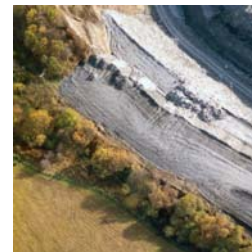


# Flintshire County Council Waste Management Strategy 2009–2025

November 2009



## Contents

Foreword.....	3
1.0   Purpose & Introduction .....	4
2.0   Flintshire’s commitments .....	5
3.0   Flintshire Profile .....	7
4.0   Flintshire Collection Service .....	8
5.0   Achievements & performance .....	11
6.0   Effecting Change .....	14
7.0   Delivering and Reviewing the Strategy.....	20
Glossary.....	21

## Figures

Figure 1   Landfill allowance scheme for Flintshire .....	5
Figure 2   Welsh Assembly Government Waste Targets .....	5
Figure 3   Visual representation of future waste allowance.....	6
Figure 4   The municipal waste collection service .....	8
Figure 5   Flintshire County Council waste infrastructure.....	9
Figure 6   Transportation of recycle out of the County 2008/09 .....	10
Figure 7   Flintshire municipal waste arisings 2002-20 .....	12
Figure 8   Flintshire municipal recycling/ composting rates.....	12
Figure 9   Projected landfilled waste and the landfill allowance scheme .....	13
Figure 10   The waste heirarchy .....	14
Figure 11.1   Summary of strategy actions, Reduce/ Reuse.....	17
Figure 11.2   Summary of strategy actions, Recycle.....	18
Figure 11.3   Summary of strategy actions, Recover .....	19
Figure 11.4   Summary of strategy actions, Dispose.....	19

## Appendices

Appendix 1   Recycling and composting targets in detail .....	25
Appendix 2   Details of FCC municipal waste collection services .....	26
Appendix 3   Details of private recycling operators contracted by Flintshire County Council in servicing captured recyclables.....	29
Appendix 4   Waste compositional analysis .....	32
Appendix 5   Miscellaneous detailed waste figures .....	34
Appendix 6   Details of the waste management strategy schemes.....	37
Appendix 7   Raising public awareness and increasing participation.....	42

## Acronyms

<b>AD</b>	Anaerobic Digestion
<b>BMW</b>	Biodegradable Municipal Waste
<b>FCC</b>	Flintshire County Council
<b>FWMS</b>	Flintshire Waste Management Strategy
<b>LA</b>	Local Authority
<b>LARAC</b>	Local Authority Recycling Advisory Committee
<b>LAS</b>	Landfill Allowance Scheme
<b>LDP</b>	Local Development Plan
<b>MRF</b>	Materials Recovery Facility
<b>MSW</b>	Municipal Solid Waste
<b>NWRWP</b>	North Wales Regional Waste Plan
<b>NWRWTP</b>	North Wales Residual Waste Treatment Partnership
<b>UDP</b>	Unitary Development Plan
<b>EA</b>	Environment Agency
<b>WAW</b>	Waste Awareness Wales
<b>WRAP</b>	Waste Resources Action Programme
<b>WAG</b>	Welsh Assembly Government
<b>WMF</b>	Waste Management Facility
<b>ROCS</b>	Renewable Obligation Credit Scheme
<b>NAWPI's</b>	National Assembly Wales Performance Indicators
<b>WLGA</b>	Welsh Local Government Association
<b>DSO</b>	Direct Service Organisation
<b>LAWDC</b>	Local Authority Waste Disposal Company
<b>WEEE</b>	Waste Electrical Electronic Equipment
<b>HWRC</b>	Household Waste Recycling Centres
<b>MNC</b>	Miscellaneous Non Combustable
<b>KWT</b>	Keep Wales Tidy
<b>WET</b>	Wales Environment Trust

## Foreword



Before accepting the portfolio for Waste Management my only involvement with waste collection and recycling was to put out the black bags once a week and the recycling once a fortnight. What happened after that never entered my mind!

Eighteen months later and a crash course in EU directives, Assembly legislation, fining procedures, recycling companies and collection patterns I am better prepared to write a foreword to Flintshire's updated Waste Strategy.

Rather than go out to consultants, we have used the talents within the council to gather the information we needed to be able to plan for the future management of waste in Flintshire and throughout North Wales.

It has been a pleasure to work closely with officers who have used their expert knowledge to inform the process.

We are guided ultimately by directives from the European Union which filters down to Flintshire via Westminster and the Welsh Assembly Governments.

If we do not achieve the goals set by such higher authorities we shall be liable for huge fines during the next decade.

### **We can avoid these fines by:**

- ▶ preventing waste
- ▶ reuse
- ▶ recycling
- ▶ recovering
- ▶ careful disposal of what's left

The management of municipal waste is one of the most challenging environmental issues facing Wales. It is an issue which affects everyone across the planet - I recently met a councillor from the Philippines and their challenges are exactly the same as ours!

### **We are committed to minimizing our reliance on landfill through reducing the production of waste. In order to do this, we, as an authority will:**

- ▶ communicate with residents
- ▶ ensure value for money
- ▶ work in partnership

Since the last edition of the Waste Strategy, Flintshire has increased its recycling performance year on year with residents embracing the kerbside recycling programme. We have achieved the targets set for us so far and reduced the amount of residual waste going to landfill.

### **But we must do better.**

The strategies and targets outlined in this document will help us to address our use of goods, our disposal of those goods and our shopping patterns. All these are matters which ultimately affect the production of waste and its treatment.

### **Our motto is:**

#### **Waste is a resource**

We are a small county and in order to achieve economies of scale we are working closely with Conwy and Denbighshire to set up a facility to treat food waste.

We are also working with Ynys Mon, Gwynedd, Conwy and Denbighshire to put together a case for procuring a technological solution for the treatment of residual waste.

This may take between 5 and 7 years to deliver.

In the meantime this strategy, plus Flintshire's residents' cooperation will take us forwards towards our ultimate goal of 150kg of residual waste per person per year

### **Together we can achieve this**

## **Cllr Nancy Matthews**

Executive Member for Waste

## 1.0 | Purpose & Introduction

---

- 1.1** The Flintshire Waste Management Strategy (FWMS) outlines how Flintshire will manage the collection, treatment and disposal of Municipal Waste collected by Flintshire County Council over the period 2009-2025. A key aim of the Strategy is to improve our environmental performance and to reduce our ecological footprint whilst maximising the use of waste;
- 1.2** Flintshire County Council is committed to a future where waste is seen and utilised as a valuable resource.
- 1.3** The management of Municipal Waste is one of the most important and challenging environmental issues facing all Local Authorities in Wales and one of the main challenges is how to reduce the amount of waste currently being landfilled. To successfully reduce landfilled waste it is necessary for the Council to engage with the public to minimise the creation of waste and to increase the reuse and recycling of waste as well as consider the use of new and up-and-coming technologies which could offer future waste management solutions. Almost everything we do creates waste and as a society we are currently producing more waste than ever before. So as consumers and producers of waste, we are central to the concept of sustainability and to meeting the target of 150kg per person, per year by 2024/25 as set out in Towards Zero Waste, the National Waste Strategy for Wales, 2009/50.
- 1.4** A key part of this approach is how we can utilise our resources more effectively, and how we can make the most of our "waste" rather than simply throwing it away. This would help safeguard existing resources and ensure their availability for future generations.
- 1.5** At the core of this document are the national commitments Flintshire must meet. Failure to meet national targets can result in significant financial penalties being levied against Flintshire County Council which ultimately would have to be paid by the public. The potential for financial penalty should Flintshire County Council fail to meet national targets, is real and would dramatically affect Flintshire County Council's ability to maintain standards of public service delivery.
- 1.6** Given that this document seeks to plan for waste management over the period 2009-2025 and given the various commitments that Flintshire County Council will have to fulfil over that period there is a need for annual review of this Strategy. The opportunity for regular review will allow the Council to continuously monitor and review its approach, provide regular public reports and will allow the Council to take early remedial action in the event of possible fines.



## 2.0 | Flintshire’s commitments

**2.1** The United Kingdom Government has made international commitments to reducing the amount of waste being landfilled. To this end the Welsh Assembly Government (WAG) has set in place targets for all Local Authorities (LA’s) which if not met can result in WAG fining individual LA’s £200 per tonne of waste landfilled above set volume allowances.

**2.2** The maximum amount of Biodegradable Municipal Waste that can be landfilled by Flintshire County Council in any given year is shown in Figure 1; these figures have been taken from published guidance within the WAG’s Landfill Allowance Scheme (LAS).

**2.3** As can be seen in Figure 1, the volume of biodegradable municipal waste (BMW) which can be disposed of to landfill decreases each year. If Flintshire County Council sends more BMW to landfill than the scheme allows then the Welsh Assembly Government (WAG) will have the right to impose fines at a rate of £200 per tonne of waste above the annual allowance. This means that even a relatively minor infraction of 1,000, tonnes roughly equivalent to 1% of current Municipal Waste Arisings, could result in a financial penalty of £200,000 for that year alone.

**2.4** The Landfill Allowance Scheme (LAS) is supplemented with a number of associated targets developed by WAG which seek to ensure that LA’s utilise waste as a valuable finite resource. These targets are shown in Figure 1.

Figure 1 | Landfill allowance scheme for Flintshire

Fiscal year	BMW landfill allowance
2004/05	27,953 (6 months)
2005/06	52,021
2006/07	48,136
2007/08	44,252
2008/09	40,367
2009/10	36,482
2010/11	33,311
2011/12	29,081
2012/13	24,851
2013/14	23,793
2014/15	22,736
2015/16	21,678
2016/17	20,621
2017/18	19,563
2018/19	18,506
2019/20	17,448

Figure 2 | Welsh Assembly Government Waste Targets

Target for each individual local authority	2009-10	2012-13	2015-16	2019-20	2024-25
Minimum levels of reuse and recycling / AD (or composting) for municipal waste	40%	52%	58%	64%	70%
Minimum levels of AD (or composting if currently committed to this technology) of source separated food waste from kitchens as part of the combined recycling/ composting target for municipal waste above.	-	12%*	14%	16%	16%
Maximum level of energy from waste (net) for municipal waste	-	-	42%	36%	30%
Maximum level of landfill for municipal waste	-	-	-	10%	5%
Maximum level of residual household waste per inhabitant per annum	-	295kg	258kg	210kg	150kg

\*These are proposed statutory targets which has been set by National Government

**2.5** As seen in Appendix 1 together with Figure 2 above there is a need to meet a 40% recycling/composting target in the financial year April 2009 – April 2010. Also by the year 2012-2013 there is the need to increase recycling to 52% which includes a new 12% target of separate treatment for kitchen waste. Plans have yet to be implemented for the roll out of separate collection services for food waste in Flintshire however such plans do exist and are detailed later in this Strategy.

**2.6** Over the longer term it is apparent from figure 3, that the maximum allowance per person per year decreases significantly from 295kg in 2012/13 to 150 kg in 2024/25; this is illustrated in figure 3 below. To meet these longer term targets this Strategy identifies a number of longer term solutions which Flintshire County Council will pursue with it's regional and national partners.

**2.7**

**Figure 3 | Visual representation of future waste allowance**



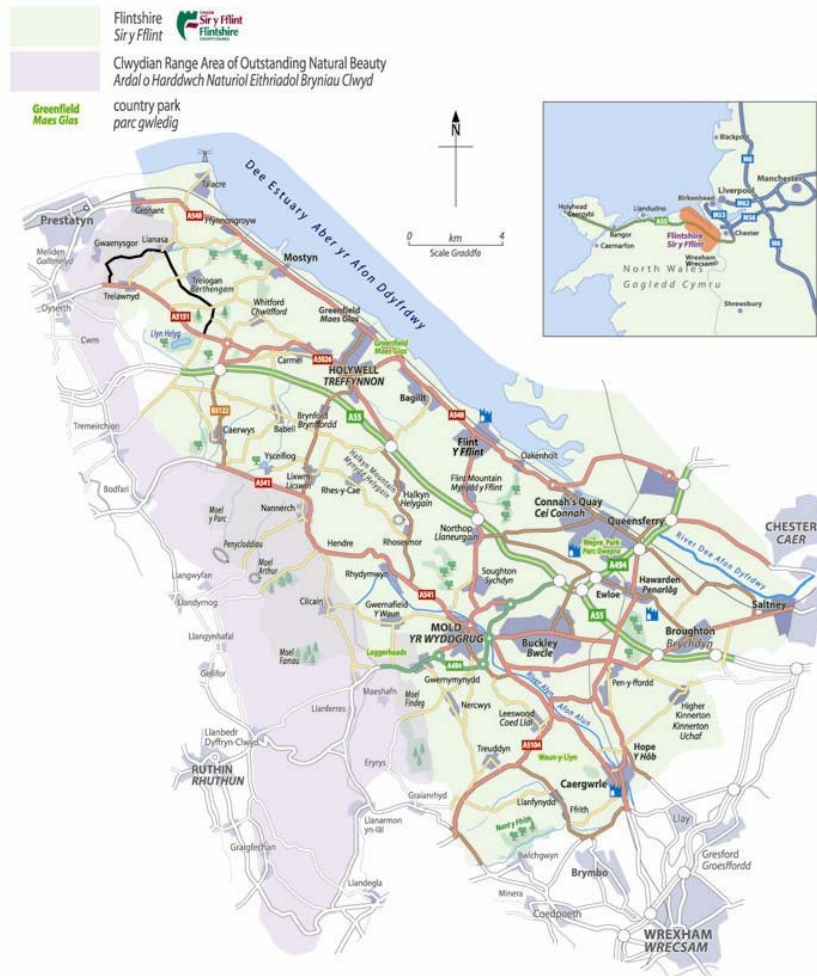
## 3.0 | Flintshire Profile

**3.1** Flintshire occupies a unique border location in the North East corner of Wales, with Denbighshire to the West, and Wrexham to the South. To the East of Flintshire lies England and the newly created County of Cheshire West and Chester together with the North West of England Region. Whilst Flintshire is firmly within Wales this Strategy recognises that there are important economic and social ties to the NW of England that have significant bearing on current waste generation and waste management options.

**3.2** Within Flintshire the major areas of population are in the east and centre of the County consisting of Buckley, Ewloe, Flint and the Deeside area which account for 43% of the population of the County. It is within this area that regionally and internationally important manufacturing industries are located for example Toyota at Deeside Industrial Park and British Aerospace at Broughton. To the west Mold and Holywell account for a further 13% of the population. The remainder of the county is predominantly rural with a focus on agricultural activities, primarily cattle, sheep and dairy farming.

**3.3** The main transportation route is the A55 which bisects the County east to west and is the main road link between North Wales and England. It serves as the gateway to North Wales, and performs a central role in the operation of the sub-region.

**3.4** The County of Flintshire is some 43,464 hectares in area and contains some 150,077 people who form 65,842 households. Flintshire Households together generate on average 89,527 tonnes of Municipal Waste every year. It should be noted that Municipal Waste volumes are not representative of all waste produced in the County and broadly speaking form 20% of all wastes produced in Flintshire. However this Strategy and the targets herein are only concerned with Municipal wastes, the North Wales Regional Waste Plan (NWRWP) considers all waste generation and this Strategy has been produced having regard to the NWRWP and its recommendations.





## 4.0 | Flintshire Collection Service

4.1 Flintshire County Council operates the municipal waste collection service for the 65,842 households in Flintshire. A summary of this service is provided in Figure 4 below, further details of the services provided are available in Appendix 2.

**Figure 4 | The municipal waste collection service**

Waste Stream	Scheme coverage	Frequency	Containers
<b>Residual waste</b> Black sack	99%	Weekly	Rolls of 52 plastic sacks delivery twice a year – March and September. (This is currently under review)
Wheelie bins	1%	Weekly	High rise and multiple occupancy residences.
<b>Dry recyclables</b> Blue box	97%	Fortnightly	55 Litre box for glass and two reusable polypropylene sacks for cans and plastics.
Blue bag	97%	Fortnightly	Reusable bag
<b>Organic collection</b> Brown bin	82%	Fortnightly (monthly during January)	140 Litre wheelie bins

4.2 As a Unitary Authority, Flintshire County Council is responsible for the collection and disposal of all municipal solid waste arising in the County. As a result, Flintshire County Council currently own and operate a number of facilities to deal with the County’s waste. This section summarises current waste management infrastructure.

4.3 The County’s Environmental Services Department is responsible for a number of waste management operations including; collection and disposal of Municipal Solid Waste (MSW), the operation of 26 ‘bring’ sites, 8 Recycling Parks, a Materials Recovery Facility (MRF), transfer site, an open windrow composting facility at Greenfield and a facility in Flint for baling and bulking recyclables ready for onward transportation and re-processing. Figure 5 summarises Flintshire County Council’s existing waste infrastructure.

**Figure 5 | Flintshire County Council waste infrastructure**

Element of infrastructure	Detail
Refuse collection rounds	13 Black Sack 1 Trade
Skip movement vehicles	2 Skip Vehicles
Fly tip collection vehicle	1 Hiab Flat Bed
Clinical waste collection vehicle	1 Specialised Vehicle
Dog bin collection vehicle	1 Specialised Vehicle
Dry recyclables vehicles	8 Blue Box 3 Blue Bag 1 Multi Material 1 Hook Lift Skip 2 Fork Lift Trucks
Organic collection rounds	5 Brown Bin
1 Materials Recovery Facility (MRF)	Spencer's Industrial Estate, Buckley
Transfer Pad – Bulking Residual Waste	Brookhill Landfill Site
1 Recycling Bulking and Baling Facility	Unit 5&6 Castle Park Industrial Estate, Flint
8 Recycling Parks	Buckley, Connah's Quay, Flint, Greenfield, Hope, Mold, Queensferry, Saltney
26 Bring sites	Countywide
1 Windrow Compost Facility	Greenfield Business Park
Landfill site	0 in Flintshire Maintenance 2 former sites
Food Waste Treatment	None at present
Residual Waste Treatment	None at present

**4.4** In addition to Flintshire County Council Services the Council operates contracts for various bring sites eg bottle banks, the wastes generated from these sites are transported to various private facilities both inside and outside of Flintshire. Flintshire County Council is conscious of the need for waste to be dealt with as close to it's source as possible and is committed to regularly reviewing contracts to ensure that Flintshire receives optimum market value for their recyclable materials as well as being an appropriate practical environmental option. Figure 6 summarises the current situation regarding the movement of waste volumes out of the County.

**Figure 6 | Transportation of recyclate out of the County 2008/09**

Measured in metric tonnes

Material	0-10 Miles	11-20 Miles	21-30 Miles	31-40 Miles	50+ Miles
Glass	-	3,997.032	-	-	-
Paper & card	5,755.17	-	-	-	-
Cans (Alu)	-	-	94.169	-	-
Cans (Steel)	-	-	-	-	383.523
Garden waste	12,932.4	-	-	-	-
Plastic bottles	-	103.410	-	294.697	294.697

**4.5** Figure 6 and Appendix 3 clearly indicate that the vast majority of recyclable material is being dealt with close to Flintshire with only a small proportion of waste being transported outside a 21 miles radius from the Flintshire Authority boundary. This situation crudely indicates that there is the potential to reduce the environmental impact of waste being transported outside of the County and that the provision of new Waste Management Facilities (WMF's) within Flintshire would be beneficial. This matter will continue to be reviewed and monitored with our regional partners with Flintshire endeavouring to maintain it's proximity principle.

## 5.0 | Achievements & Performance

---

**5.1** Since the publication of the 2005 Flintshire Waste Management Strategy the following notable achievements have been made in Flintshire and the North Wales Region:

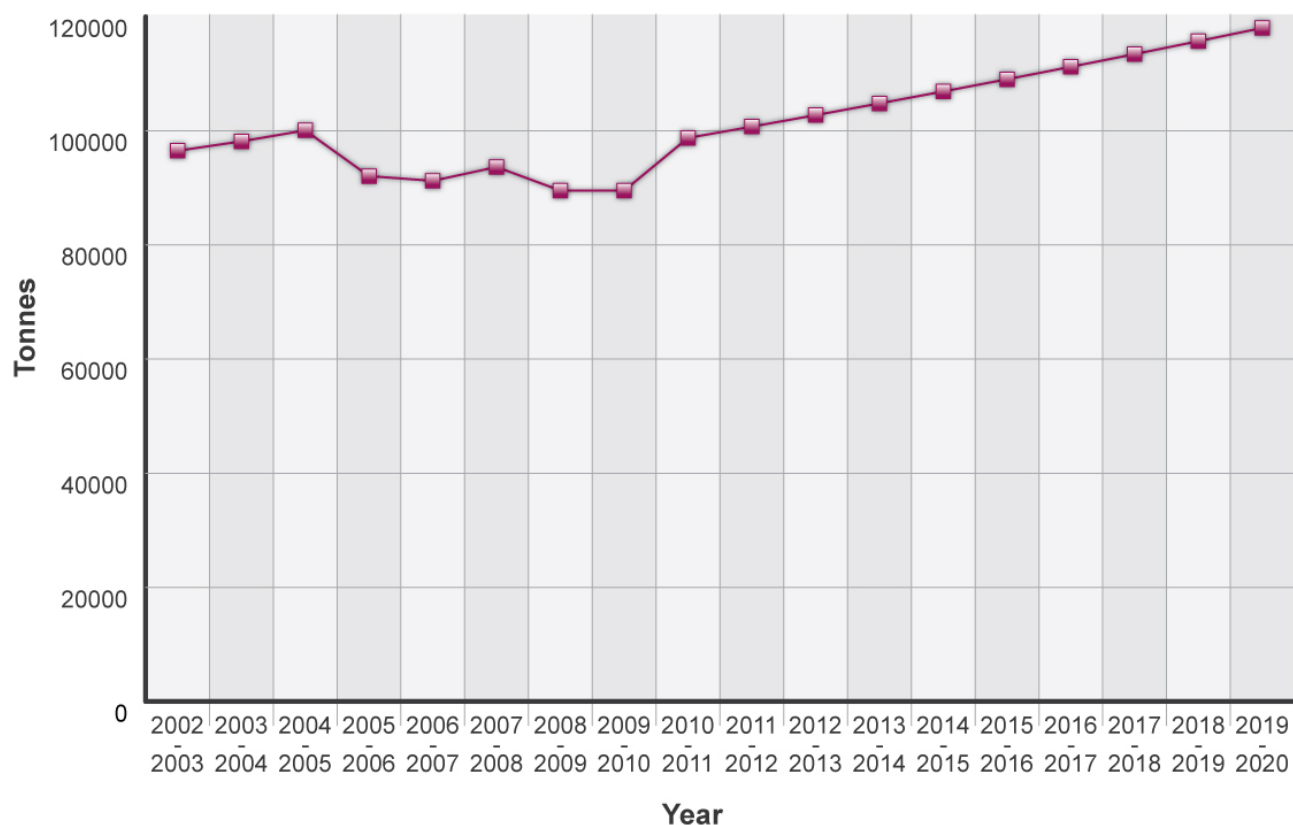
- ▶ Introduction of the Van Ban Scheme (Recycling Park Permit), which has prevented trade waste from entering the household waste sites.
- ▶ Further Waste minimisation has been achieved through promotion of Home Composters and Awareness raising activities throughout the County.
- ▶ Kerbside collection of organic green garden waste has been expanded to 82% coverage in 2008.
- ▶ A Materials Recycling Facility (M.R.F) opened in Buckley during 2006. The MRF sorts and bales recyclate collected via the kerbside recycling service and recyclate deposited at household waste recycling centres (HWRC's). Residual waste from Recycling Parks is further sorted to recover as much recyclable material as possible. The sorted and baled materials are sent to merchants or processors for treatment.
- ▶ A split level Recycling Park was opened in 2005 in Greenfield to enhance the current provision in the North West of the County.
- ▶ Achievement of the Recycling Park targets, with an improvement from 40% in 2006 to 62% during 2008.
- ▶ Dedicated Enforcement Team established to investigate illegal fly tipping incidents, duty of care issues and abandoned vehicles.
- ▶ Purchase of a customised campaign trailer for the promotion of sustainable waste management practices to raise community awareness.
- ▶ The introduction of measures to reduce the Council's own waste generation, and increase recycling and composting by Council employees.
- ▶ The introduction of a new Areas of Search approach within the Unitary Development Plan (UDP) which provides a more positive decision making framework for the development of new waste management facilities in the County.
- ▶ The 1st review of the Regional Waste Plan has been completed (2008).
- ▶ The appointment of a Regional Project Director to progress the North Wales Regional Waste Project.

**5.2** Flintshire County Council has implemented a range of key changes to its waste services and is aware of the strategic challenges it faces in reducing the volume of landfilled waste. For example analysis of waste arisings indicates that there are key opportunities to divert key waste streams such as kitchen wastes away from landfill. The summarised key findings of the national Waste Composition Analysis study undertaken by Eunomia can be viewed in Appendix 4.

Figure 7 illustrates actual Flintshire municipal waste arisings up to 2008/09 and projects these arisings in accordance with the NWRWTP growth rate projections

**5.3** . These waste generation projections will be reviewed annually to ensure projections are accurate and reflective of identified trends from up to date data.

**Figure 7 | Flintshire municipal waste arisings 2002-20**



**5.4** The municipal waste arisings shown in the above table represent the total amount of waste collected. The actual amount of waste sent to landfill is significantly smaller and is affected to a large degree by the amount of waste generated which tends to vary significantly from year to year and the amount of waste that can be diverted from landfill through recycling and composting. Figure 8 below illustrates that FCC has performed well against the Welsh average.

**Figure 8 | Flintshire municipal recycling/ composting rates**

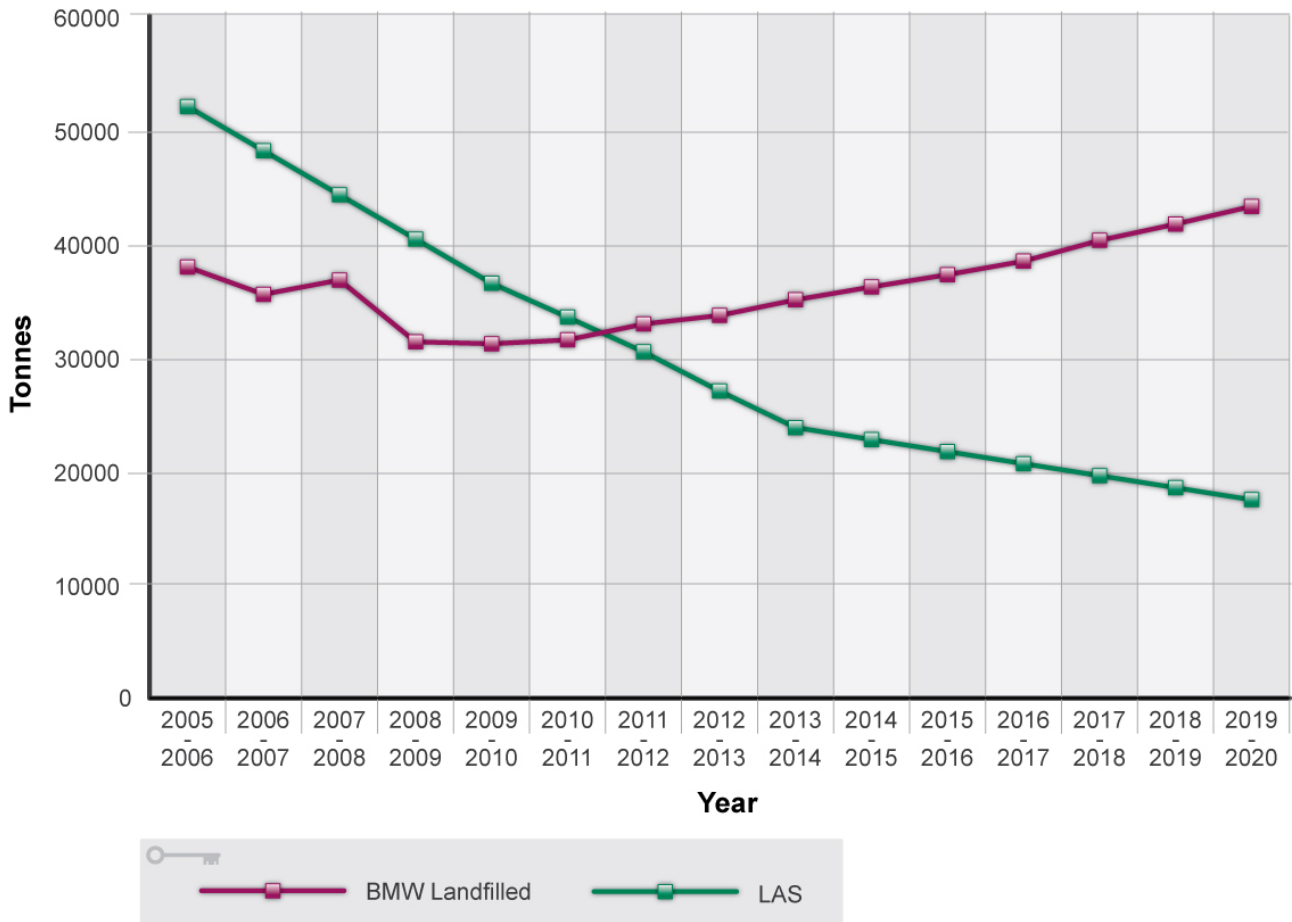
	2001/ 02	2002/ 03	2003/ 04	2004/ 05	2005/ 06	2006/ 07	2007/ 08
Flintshire	8.5%	18.4%	22.3%	21.6%	32.1%	28%	36.9%
Wales avg.	8.4%	12.5%	17.7%	21.7%	25.5%	29.9%	33.6%

Source: WAG Municipal Waste Management Report for Wales, 2007-2008 (2008)

**5.5** Focusing only on that waste which has been sent to landfill since 2002 (See Technical Appendix 5) and the volumes of waste arisings which are projected up until 2020 in Figure 6 and using the data contained in Figure 1, it is possible to predict when FCC will become subject of financial penalties under the Landfill Allowance Scheme. Figure 9 below illustrates that barring other factors it is theoretically possible that unless significant progress is made to reduce landfilled waste then the County Council will be the subject to financial penalties following the financial year April 2011 to April 2012. It is important to note that these financial penalties are cumulative and would be incurred each year that FCC landfilled more waste than the allowance permitted within the LAS scheme.



Figure 9 | Projected landfilled waste and the landfill allowance scheme



5.6 Already within this Strategy, it has been stated that for every tonne of waste disposed to landfill above the LAS allowance, FCC would be subject of a £200 fine on top of normal disposal costs. Figure 9 indicates a theoretical potential in 2010/11 for some 5,000 tonnes more Biodegradable Municipal Waste being landfilled then the LAS scheme would allow for. It is important to note that an infraction of some 5,000 tonnes in 2010/ 11 could lead to a fine of £1,000,000. This situation would be unacceptable for the taxpayers of Flintshire and should be avoided through the implementation of a range of schemes and measures set out within this Strategy.

## 6.0 | Effecting Change

**6.1** In effecting positive and beneficial changes which will help this Authority to avoid financial penalties, it is necessary to consider how Flintshire County Council should be prioritising its efforts. In this regard it is important to consider the diagram below which illustrates that the best environmental option is to prevent the generation of waste before considering how waste can be reused, recycled/composted, utilised and disposed of. However, whilst waste prevention will be the main focus for the Authority it is accepted that “Zero Waste” generation is not a realistic target for this Strategy document and the need for waste disposal sites will be required into the foreseeable future.

**Figure 10 | The waste hierarchy**

This guide attempts to illustrate how we should be prioritising our waste management efforts:



**6.2** In considering the Waste Hierarchy it is critical that this Strategy recognises the importance of informing the community and proactively engaging the community to raise the level of understanding surrounding waste management. Our key aim is to encourage a change in behaviour by Flintshire householders to reduce waste generation and increase recycling and composting. At present Flintshire County Council does operate a number of different kerbside collection services but there is potential to significantly increase community participation in these schemes. By undertaking awareness raising campaigns the Council would seek to increase public participation and reduce the volume of waste being landfilled.

**6.3** The Council proposes within this Strategy a number of different schemes to minimise waste generation and to divert waste that is generated away from landfill. The schemes identified can be broadly categorised in the same way as the Waste Hierarchy above and are discussed in the following sections entitled “Reduce/Reuse”, “Recycle”, “Recover”, and “Dispose”. Technical Appendix 6 includes significantly greater detail regarding how FCC will develop schemes, and its partner organisations. Please see Appendix 7 for FCC’s approach to increasing public participation.

## Reduce/ Reuse

- 6.4** Minimising waste is the first priority of the waste hierarchy and it is also an area where the entire community can work to make a difference. The Local Authority will work with key regional and national partners (such as Waste Awareness Wales) to raise awareness of how individuals, communities and businesses can make a positive difference. Schemes include promoting the purchase and use of Home Composters; reducing junk mail; reducing unnecessary packaging of goods; and encouraging people to purchase reusable products and avoid the use of disposable bags.
- 6.5** In promoting the minimisation of waste generation the Council has taken steps to lead the way and set an appropriate example for all to follow. The council is committed to reducing the amount of waste it generates and will focus on green procurement which includes assessing the product lifecycle and purchasing products made from recycled materials.
- 6.6** A summary of the actions proposed by the Council to reduce waste generation is contained in Figure 10.

## Recycle

- 6.7** Recycling is the reprocessing of wastes, either into the same product or a different one. Recycling reduces the demand for raw materials, reducing the environmental impact of extraction and transportation. Recycling uses less energy than producing goods from virgin materials and also results in fewer emissions. Burning fossil fuels for energy produces carbon dioxide, a green house gas which contributes to global warming, so using less energy is essential in achieving a reduction in our Carbon and Ecological footprint.
- 6.8** Examining household waste composition (See Appendix 4) potentially 30% of municipal waste can be recycled. An additional 30% of vegetable peelings and other organic waste can also be composted. In theory therefore 60% of our waste can be diverted from landfill, however in 2008/09 Flintshire only recycled and composted 37% of municipal wastes. Analysis of Kerbside collection data indicates that there exists significant potential to increase public participation in recycling and composting. The Council will consider how best to engage with the public to increase participation in kerbside schemes and other schemes including community 'bring sites'. In the meantime the Council will continue to set the standard by reducing the wastes it generates, and recycling / composting wherever possible, those wastes that are generated.
- 6.9** The WAG 2012/13 food waste recycling target of 12% (see Table 2) requires that Flintshire Country Council introduces a new food waste collection service and makes provision for the separate treatment of this waste. In 2008/09 Flintshire, along with other Local Authorities in Wales, took advantage of available Regional Capital Access Fund (RCAF) of £605,066 to procure 65,000; 7 Litre and 25 Litre kitchen caddies and compostable sacks. Flintshire is also working regionally with Conwy and Denbighshire to develop an Anaerobic Digestion Facility where food waste can be treated to generate a marketable compost and biofuel. The projected commission date for this facility is April 2012.
- 6.10** Flintshire County Council is also continuously reviewing and improving its public services including the creation of a fly tipping and abandoned vehicles enforcement team and increasing efficiency at the County's 8 recycling parks.
- 6.11** Future key options for consideration by the Council will include:
- ▶ Kerbside sort versus co-mingled collections  
To maximise recycling opportunities, and increase participation rates, the way in which we collect our recyclables will need to be reviewed. Authorities who have introduced co-mingled collection of recyclables have seen a significant increase in participation. Another alternative is to continue with kerbside sort and increase the frequency of recycling collections from

fortnightly to weekly. Changes like these will ensure that recycling becomes standard practice and take precedence over residual waste collection.

► **Managed Weekly Collections**

If weekly food waste collections are introduced, the amount of waste in the residual black sack will be minimised, therefore a reconsideration of the collection patterns would ensure best value and provide a sustainable solution. One possibility would be for residual waste collections to be collected one week, followed by the green waste brown bin on the same day on the following week. This is essential to meet recycling targets and help Flintshire County Council avoid LAS penalties as set out in section 2.3 Other LA's that have introduced this have seen a 10% increase in their recycling performance.

► **Weigh residual waste**

The Welsh Assembly Government is committed to reducing household waste this includes waste generation targets per individual per year (for example 295kg in 2012/13 decreasing to 150kg by 2024/25). To meet the targets it will be a matter for future consideration as to whether a scheme of Direct and Variable Charging / Pay as You Throw (PAYT) be introduced at a National or Local level.

**6.12** A summary of the actions proposed by the Council to recycle/compost waste is contained in Figure 11.

## Recover

**6.13** Municipal waste that cannot be reused or recycled should not be disposed of to landfill if the wastes can be utilised for other positive and beneficial uses. Examples of where waste value is recovered are the use of landfill gas at existing landfill sites in the County and the Material Recovery Facility in Buckley. However, the best example of recovery of waste value is the proposed Anaerobic Digestion Facility in North Wales which will treat food wastes and generate compost and biogas both of which are marketable products. Efforts to recover value from waste will reduce landfilled waste volumes; help Flintshire meet its targets and avoid financial penalties; and improve Flintshire's overall environmental performance.

**6.14** Given the various technologies that could be utilised to recover value from waste, it is widely accepted across North Wales that there is a need for Local Authorities to work in partnership. Flintshire County Council is the Lead Authority on the North Wales Residual Waste Treatment Partnership (NWRWTP) tasked with the procurement of a residual waste technology for North Wales. The partnership includes: Conwy County Borough Council, Denbighshire County Council, Flintshire County Council, Gwynedd Council and Isle of Anglesey County Council. The Partnership is considering a range of technologies for the treatment of residual wastes examples of which are as follows:

- Mechanical Biological Treatment (MBT)
- Mechanical Heat Treatment (MHT)
- Waste to Energy (W2E)
- Combined Heat and Power (CHP)
- Advanced Thermal Treatment (ATT)

**6.15** A summary of the actions proposed by the Council to recover value from waste is contained in Figure 11.

## Dispose

**6.16** One of the main objectives of this strategy is to prevent waste going to landfill. The disposal of waste to landfill is the last option in the Waste Hierarchy; it is also the option which is most frequently resorted to will result in Flintshire failing to meet targets as set in the Landfill Allowance Scheme. It is therefore

important that Flintshire continuously seeks to decrease the volume of waste being landfilled by every means available.

**6.17** Flintshire County Council has until recently disposed of its waste to Brookhill Landfill site, however this closed in December 2007 leaving no alternative facilities in Flintshire. Flintshire’s residual municipal wastes are currently bulked up using a transfer pad at Brookhill to minimise the amount of vehicle movements required and are then transported out of the county by road to a landfill site in Wrexham.

**6.18** Whilst it is a key objective of this Strategy to reduce landfilled municipal wastes it is clear from current performance that landfill facilities are still required and will be required for the foreseeable future. Flintshire County Council will continue to review landfill opportunities within Flintshire taking into consideration both the financial and environmental costs of transporting waste out of the County. In the meantime Flintshire County Council will continue to work closely with its regional partners through groups such as the North Wales Residual Waste Treatment Partnership to develop a regional network of waste management facilities which will increase the proportion of waste recycled and composted; and increase recovery value from waste resources.

**6.19** A summary of the actions proposed by the Council to dispose of residual wastes is contained in Figure’s 11.1 – 11.4 below.

**Figure 11.1 | Summary of strategy actions, Reduce/ Reuse**

How can we minimise the amount of municipal waste created in Flintshire?

Initiative	Impact	Target
<b>Home Composters</b> <ul style="list-style-type: none"> <li>▶ promotions</li> <li>▶ competitions</li> <li>▶ advertising</li> </ul>	Low	Short term 2009-11
<b>Door knocking awareness raising</b> <ul style="list-style-type: none"> <li>▶ how to reduce, reuse, recycle, compost waste at home</li> <li>▶ publicity of local services</li> </ul>	Low	Short term 2009-11
<b>Reuse &amp; Repair schemes</b> Furniture and white goods recovery and repair	Medium	Short term 2009-11
<b>Real nappies</b> <ul style="list-style-type: none"> <li>▶ promote the use of reusable nappies (midwives, clinics etc)</li> <li>▶ Voucher incentive scheme (financial help)</li> </ul>	Low	Medium-term 2009-15
<b>Green Cones (as Home Composters)</b>	Low	Medium-term 2009-15
<b>Procurement</b> <ul style="list-style-type: none"> <li>▶ aim is to reduce Council own waste</li> <li>▶ work with Information Communication Technology department (ICT) to provide information on how to print both sides etc</li> <li>▶ buy recycled materials / from sustainable sources</li> <li>▶ set the standard internally</li> </ul>	Low	Medium-term 2009-15
<b>Working with producers/manufacturers</b> <ul style="list-style-type: none"> <li>▶ to promote sustainable waste management practices</li> <li>▶ promote duty of care</li> <li>▶ Work with WAG /WLGA/ Envirowise</li> </ul>	Low	Long-term 2009-20



**Figure 11.2 | Summary of strategy actions, Recycle**

How can we maximise recycling opportunities in Flintshire?

Initiative	Impact	Target
<b>Cardboard kerbside</b> Full roll out now complete	High	Short-term 2009
<b>Internal and Public Sector Recycling Service</b>	Low	Short-term 2009-11
<b>Participation rates</b> Minimum target set at 55% by 2009/10	High	Short-term 2009-11
<b>Door knocking campaigns to breakdown barriers</b>	High	Short-term 2009-11
<b>Improvements to Bring and Recycling Parks</b> <ul style="list-style-type: none"> <li>▶ Provision of bring sites reviewed</li> <li>▶ Community adoption of facilities</li> <li>▶ Meet and Greet at larger sites</li> </ul>	High	Medium-term 2009-15
<b>Food waste collections</b> Weekly collections	High	Short-medium-term 2009-15
<b>Weekly Recycling</b> Blue Bag - Paper & card Blue Box – Glass bottles/jars, cans/tins and plastic bottles	High	Medium-term 2009-15
<b>Managed Weekly Collections (Green and Residual)</b> <ul style="list-style-type: none"> <li>▶ Only with weekly Food Collections</li> <li>▶ Average uplift following introduction in Recycling Rate is 10%</li> </ul>	High	Medium-term 2009-15
<b>Keep services simple, efficient and provide a reliable collection service.</b> <ul style="list-style-type: none"> <li>▶ Same day collections</li> <li>▶ Provide best value</li> </ul>	Medium/ Low	Medium-long-term 2009-20
<b>Develop local market opportunities for other materials</b>	Low	Long-term 2009-20
<b>Enforcement</b> <ul style="list-style-type: none"> <li>▶ Fly-tipping</li> <li>▶ Abandoned Vehicles</li> </ul>	Low	Long-term 2009-20
<b>Weigh residual waste</b> <ul style="list-style-type: none"> <li>▶ If WAG makes this statutory- research need for PAYT (Pay As You Throw) scheme</li> <li>▶ Trade waste</li> <li>▶ Links to waste minimisation target set by WAG</li> </ul>	Medium	Long-term 2009-20

**Figure 11.3 | Summary of strategy actions, Recover**

How can we maximise recovery and energy opportunities in all waste streams and reduce our carbon footprint?

Initiative	Impact	Target
<b>Anaerobic Digestion Plant for Food waste treatment</b> <ul style="list-style-type: none"> <li>▶ Digestate – can be used as a biofertiliser</li> <li>▶ Biogas (mostly carbon dioxide and methane) can be sold as a bio fuel or combusted to generate electricity which is eligible for ROCs (Renewable Obligation Certificates) a financial incentive.</li> </ul>	High	Short-medium-term 2009-15
<b>Material Recovery Facility</b> <ul style="list-style-type: none"> <li>▶ Maximise recovery of any material which can be reused, recycled or composted.</li> <li>▶ General waste skips from the Recycling Parks are currently sorted to recover any potential materials opportunities.</li> </ul>	High	Short-medium-term 2009-15
<b>Residual Waste Treatment (NWRWTP)</b> <ul style="list-style-type: none"> <li>▶ Maximise recovery of resources from the waste stream</li> <li>▶ Generate alternative/sustainable energy source</li> </ul>	High	Long-term 2009-20
<b>Landfill Gas Capture on any future sites</b> Already in place at Brookhill and Standard Landfill sites	Medium	Medium-term 2006-15

**Figure 11.4 | Summary of strategy actions, Dispose**

How can we minimise the amount of waste landfilled?

Initiative	Impact	Target
<b>Through ensuring all the above initiatives are implemented.</b> Aim is to manage the materials remaining in the waste stream after waste minimisation; reuse and recycling initiatives have taken place in a sustainable way.	High	Long-term 2009-20
<b>Pre Treatment of waste through Material Recovery Facility</b>	High	Medium-term 2009-15
<b>Food Waste Treatments</b> Sub Regional Partnership – Denbighshire, Flintshire, Conwy	High	Short-medium-term 2009-15
<b>Residual Waste Treatment to maximise recovering resources from the waste stream</b> Regional Partnership –NWRWTP – Flintshire, Denbighshire, Conwy, Gwynedd, Anglesey	High	Medium-long-term 2009-20
Landfill facilities will still be required in the future, for any non recyclable or non recoverable waste, only as part of a more sustainable network of waste management facilities.	Medium	Throughout strategy period

## 7.0 | Delivering and Reviewing the Strategy

---

- 7.1** Flintshire County Council (FCC) is committed to continually improving its services in order to meet national targets and improve existing environmental performance. FCC will utilise the opportunities of annual best value reviews; internal monitoring and review; together with external monitoring and waste reporting to ensure that its waste services are continually improved, efficient, responsive and cost effective.
- 7.2** The County Council will undertake an annual review of this strategy and will update the data and information contained to reflect the most up-to-date data reported through the WasteDataFlow national reporting system. The annual review of the strategy will highlight whether or not FCC has been successful in meeting WAG targets and will provide the opportunity to modify its projections each year to take account of up-to-date data and information. Where it is clear that there exists reasonable risk of financial penalties FCC will report this within the strategy and will report what priority remedial measures are required as a matter of urgency.
- 7.3** FCC will also continue to work with its regional partners. The Regional Waste Plan (2004) and its First Review (2008) make it clear that there is significant potential for regional working between municipal waste authorities to better plan for the treatment and disposal of residual wastes. The options being considered as part of the North Wales Residual Waste Treatment Partnership include various new and expensive technologies which are potentially prohibitive for any single Local Authority to pursue. Flintshire County Council will continue to work in partnership with its regional and national partners to secure new waste management facilities which can service the North Wales Region's waste needs.
- 7.4** FCC will take all appropriate opportunities to enhance and expand the existing network of waste management facilities (both publicly and privately owned) to increase the capacity of this industry to treat waste and divert waste from landfill. In this regard waste management officers will work closely with waste planning officers to identify the appropriate waste opportunities in the County as well as seek partnership arrangements with experienced commercial operators. The opportunity presented by the introduction of the new Local Development Plan (LDP) will also be used to inform future reviews of this strategy as well as influencing the County waste land use strategy and its supporting policies.

## Glossary

---

**Aggregates** Materials used by the construction industry: primary aggregates include sand, gravel and crushed rock; secondary aggregates are waste materials (e.g. demolition waste) that are re-used or recycled by the construction industry in the place of primary aggregates.

---

**Anaerobic digestion** A process where biodegradable material is encouraged to break down in the absence of oxygen, in an enclosed vessel. It produces carbon dioxide, methane and solids/liquors known as digestate, which can be used as fertiliser and compost.

---

**Best Practicable Environmental Option** A BPEO is the outcome of a systematic and consultative decision-making procedure which emphasises the protection and conservation of the environment across land, air and water. The BPEO procedure establishes, for a given set of objectives, the option that provides the most benefits or the least damage to the environment as a whole, at acceptable cost, in the long term as well as in the short term.

---

**Biodegradable** Materials which are capable of being broken down by plants (including fungi) and animals (including worms and micro-organisms). In municipal solid waste, the property is generally attributed to the following fractions: paper and card, food and garden waste and a proportion of textiles, fines and miscellaneous combustible waste, including disposable nappies.

---

**Bring (drop off) recycling** Recycling schemes where the public bring material for recycling to centralised collection points (e.g. bottle and can banks) at civic amenity sites, supermarket car parks and similar locations.

---

**Civic amenity (CA) site / Recycling Park** Often used as a generic term for a facility provided by the local authority which receives household waste normally delivered by the public direct to sites. Wastes handled include bulky items such as furniture and DIY wastes, white goods, garden waste and general household wastes as well as recyclables. Some CA sites have facilities to receive certain hazardous household wastes, e.g. lead acid batteries and oil. The term civic amenity site originally referred to facilities established under the Civic Amenities Act 1967, which was repealed and replaced by section 2 of the Refuse Disposal (Amenity) Act 1978, which has since been repealed. The term household waste amenity site (used in Waste Management Paper 4) or Recycling Park is a more correct term for facilities provided under the Environmental Protection Act 1990, however 'civic amenity site' is still widely used.

---

**Clinical waste** Waste arising from medical, nursing, dental, veterinary, pharmaceutical or similar practices, which may present risks of infection.

---

**Combined heat and power (CHP)** CHP is the simultaneous generation of usable heat and power (usually electricity) in a single process. CHP uses a variety of fuels and technologies. The basic elements of a CHP plant comprise one or more prime movers (a reciprocating engine, gas turbine, or steam turbine) driving electrical generators, or other machinery, where the steam or hot water generated in the process is utilised via suitable heat recovery equipment for use either in industrial processes, or in community heating and space heating.

---

<b>Commercial waste</b>	Waste arisings from premises which are used wholly or mainly for trade, business, sport, recreation or entertainment, excluding industrial waste and waste from municipal facilities.
<b>Composting</b>	The controlled biological decomposition and stabilisation of organic substrates (e.g. garden and kitchen waste), under conditions that are predominantly aerobic and that allow the development of thermophilic temperatures as a result of biologically produced heat. It results in a final product that has been sanitised and stabilised, is high in humic substances and is of such a quality that it can be used as a soil improver, as an ingredient in growing media, or blended to produce other marketable products (that meet recognised industry standards). In the case of vermicomposting these thermophilic temperatures can be foregone at the point the worms are introduced.
<b>Construction and demolition (C&amp;D) waste</b>	Arises from the construction, repair, maintenance and demolition of buildings and structures. It mostly includes brick, concrete, hardcore, subsoil and topsoil, but it can also contain quantities of timber, metal, plastics and (occasionally special (hazardous) waste materials.
<b>Green procurement</b>	Ensuring that the procurement of goods and services includes the consideration of environmental factors integrated with other criteria, including performance, life expectancy, quality and cost. Public sector procurement contracts should specify the purchase of long-life and low energy products, minimal use of packaging, re-use of products and the purchase of products containing recycled materials (e.g. paper, plastics and compost).
<b>Green waste</b>	Organic garden waste such as grass clippings, tree prunings, leaves etc. which can be used as composting feedstocks. Also known as 'garden wastes', or 'yard waste'. They can arise from gardens, parks and landscaping activities.
<b>Hazardous wastes</b>	The most harmful wastes to people and the environment, and defined according to properties listed in Annex III to Council Directive 91/689/EEC on hazardous waste.
<b>Hazardous household waste</b>	Defined by the National Household Hazardous Waste Forum (NHHWF) as "... any material discarded by a household which is difficult to dispose of, or which puts human health or the environment at risk because of its chemical or biological nature."
<b>Household waste</b>	Includes waste from household collection rounds, from services such as street sweepings, bulky waste collection, litter collection, hazardous household waste collection and separate garden waste collection. Also includes waste from civic amenity sites and wastes separately collected for recycling or composting through bring or drop-off schemes, kerbside schemes and at 'civic amenity sites'.
<b>Household waste amenity site</b>	see Civic amenity sites
<b>Industrial waste</b>	Waste from any factory and from any premises occupied by an industry (excluding mines and quarries).
<b>Inert waste</b>	Waste which, when deposited into a waste disposal site, does not undergo any significant physical, chemical or biological transformations and which complies with the criteria set out in Annex III of the EC Directive on the Landfill of Waste.
<b>Kitchen waste</b>	Biodegradable waste food including items such as lettuce leaves, carrots, potato peelings, banana skins, tea bags etc.



<b>Landfill site</b>	Is defined in the Council Directive 1999/31/EC on the landfill of waste as meaning "...a waste disposal site for the deposit of the waste onto or into land..". The definition includes sites where the producer of the waste is landfilling at the place of production of the waste and any site established for over a year, where waste is temporarily stored. Landfill sites are often located in disused quarries or mines. In areas where there are limited, or no ready-made voids, the practice of landraising is sometimes carried out, where some or all of the waste is deposited above ground, and the landscape is contoured.
<b>Landfill tax</b>	A tax intended to address the environmental costs of landfilling by encouraging the diversion of waste from landfill.
<b>Local Development Plan</b>	This Plan is the next generation of land use development plans which is currently being introduced within Wales. The LDP will eventually replace the Unitary Development Plan (see Glossary) as the primary document which will inform decision making in relation to formal development proposals (ie planning applications).
<b>Municipal wastes</b>	Are defined in different ways. The Council Directive 1999/31/EC on the landfill of waste defines it as "...waste from households as well as other waste which, because of its nature or composition, is similar to waste from households." In Part 2 of Waste Strategy 2000 municipal waste is defined as "...all waste under the control of local authorities or agents acting on their behalf" and this is the definition used in the National Waste Strategy for Wales.
<b>Municipal Waste Management Strategy</b>	Prepared by each local authority in Wales this strategy should provide comprehensive information about waste management in their area.
<b>Precautionary principle</b>	Is used by decision makers in the management of risk. Precaution should be applied where scientific evidence is insufficient, inconclusive or uncertain and where there are indications through preliminary objective scientific evaluation that there are reasonable grounds for concern that the potentially dangerous effects on the environment, human, animal or plant health may be inconsistent with the chosen level of protection (further guidance is provided in the 'Communication from the Commission on the Precautionary Principle' )
<b>Proximity principle</b>	Requires that waste should generally be disposed of as near to its place of production as possible.
<b>Recycling</b>	Involves the reprocessing of wastes, either into the same product or a different one. Many non-hazardous industrial wastes such as paper, glass, cardboard, plastics and scrap metals can be recycled. Special wastes such as solvents can also be recycled by specialist companies, or by in-house equipment.
<b>Recycling Parks</b>	See CA sites
<b>Reduction</b>	Achieving as much waste reduction as possible is a priority action. Reduction can be accomplished within a manufacturing process involving the review of production processes to optimise utilisation of raw (and secondary) materials and recirculation processes. It can be cost effective, both in terms of lower disposal costs, reduced demand for raw materials and energy costs. It can be carried out by householders through actions such as home composting, re-using products and burying goods with reduced packaging.
<b>Regional waste plans</b>	They are prepared by 'joint local authority arrangements' between local authorities in the same region and address the comprehensive list of criteria set out in TAN 21. The Regional Waste Plan for North Wales is the North Wales Regional Waste Plan (2004) which was reviewed and amended in 2008 (North Wales Regional Waste Plan First Review).

<b>Re-use</b>	Using a product again for the same or a different use. Furniture and some electrical goods are often capable of being re-used and many community and voluntary sector groups are actively involved in facilitating re-use of such items. It can be practised by the commercial sector with the use of products designed to be used a number of times, such as re-usable packaging. Householders can purchase products that use refillable containers, or re-use plastic bags. The processes contribute to sustainable development and can save raw materials, energy and transport costs.
<b>Residual Waste</b>	This is that proportion of waste which is left over after waste treatment
<b>Separate collection</b>	Kerbside schemes where materials for recycling are collected either by a different vehicle or at a different time to the ordinary household waste collection.
<b>Special waste</b>	The Special Waste Regulations 1996 (as amended) define special waste as: ‘...Wastes on the Hazardous Waste List displaying hazardous properties; any other controlled wastes displaying defined properties (e.g. irritant) and waste prescription only medicines.’
<b>Sustainable development</b>	Development which is sustainable is that which can meet the needs of the present without compromising the ability of future generations to meet their own needs.
<b>Sustainable waste management</b>	Requires that waste management should be carried out in a way that does not place undue social, economic or environmental burdens on either present or future generations and that ensures social equity, effective protection of the environment, the prudent use of natural resources and the maintenance of high and stable economic growth and employment. The aim is to de-couple waste production from economic growth.
<b>Technical Advice Note 21 (TAN 21)</b>	‘Planning Policy Wales’, published in November 2001, provides advice on how the land use planning system should contribute to sustainable waste management.
<b>Unitary Development Plan</b>	This is the land use plan of the local authority which is used to assess and to inform determination of formal proposals for development. In Flintshire the UDP has yet to be adopted but it is currently in the latter stages of progression. It is anticipated that the plan will be adopted by 2010/11.
<b>Waste</b>	Is defined in Council Directive 75/442/EEC on waste as meaning “.....any substance or object in the categories set out in Annex I which the holder discards or intends or is required to discard.” Annex I of the Directive lists 16 categories of waste, including ‘agricultural, household, office, commercial and shop discards’. Waste defined by the Directive is referred to as ‘Directive waste’.
<b>Waste arisings</b>	The amount of waste generated in a given locality over a given period of time.
<b>Waste transfer station</b>	A site to which waste is delivered for sorting prior to transfer to another place for recycling, treatment or disposal.
<b>Welsh Assembly Government (WAG)</b>	Often referred to in the strategy as ‘the Assembly Government’ or ‘WAG’, consists of the Cabinet, Ministers and civil servants working for the devolved administration in Wales.
<b>Welsh Local Government Association (WLGA)</b>	Represents all 22 unitary local authorities and exists to serve its members and promote local democracy.

## Appendix 1 | Recycling and composting targets in detail

**1.1** Local targets are based on a stepped approach to meet national targets as set out in section 4.4. These are reviewed on a monthly basis through service plans.

Target	Total	Recycle	Compost
Local & National 2008/ 09	35%	20%	15%
WAG 2009/10	40%	25%	15%
WAG 2010/11	45%	30%	15%
WAG 20011/12	50%	35%	15%

**1.2** Introduction of Food specific target in addition to recycling and composting target

**1.3** The Welsh Assembly Government has now concluded its consultation on proposed targets for a New Waste Strategy for Wales as set out in 'Towards Zero Waste'. The targets are set out below in relation to waste minimisation and landfill diversion and will be used to inform this strategy.

**1.4** Targets are based on the percentage of total municipal waste arising.

Target	Total	Recycle & compost	Food
Local & national			
WAG 2012/ 13	52%	40%	12%
WAG 2013/ 14	51.75%	39%	12.75%
WAG 2014/ 15	54.25%	41%	13.25%
WAG 2015/ 16	58%	44%	14%
WAG 2016/ 17	59.5%	45%	14.5%
WAG 2017/ 18	61%	46%	15%
WAG 2018/ 19	62.5%	47%	15.5%
WAG 2019/ 20	64%	48%	16%
WAG 2020/ 21	65%	49%	16%
WAG 2021/ 22	67%	51%	16%
WAG 2022/ 23	69%	53%	16%
WAG 2023/ 24			
WAG 2024/ 25	70%	54%	16%

**2009/ 10** a minimum of 40% recycling of which 15% compost

**2012/ 13** a minimum of 52% recycling of which 12% food (Statutory)

**2015/ 16** a minimum of 58% recycling of which 14% food

**2019/ 20** a minimum of 64% recycling of which 16% food

**2024/ 25** a minimum of 70% recycling of which 16% food

**2012/13** a maximum of 295kg per inhabitant per annum

**2015/ 16** a maximum of 258kg per inhabitant per annum

**2019/ 20** a maximum of 210kg per inhabitant per annum

**2024/ 25** a maximum of 150kg per inhabitant per annum

**2015/ 16** a maximum of 42% Energy from Waste (EfW / CHP)

**2019/20** a maximum of 36% Energy from Waste (EfW / CHP)

**2024/ 25** a maximum of 30% Energy from Waste (EfW / CHP)

**2019/ 20** a maximum of 10% landfilled

**2024/ 25** a maximum of 5% landfilled

## Appendix 2 | Details of FCC municipal waste collection services

---

### Refuse Collection

- 2.1 Household waste is collected in black sacks weekly. The service is carried out by Flintshire's Direct Service Organisation (DSO). In March 2009 there were 66, 262 domestic properties.
- 2.2 The in-house DSO is subject to the Councils policies and plans and has set performance targets, which are reviewed within the Council Service Plans which align to the National Assembly for Wales Performance Indicators (NAWPIs).

### Paper Collection – Blue Bag Collection Scheme

- 2.3 A kerbside collection of paper (Newsprint, magazines) and card is provided to approximately 64,300 households across Flintshire (97% coverage). Collection is on a fortnightly basis using re-usable blue plastic sacks and dedicated collection vehicles which are operated by the DSO. All paper and card is then dispatched to UPM Kymmene, Shotton Paper Mill for reprocessing.

### Dry Recyclate - Blue Box Collection Scheme

- 2.4 The kerbside collection scheme for the collection of source separated dry recyclables commenced in July 2001, funded initially by the Landfill Tax Credit Scheme. The scheme was offered to 7,500 households on a pilot basis for the collection of glass, plastics bottles, cans/tins and textiles using 55L blue boxes, which are emptied on a fortnightly basis. The blue box scheme has undergone continuous expansion and is now offered to 97% of households (64,300). Due to market constraints, the scheme no longer collects textiles.
- 2.5 Two reusable polypropylene sacks for the collection of cans (50L capacity) and plastic bottles (80L capacity) at the kerbside were introduced in 2009 in response to the potential single use bag tax proposed by WAG. Regular use of these sacks by Flintshire residents allows the 55L blue box to contain glass for collection.

### Organics Collection (Green Garden Waste) – Brown Bin Scheme

- 2.6 A collection service for organic garden waste was introduced in April 2003 and through continued expansion is now offered to 82% (54,200) of the properties in the County. Organic garden waste is collected using a 140 litre wheeled bin and the service is provided on a fortnightly basis during the summer months (February to December) reducing to a monthly service during January. This service is operated by DSO as part of the overall waste collection contract. All green waste collected is taken to the Open Windrow Composting facility in Greenfield which opened in 2002. The green waste is shredded, and then arranged in long piles (windrows), which accelerate the decomposition of the material. The temperature of the windrow is monitored and the windrow is turned every few weeks to add Oxygen to the pile. The windrow is turned on average between 3 to 5 times, and then the material is screened to different sizes 40mm down to 10mm. The finished product is a nutrient rich Soil Conditioner and goes to Rhyg Organic Farm in Corwen.

## Organics Collection – Parks and Gardens

2.7 Skips are provided to the Parks and Gardens team for the collection of green organic waste generated through their service. This waste is also processed at FCC's open windrow composting facility at Greenfield.

## Bring Sites

2.8 Flintshire provide 26 bring bank sites, which are community based facilities for householders to deposit their recyclables. Banks are provided for paper, glass, plastic, cans, textiles, shoes and books.

2.9 Sites are managed by the Council with the collection of some recyclable materials being sub-contracted.

## Recycling Parks (Household Waste Recycling Centres)

2.10 There are currently 8 Recycling Parks within Flintshire situated in:

- ▶ Buckley,
- ▶ Connah's Quay,
- ▶ Flint,
- ▶ Greenfield,
- ▶ Mold,
- ▶ Hope,
- ▶ Queensferry,
- ▶ Saltney

2.11 The Saltney site is a 100% recycling site (since April 2005) which now only receives recyclable wastes.

2.12 Historic provision of sites resulted in a concentration of Recycling Parks in the centre and East of the County. The Greenfield site opened in October 2005, which provides a state of the art, ten bay split level facility, to the West of the County.

2.13 AD Waste Ltd the Local Authority Waste Disposal Company (LAWDC) has managed the contract for these sites since July 2005, under a performance based management contract with a requirement to recycle in excess of 40%. With continual year on year improvements, the HWRC's presently divert 67% of all waste received for reuse, recycling or composting.

## Trade Waste

2.14 A trade waste collection service is provided by the DSO within the waste collection contract, collecting residual waste from approximately 1000 business premises. The collections use a mixture of wheeled bins and sacks and charges vary accordingly.

2.15 Recycling services are also provided for trade customers. Glass is collected from a series of bring banks situated on commercial premises; there are approximately 8 such sites. These sites not only provide a means of recycling for the commercial customers but also for FCC residents in the surrounding areas.

## Bulky Waste Collection

2.16 A Bulky Waste Collection service is available on request for large items of furniture, which are not classed as regular weekly domestic waste.

**2.17** This is a free service, for certain items, for householders in receipt of benefits, namely Income Support, Job Seekers Allowance, Disability Living Allowance or State Pension. A minimal charge is made to residents not receiving benefits, £10.00 for up to 5 items and £2 per item thereafter. There is a limit of 10 household items (or up to 20 bin bags) in a twelve month period.

**2.18** Additional garden waste and shed clearances are quoted on an individual basis.

## **Schools Recycling**

**2.19** All Schools in Flintshire are offered dry recycling collections, which are linked in with the kerbside schemes.

## **Clinical Collection**

**2.20** Flintshire County Council provides a Clinical Waste Collection for residents receiving care in the community. This is a weekly collection carried out over a 3/4 day cycle to approximately 1500 households in total.

## **Fly Tipping**

**2.21** Flintshire County Council has a dedicated enforcement team, within the Environmental Services department, who investigate incidents of illegally fly-tipped rubbish on public land and incidents of trade waste abuse. Working with the EA, the Council are committed to tackling this problem through a combined approach involving both education and enforcement.

**2.22** There is a dedicated vehicle and team operated by the DSO to respond to fly-tipping incidents. On average, the majority of fly-tipping incidents in Flintshire are cleared within three working days. Larger fly-tips often require the use of specialist machinery and equipment.

## **Abandoned Vehicles (AVs)**

**2.23** The dedicated enforcement team also investigate reports of abandoned vehicles. Flintshire County Council has the powers to remove vehicles abandoned on the highway under the Refuse Disposal (Amenity) Act 1978. The previous owners of the vehicle must be traced and contacted before it can be sent for disposal.

**2.24** Working in partnership with the Police, Fire Services and a licensed vehicle disposal company, a Vehicle Amnesty has been set up in Flintshire for the free disposal of unwanted vehicles.

## **Provision of Dog Bins**

**2.25** The County has approximately 560 dog fouling bins. These bins are placed in areas of the County following consultation with the public and Town and Community Councils. The dogs bins are emptied by the DSO on a weekly schedule which is dependant on the frequency of use; some are emptied twice a week accounting for 560+ empties every week.

## **Market Clearances**

**2.26** The DSO is also responsible for the removal of waste from Flintshire markets. This is collected on a scheduled basis from Mold, Connah's Quay, Holywell and Flint weekly markets.

## Appendix 3 | Details of private recycling operators contracted by Flintshire County Council in servicing captured recyclables

3.1 Flintshire is committed to meet the principles set out in Annex 5 and 7 of the Waste Framework Directive which advocates waste is treated as close to source as possible, with the aim to achieve self-sufficiency at a regional/or sub regional level – as known as the proximity principal. The majority of the current recycling outlets are within a 50 mile radius of Flintshire. A summary of out outlets for materials collected via the Kerbside Schemes, Recycling Parks and Bring Sites are summarised below:

Material	Kerbside
<b>Glass</b> Blue Box	<b>Recresco Ltd</b> Manisty Wharf, North Road, Ellesmere Port, Cheshire, CH65 1AB
<b>Paper &amp; Card</b> Blue Bag	<b>UPM-Kymmene (UK) Ltd</b> Shotton Paper, Weighbridge Road, Shotton, Deeside, CH5 2LL  Via Parry and Evans, Sandycroft
<b>Cans (alu)</b> Blue Box & Recycling Parks	<b>Novelis (Alu)</b> Latchford Lock Works, Warrington, Cheshire, WA4 1NP
<b>Cans (steel)</b> Blue Box & Recycling Parks	<b>CansCorus, Via the Can Route Centre – European Metal Recycling Ltd Rochdale (Steel)</b> Uncouth House, Uncouth Road, Milnrow, Rochdale, OL16 3DD
<b>Garden Waste</b> Brown Bin & Recycling Park	<b>AD Waste Ltd</b> Greenfield Windrow Composting Site, CH8 7HT
<b>Yellow Pages School Comp</b>	<b>Parry &amp; Evans (recycled at Shotton Paper)</b> Severn Farm Ind. Est., Welshpool, Powys, SY21 7DF

Material	Bring sites/ recycling parks
<b>Books</b>	<b>Oxfam</b> Donated Products Sourcing, Office 281-283, Fulwood Road, Sheffield, South Yorkshire, S10 3BD  <b>British Heart Foundation</b> Collected through a regional hub
<b>Glass</b>	<b>Glass Recycling UK Ltd</b> 418 Carlton Road, Carlton, Barnsley, South Yorkshire, S71 3HX
<b>Paper</b>	<b>UPM-Kymmene (UK) Ltd</b> Shotton Paper, Weighbridge Road, Shotton, Deeside, CH5 2LL



<b>Material</b>	<b>Bring sites/ recycling parks</b>
<b>Plastic bottles</b>	<p><b>Intercontinental Recycling Ltd</b> Gerrard Place, East Gillibrands, Skelmersdale, Lancashire, WN8 9SU</p> <p><b>Eurokey Recycling</b> Quartz Close, Warren Industrial Estate, Enderby, Leicestershire, LE19 4SG</p> <p><b>JFC Plastic Ltd</b> Hardwick Road, Astmoor Industrial Estate, Runcorn, WA7 1P</p>
<b>Cans</b>	<p><b>Dobbins, P, (Chester) Limited</b> British Railways Buildings, Saltney Ferry, Flintshire</p> <p><b>Solid Cast</b> Raglan Street, Hyde, Cheshire, SK14 2DX</p>
<b>Shoes</b>	<p><b>The European Recycling Company</b> Whitehead House , 120 Beddington Lane, Croydon, Surrey, CR9 4ND</p>
<b>Textiles</b>	<p><b>Oxfam</b> Donated Products Sourcing, Office 281-283, Fulwood Road, Sheffield, South Yorkshire, S10 3BD</p> <p><b>Scope</b> Scope Trading, 25a High Street Knaresborough, North Yorkshire, HG5 0ET</p> <p><b>Salvation Army Trading Company Limited</b> Recycling Unit, 66-78 Denington Road, Wellingborough, Northamptonshire, NN8 2QH</p>
<b>Batteries</b>	<p><b>G&amp;P Batteries</b> Crescent Works, Willenhall Road, Darlaston, Walsall, West Midlands</p>
<b>Fridges</b>	<p><b>Global Environmental Recycling Company Limited</b> Unit D, Maritime Business Park, Campbeltown Road, Birkenhead, CH4 9BP</p>
<b>Scrap</b>	<p><b>J. Chadwick's &amp; sons</b> Factory Road, Sandycroft, Deeside, CH5 2QJ</p>
<b>Cardboard depot</b>	<p><b>Parry &amp; Evans</b> Severn Farm Ind. Est., Welshpool, Powys, SY21 7DF</p>
<b>Cardboard HWRC</b>	<p><b>Oswestry Waste Paper</b> The Mill, Mile Oak Ind Est, Oswestry, SY10 8HA</p>
<b>Tetra Paks (juice containers)</b>	<p><b>Tetra Pak Ltd</b> Bedwell Road, Cross Lanes, Wrexham, LL13 0UT</p>
<b>Garden waste</b>	<p><b>AD Waste Ltd</b> Greenfield Composting Site, Greenfield Business Park, Greenfield, CH8 7AB</p>
<b>Wood</b>	<p><b>GI Hadfield &amp; Son Ltd</b> Lumm Farm, Littlemoss, Droylsden, Manchester, M43 7LB</p>
<b>Oil</b>	<p><b>Oil Salvage Ltd</b> Lysters Road, Bottle, Merseyside, L20 1AS</p>

<b>Material</b>	<b>Bring sites/ recycling parks</b>
<b>Oil filters</b>	<b>Safety Kleen UK Ltd.</b> Unit 2, Broughton Mills, Broughton, Flintshire, CH4 0BY
<b>Tyres</b>	<b>DME Tyres</b> Unit 1, Ring Road, Zone 2, Chase Terrace, Burntwood, Staffs, WS7 8JQ
<b>Fluorescent tubes / bulbs</b>	<b>Lampcare</b> Unit C, River Way, Maede Park Ind. Estate Harlow, Essex, CM20 2SE
<b>WEEE</b>	<b>ERP GEODIS (Compliance Scheme)</b> Unit D, Maritime Business Park, Campbeltown Road, Birkenhead, CH4 9BP  <b>Global</b> CF40 1HZ  <b>Waste Technique</b> Apollo House, Penygraig Industrial Estate, Dinas Road, Penygraig, Tonypany, M5 4LQ  <b>EMR</b> Uncouth Road, Milnrow, Rochdale, Lancashire
<b>Asbestos</b>	<b>Ineous Clor</b> Runcorn Site, PO Box 9, Runcorn, WA7 2JE

## Appendix 4 | Waste compositional analysis

4.1 Eunomia were commissioned by WAG to conduct a Waste Compositional Analysis (WCA) on a number of Welsh Authorities. This informed WAG's Revised Future Directions' paper April 2009, which is the consultation document released prior to the publication of the new Waste Strategy for Wales. The methodology of this analysis has been questioned as it is not representative of all Welsh Local Authorities current collection services and resident behaviour. As a result WAG has funded WRAP to undertake individual Local Authority waste compositional analysis.

### The National Results of the Waste Compositional Analysis

Material	AEA	Eunomia
Newspapers and magazines	9.0%	7.2%
Recyclable paper	2.1%	1.9%
Cardboard boxes/containers	5.1%	5.3%
Other paper and card	4.8%	5.2%
Refuse sacks and carrier bags	1.3%	1.4%
Packaging film	1.3%	1.5%
Other plastic film	0.2%	0.2%
Dense plastic bottles	1.7%	1.8%
Other packaging	1.5%	1.7%
Other dense plastic	1.3%	1.5%
Textiles	1.8%	2.1%
Shoes	0.4%	0.4%
Disposable nappies	2.3%	2.5%
Wood	2.8%	3.6%
Carpet and underlay	1.5%	1.7%
Furniture	1.5%	1.5%
Other misc. combustible	3.6%	2.1%
Packaging glass	5.3%	5.3%
Non-packaging glass	0.5%	0.5%
Garden waste	12.7%	10.5%
Food and kitchen waste	15.7%	17.6%
Other organics	2.1%	2.3%
Ferrous food and beverage cans	1.7%	1.9%
Other ferrous metal	3.1%	2.2%
Non-ferrous food and beverage cans	0.3%	0.4%
Other non ferrous metal	0.5%	0.6%
White goods	0.8%	0.9%
Large electronic goods	0.2%	0.2%
TVs and monitors	0.3%	0.3%

<b>Material</b>	<b>AEA</b>	<b>Eunomia</b>
Other WEEE	0.7%	0.7%
Lead/acid batteries	0.2%	0.2%
Oil	0.1%	0.1%
Identifiable clinical waste	0.2%	0.2%
Other potentially hazardous	0.3%	0.3%
Construction and demolition waste	5.2%	5.2%
Other MNC	2.8%	1.2%
Fines	5.2%	5.7%
Mixed waste	0.0%	2.0%
<b>Total</b>	<b>100%</b>	<b>100%</b>

Sources:

*AEA Technology, MEL Research, Waste Research and WRc (2003) The Composition of Municipal Solid Waste in Wales, Report to the Welsh Assembly Government, December 2003.*

*Eunomia, Dr Dominic Hogg, Dr Jessica North, Hannah Montag and Joe Papineschi, Scoping New Municipal Waste Targets for Wales, Report to the Welsh Local Government Association, September 2007*

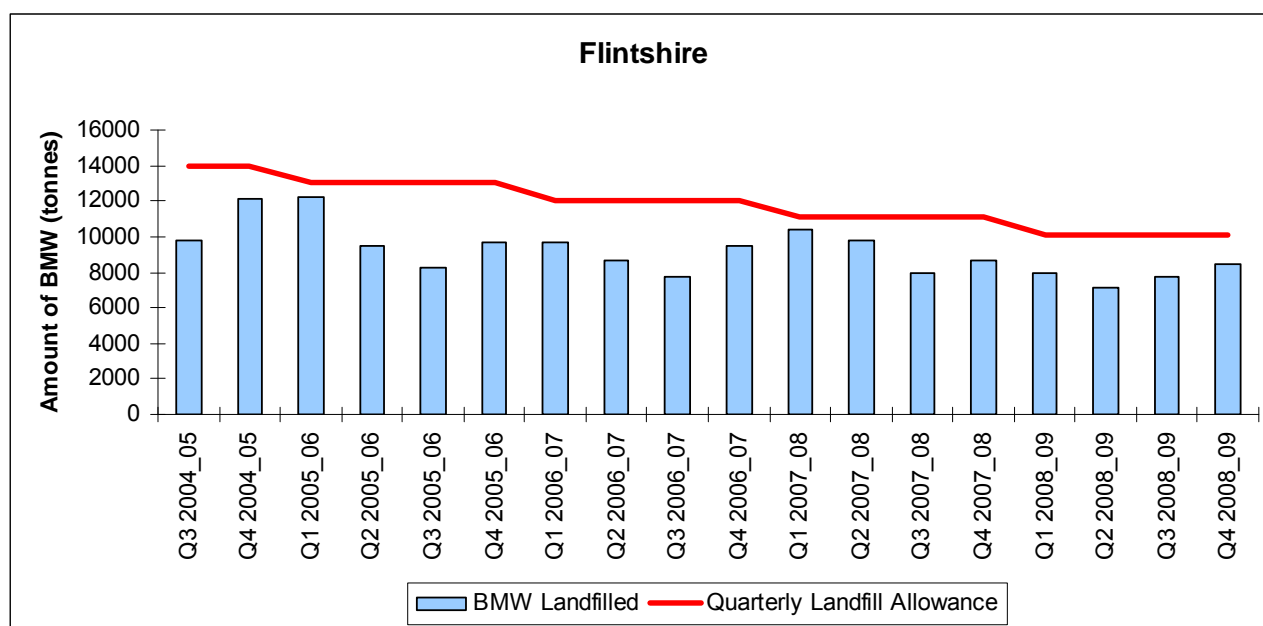
- 4.2** Flintshire is currently undertaking a full Waste Compositional Analysis during the summer and winter of 2009/10 as part of the WAG's and WRAP exercise. The analysis will adhere to the Protocol set by WAG.
- 4.3** The analysis will examine all materials recycled and composted through various services provided, it will also analyse the materials left in the residual waste stream, which will help identify potential resources which could be recovered, and diverted from landfill.
- 4.4** Initial results will be available from the autumn, which update this section.

## Appendix 5 | Miscellaneous detailed waste figures

### Landfilled Waste in comparison with the Landfill Allowance Scheme 2004-2009

Year	Quarter	BMW landfilled	Quarterly landfill allowance	Annual BMW landfilled	Annual landfill allowance	Difference
04_05	Q1 2004_05					
04_05	Q2 2004_05					
04_05	Q3 2004_05	9834	13977			-4143
04_05	Q4 2004_05	12142	13977	21976	27953	-1835
05_06	Q1 2005_06	12267	13005			-738
05_06	Q2 2005_06	9513	13005			-3492
05_06	Q3 2005_06	8276	13005			-4729
05_06	Q4 2005_06	9685	13005	39741	52021	-3320
06_07	Q1 2006_07	9706	12034			-2328
06_07	Q2 2006_07	8618	12034			-3417
06_07	Q3 2006_07	7705	12034			-4329
06_07	Q4 2006_07	9481	12034	35508	48136	-2553
07_08	Q1 2007_08	10382	11063			-681
07_08	Q2 2007_08	9820	11063			-1243
07_08	Q3 2007_08	7903	11063			-3160
07_08	Q4 2007_08	8660	11063	36764	44252	-2403
08_09	Q1 2008_09	7980	10091.75			-2111
08_09	Q2 2008_09	7126	10091.75			-2965
08_09	Q3 2008_09	7794	10091.75			-2298
08_09	Q4 2008_09	8431	10091.75	31332	40367	- 1661

**A Graphical Illustration of Landfilled Waste in comparison with the Landfill Allowance Scheme 2004-2009**



**Actual and Projected Flintshire Waste Arisings 2002-2020**

	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008
Waste arising	96,502	98,147	100,071	92,062	91,230	93,656

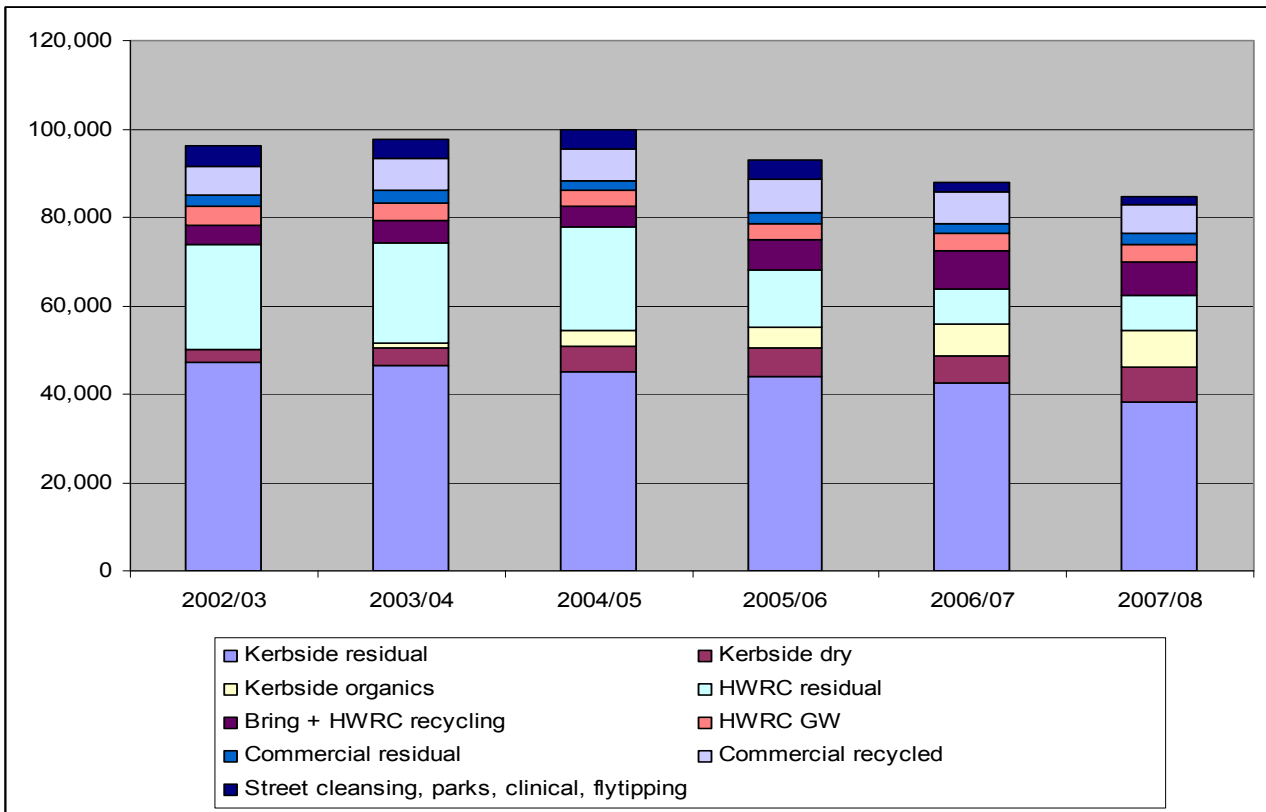
	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
Waste arising	94,593	89,774	89,953	90,313	90,855	91,400

	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
Waste arising	91,948	92,500	92,870	93,241	93,614	93,989

Growth rates have been calculated in accordance with the NWRWTP growth rate projections.

**A breakdown of waste arising types**





## Appendix 6 | Details of the waste management strategy schemes

---

### Reduce

6.1 Minimising waste is top of the waste hierarchy. Recycling can help save materials and energy, however cutting down on waste in the first place is even better. Approximately 18 per cent of household waste is packaging from retail purchases. Shopping carefully, avoiding disposable bags, and choosing re-usable products are just some of the ways in which waste can be avoided.

### Home Composters

6.2 Garden and kitchen waste can be composted at home. More than a third of household rubbish is organic, including garden and kitchen waste. If sent to landfill, organic waste produces methane which is 23 times more potent than carbon dioxide in greenhouse gas terms. Flintshire is committed to subsidising home composters to help residents compost at home.

### Council Procurement Policy–

6.3 The council is committed to reducing the amount of waste it generates and will focus on green procurement which includes looking at the lifecycle of the product and buying where possible products made from recycled materials. The council is working to enhance the County's Green Dragon Award which is an environmental management system.

### Tackling Junk Mail

6.4 Working in partnership with Waste Awareness Wales, Flintshire is committed to promoting the mail preference service, in which residents sign up to refuse junk mail and can set up procedures to stop former resident's mail being sent.

### Working with businesses/mmanufacturer's

6.5 Working in partnership with WLGA, to lobby the British Retail Consortium to reduce the amount of packaging used in manufactured goods. FCC provide advice to local businesses on managing waste sustainably without wasting resources.

### Reuse

6.6 Reusing waste is generally overlooked due to our current lifestyles, we tend to use items once then discard or replace them, rather than reusing or repairing.

### Reuse and Repair Organisations

6.7 The Council is not the only organisation that can promote and encourage waste minimisation throughout the County. There are many groups within the community that are well placed to take forward initiatives that lead to waste minimisation, either through the promotion of 're-use' of unwanted items, or the elimination of waste at source. There are a number of local groups already active in Flintshire. The Council recognises the important part these local initiatives play in the management of waste within Flintshire and we intend to support these schemes where possible. Examples include Household Goods Reuse Organisations and Exchange websites.

## Reusable nappies

- 6.8 In Wales approximately 200 million disposable nappies are thrown away every year, the majority of which end up in landfill sites. It can take hundreds of years for them to biodegrade in landfill sites. Reusable nappies can help reduce a families waste arising by almost 50%. The council will look into financial incentives to help families change from disposable nappies and will continue to promote the use of reusable nappies.

## Recycle

- 6.9 Recycling is the reprocessing of wastes, either into the same product or a different one. Recycling reduces the demand for raw materials, reducing the environmental impact of extraction and transportation.

## Participation Rates

- 6.10 Following a monitoring exercise, minimum targets have been set (Section 4.5). This will be achieved through education and awareness raising activities. (See Appendices 7 for further details.)

## Awareness Raising Campaigns for Households

- 6.11 The aim will be to establish what prevents residents from participating and to help to breakdown any barriers they perceived to be there. This will be conducted through various techniques such as questionnaires. This will also be a good way of obtaining feedback on the services provided by the Council.

## Internal and Public Sector Recycling Service

- 6.12 Flintshire is committed to improve the management of wastes within their offices and premises. The procurement team have been given the responsibility to consider the lifecycle of any products purchased. Flintshire is also working towards the Green Dragon Environmental Management System, which is accredited to ISO 14001.

## Improvements to Recycling Parks

- 6.13 Currently approximately a quarter of Flintshire's household waste is collected through the 8 Recycling Parks. In 2008/09 the sites collectively diverted 67%. Flintshire is dedicated to continue the success achieved to date through implementing the following improvements:
- ▶ Review Meet and Greet at the Gate
  - ▶ More advice over materials which can be reused and recycled
  - ▶ Increase numbers of compactor skips, which minimise skip movements (9 tonnes of waste collected rather than 4.5 tonnes)
  - ▶ Increase material streams (market dependant)
  - ▶ Improve layout of sites
  - ▶ New state of the art, split level facility at Sandycroft
  - ▶ Review of Recycling Parks
  - ▶ Improve Signage at all sites

## Improvements to Bring Sites

- 6.14 There are 26 Bring sites throughout Flintshire, the location of these sites are to reviewed to ensure that householders outside the 5 mile radius of a Recycling Park have facilities to maximise recycling opportunities. The council will also discuss with Town and Community Councils the possibility of community adoption of the sites, so they become part of community life.

## **Food waste collections**

**6.15** To meet the food specific targets set by Welsh Assembly Government (WAG) and maximise diversion of Biodegradable Municipal Waste (BMW) from landfill, Flintshire will commence weekly collection of food waste once an outlet to treat food waste is secured. Flintshire is committed to the sub regional partnership with Conwy and Denbighshire to procure an Anaerobic Digester Facility. Flintshire County Council will provide residents with a 7litre kitchen caddy with compostable liners, which will be collected in a 23 litre kerbside container. All residents will be provided with detailed literature and supported by advice through the website and through the Customer Services and Recycling Teams.

## **Weekly Recycling**

**6.16** To maximise recycling opportunities and to increase participation, the frequency of collection will need to increase from fortnightly to weekly. This will ensure that recycling becomes standard practice and take precedence over residual waste disposal.

## **Managed Weekly Collections / ABC Service (Alternate Bin Collection)**

**6.17** Following the introduction of weekly food waste collections and weekly recycling collections, the amount of waste in the residual black sack will be minimised, therefore changing the collection patterns would ensure best value and provide a sustainable solution. The residual waste collections would be collected one week, followed by the green waste brown bin on the same day on the following week. This is essential to meet 50% targets; other LA's that have introduced this has seen a 10% to increase in their recycling performance

**6.18** It is our intention to keep services simple but within a framework of continual evolution, so that they provide a modern, cost effective and reliable service to our customers. This will involve regular reviews of collections methodology, round information and learning from others who undertake best practice. All of this will ensure we deliver a best value service which has a reducing ecological footprint.

**6.19** We intend to continue our development of market opportunities for other materials. Working along side industry to enhance any opportunities for outlets for materials collected. The council is committed to the proximity principal when securing markets.

## **Enforcement**

**6.20** Flintshire has an established enforcement team for fly tipping and abandoned vehicles. The council has legislative powers to enforce recycling and prevent waste being put out too early.

## **Weigh residual waste**

**6.21** Within the consultation process undertaken by WAG, the targets that have been propose may necessitate the introduction of Direct and Variable Charging / Pay as You Throw (PAYT) schemes, whether this be at a National or Local level.

## Recover

6.22 To ensure that any resources left in waste stream are diverted from landfill, recovery opportunities will be undertaken. This will help towards meeting our obligations to reduce Flintshire's carbon and ecological footprint.

### Material Recovery Facility

6.23 Flintshire is committed to using facilities for maximising the recovery of any material which can be reused, recycled or composted. A small material recovery facility is in operation in Buckley; general waste skips from the Recycling Parks are sorted, to maximises recovery opportunities.

### Anaerobic Digestion Plant

6.24 Flintshire is part of a sub regional partnership with Conwy and Denbighshire to procure an Anaerobic Digester for Food waste treatment, which creates different outputs that can be recovered; Digestate – can be used as a biofertiliser; Biogas (mostly carbon dioxide and methane) can be sold as a bio fuel or combusted to generate electricity which is eligible for Renewable Obligation Certificates (ROCs) - a financial incentive.

### North Wales Residual Waste Treatment Partnerships (NWRWTP)

6.25 Flintshire County Council is the Lead Authority on the procurement of residual waste management facilities within North Wales. The partnership includes: Conwy County Borough Council, Denbighshire County Council, Flintshire County Council, Gwynedd Council and Isle of Anglesey County Council.

6.26 Some examples of resource recovery and treatment technologies for residual waste are:

- ▶ Mechanical Biological Treatment (MBT)
- ▶ Mechanical Heat Treatment (MHT)
- ▶ Waste to Energy (W2E)
- ▶ Combine Heat and Power (CHP)
- ▶ Advanced Thermal Treatment (ATT)

6.27 It has been suggested that eventually there may be a joint waste strategy for the residual element between the partnering authorities. This option offers significant public value for money and will continue to be explored with our regional partners.

### Landfill Gas Recovery

6.28 Landfill Gas is already captured on both Brookhill and Standard Landfill sites. This process captures methane gas which is more potent than carbon dioxide. The methane is used to generate electricity which is utilised on site, with the remainder sold back to the National Grid.

## Dispose

6.29 Following waste minimisation, reuse, and recycling initiatives, Flintshire aims to manage the materials remaining in the waste stream in a more sustainable way.

6.30 Flintshire landfill site at Brookhill closed December 2007. Flintshire's residual waste is bulked up using the transfer pad at Brookhill, to minimise the amount of vehicle movements required and is hauled using a twin hub system. Flintshire currently transports residual waste to a landfill site in Wrexham.

6.31 A key objective if this Strategy is to reduce the reliance on landfill. Through the NWRWTP, all the partnering LA's residual waste will be treated. However landfill facilities will still be required in the future

for residues from the treatment process, but only as part of a more sustainable network of waste management facilities.

## Appendix 7 | Raising public awareness and increasing participation

---

- 7.1** The success of the Flintshire Municipal Waste Strategy is dependant on changing attitudes and perceptions to waste. There is a need to encourage active participation from every resident in Flintshire, in reducing waste and increased recycling through the Council services. It is the intention that these waste management practices become embedded (through habit) and become an integral part of everyday living.
- 7.2** Flintshire has established education and awareness schemes already in place, however to further enhance behavioural change, it is essential that increased development and resources are in place to ensure such initiatives succeed.

### Case Studies – examples of current successful initiatives

#### **Raising awareness and changing behaviour of young people:**

Flintshire Recycling Team has a dedicated officer who runs Recycling Awareness Workshops (R.A.W), which are available to all infant and junior schools and local youth community groups. The aim of the workshop is to develop the pupils understanding of the waste hierarchy, environmental issues and sustainable development. The workshop includes a fun and informative presentation to give a background about waste and best practices for waste management. This is followed by an interactive 'Life Cycle Analysis' of the materials found in the household waste stream – source, usage, recycling and disposal option. The workshop finishes with an entertaining quiz which reinforces key issues and also provides the pupils with interesting facts about recycling and waste minimisation.

#### **Recycling and Promotions at key events:**

In 2007 Flintshire hosted the annual Eisteddfod. FCC Environmental Services provided recycling collection facilities around the showground and campsites for visitors. This was promoted through clear labelling, WAW signage, leaflets and an enthusiastic workforce on site. The recycling team also had a dedicated section within the main FCC corporate tent to promote all aspects of the waste hierarchy, with the main theme of explaining what happens to all the materials after they have been collected. This was an ideal platform to demonstrate Flintshire's best practices to all of Wales, and set a precedent for future events. FCC has an annual presence at the largest agricultural show in North Wales; The Flint and Denbigh Show and regularly attends fates and shows across the county on an ongoing basis.

### Door Stepping Campaigns

- 7.3** Flintshire will dedicate a team to visit residents throughout Flintshire to help improve participation rates and to promote the waste services provided. Attitude and Awareness Surveys will continue to be undertaken to identify any potential barriers to non participation, and to gain feedback on the services provided. The aim is to raise awareness of sustainable waste management and encourage residents to participate. This will also help to ensure the services we provide are continually improved and are customer focused.

## Schools

### Talks and workshops

7.4 Building upon success achieved to date, Flintshire is committed to maintaining links with schools to improve waste awareness. The Recycling team has a dedicated Officer who works with schools to promote sustainable waste management, additional resources are needed to develop this area. The aim is to provide an understanding of the lifecycle of products, the composition of the materials used, and the recycling, reprocessing and treatment of the product once it has been discarded. Workshops and talks are offered to schools at various levels; from Infants through to Sixth Form and Colleges, with links to the curriculum.

### Eco Schools

7.5 The Eco –Schools programme is an international environmental award scheme for schools, rewarding and accrediting schools that have made a commitment to continuously improve their environmental performance. The aim of the Eco-Schools programme is to make environmental awareness and action an intrinsic part of the life and ethos of the schools; both pupils and staff and the wider community. Flintshire has trained Eco School Assessors to help promote and assess schools towards Eco-Schools status, to date Flintshire has 22 schools awarded with the Green Flag, 1 school has been awarded with permanent status.

### Lesson Plans

7.6 The Recycling team aims to provide lesson plans to schools and out of school groups to assist in improving waste awareness in schools.

### Awards/Achievements

7.7 Flintshire would like to introduce an award scheme to recognise the achievements in schools and their commitment to recycling, composting and waste minimisation initiatives.

### School Visits

7.8 To enhance the learning and understanding of sustainable waste practices, Flintshire also facilitates schools visits to Flintshire's Composting Site, Recycling Parks and Landfill Sites. These visits provide a valuable insight into the management of Flintshire's waste, both past and present and the impact it has on local environments and demonstrates to pupils the need to live more sustainably.

### Community and Out of School Groups

7.9 Similar to the schools workshop, Flintshire works with all ages of out of school groups such as youth clubs and the scout movement. The aim is to undertake fun and interactive activities which help promote waste awareness. These activities also help scouts and guides groups towards achieving Badges linked to the environment.

7.10 As community groups range in ages, presentations and workshops are tailored to the needs of the group e.g. W.I, Youth Clubs, Tenant and Residents etc. They provide excellent opportunities to discuss waste management practices and provide feedback on the services we provide. These talks assist in spreading the message to the local community.



## Key Corporate Events

7.11 Using the promotions trailer, Flintshire actively participates in any Corporate Event including the Tenants and Residents Seminar, Denbighshire and Flintshire Show and other events in the County e.g. The Caerwys Show, to engage with residents and promote sustainable waste practices. These events provide a platform to highlight any issues or new initiatives throughout the County. Flintshire also offers recycling facilities for any event in Flintshire, to encourage recycling and assist in the diversion of materials from landfill.

## National Campaigns

7.12 Working with Waste Awareness Wales (WAW) and the Waste Resources Action Programme (WRAP). Flintshire actively promote and support National Campaigns including the Big Recycle Week, Nappy Week, and National Composting Week. These National Campaigns focus on specific Waste Management themes and provide excellent publicity to a wider audience, through all types of media including Television, Internet, Newspapers and Radio. Flintshire promotes National themes along with local initiatives.

## Information Leaflets

7.13 To help, advise and promote services, Flintshire is committed to providing home recycling information packs to residents to ensure sustainable waste management and an increase in participation. This will include detailed information on all waste services provided by Flintshire and an A-Z of Recycling and Composting explaining which materials can be recycled, reused, composted and where.

## Media Links

7.14 The publicity of Sustainable Waste Management Services is very important to increase awareness of facilities and participation in our collection services and is critical in achieving targets set. Flintshire works with various media organisations to promote sustainable waste management practices including:-

- ▶ Monthly articles in local papers
- ▶ Articles in Flintshire County Council's publication 'Your Community Your Council'
- ▶ Inserts in Local and Town Council Magazines and schools newsletters.
- ▶ Links with Waste Awareness Wales Television and Radio Adverts
- ▶ Press releases
- ▶ Website Improvements

## Campaign Trailer

7.15 The customised campaign trailer is used as a mobile unit for awareness raising campaigns. The trailer is utilised at Local Events, such as Community Shows, Mold Food Festival and Corporate Events as listed previously. It provides an ideal facility to promote waste minimisation, recycling and composting. The trailer is also utilised for promoting recycling in areas of poor participation.

## Marketing

7.16 The marketing of Waste Services is important in creating an identity for the services provided. The Livery on Collection Vehicles has been customised to identify the collection fleet from Council services. The vehicles provide an excellent opportunity to promote sustainable waste practices. The theme

currently used is a thought provoking 'What did you throw away today?' the aim is to continue to utilise the vehicles to convey key motivational messages.

Flintshire also has specific promotional materials with unique branding such as:

- ▶ Recycle for Flintshire
- ▶ 'Out of the Blue'
- ▶ 'What did you throw away today?'



These promotional materials reinforce key messages about sustainable waste management practices and increases awareness to diverting materials from landfill.

## Competitions / Incentive Schemes

**7.17** Flintshire is committed to increasing awareness of waste management through incentive schemes such as competitions and prize draws.

**7.18** Flintshire has promoted the 'Yellow Woods Challenge' which is a fun environmental initiative for schools, set up by Yellow Pages and the Woodland Trust. The aim is to collect and recycle old Yellow Pages directories and the schools with the most collected per pupil win cash prizes. Flintshire has promoted and facilitated this competition for the past 4 years; and has been a great success in diverting BMW from landfill. Prize draws are held annually to help promote the composting of Real Christmas Trees at the Recycling Parks. Any resident who brings their Tree for composting at any of the 8 Recycling Parks can be entered into a prize draw. This has been held for the last 3 years and has helped promote composting at the recycling parks.

**7.19** A future initiative is to work with collection crews to nominate Household Recycling Champions. The aim is to identify residents who actively participate in recycling and composting and reward them for their efforts. It is envisaged this initiative and initiatives like it will increase and encourage the participation of residents in our recycling collection services.

## Local Composting events

**7.20** Home composters are supplied free of charge, as an educational tool to Eco or composting/gardening clubs, this helps children to learn the importance of composting organic materials. Flintshire also intends to run workshops to promote and advise residents on 'how to compost'. The aim is to run hands on sessions for residents to experience and encourage them to compost at home and promote waste minimisation. Links will be made with the local horticultural college.

## **Litter Pickers / Supporting Local Community Clean Up Events**

7.21 Flintshire offers and promotes the loan of litter pickers and high visibility jackets for local clean up events, along with bags for recycling. This raises awareness of the causes and problems of litter and also encourages good waste management practices. The team work in conjunction with Keep Wales Tidy to highlight the issues of litter.

## **Visitor Centres / Eco Parks**

7.22 It is anticipated as part of the North Wales Residual Waste Treatment Project there may be an opportunity for a visitor/education centre. The aim of the centre would be to build upon, complement and add value to the education and awareness activities of the Council. This will be an opportunity to convey wide ranging messages about sustainable waste management and provide an ideal location for training and visits for first hand experience of how Flintshire deals with waste.

## **Partnership Working**

7.23 Flintshire also works in partnerships with other organisations on a frequent basis including:

### **Waste Awareness Wales**

7.24 The Welsh Assembly Government has funded Waste Awareness Wales since 2002 to provide official information to the public about managing materials and resources more sustainably, and reducing waste. They organise National Campaigns and National Advertising on television and radio.

### **Waste & Resources Action Programme (WRAP)**

7.25 WRAP offer local authorities support and resources to help deliver high quality recycling services and waste prevention advice. They provide toolkits and best practices to encourage sustainable waste management.

### **Welsh Local Government Association (WLGA)**

7.26 The WLGA represents all 22 unitary local authorities and exists to serve its members and promote local democracy. The WLGA's primary purposes are to promote better local government and its reputation and to support authorities in the development of policies and priorities which will improve public services and democracy. They have specific Officers for Waste Management and have a close working relationship with Flintshire.

### **Local Authority Recycling Advisory Committee (LARAC)**

7.27 LARAC was formed in 1985 to represent local authority views in waste and recycling issues. Key aims are to inform and lobby key opinion formers and policy makers on members' behalf. To ensure that relevant and timely information is shared amongst LARAC members and that they are consulted on a regular basis. Flintshire has been a member of LARAC for a number of years and find it a very useful organisation for sharing best practices and up to date information on waste management activities both UK and Internationally.

## **Environment Agency (EA)**

7.28 The EA's principal aims are to protect and improve the environment, and to promote sustainable development. They play a central role in delivering the environmental priorities of Central Government and the Welsh Assembly Government. They have responsibility for enforcement and prosecutions. Flintshire works with the EA for fly tipping initiatives along with supplying information regarding waste data through the WasteDataFlow system.

## **Voluntary Sector**

7.29 Flintshire works with many Voluntary and Charitable organisations, such as furniture reuse organisations, textiles reuse schemes and community groups. Flintshire aims to work with organisations to promote sustainable waste management throughout the whole community.

## **Keep Wales Tidy (KWT)**

7.30 KWT aim to encourage action to maintain a cleaner, safer, tidier Wales. Flintshire works with KWT to encourage residents to behave in a responsible manner and to encourage people to take responsibility for their own local environment.

## **Wales Environment Trust (WET)**

7.31 The main aim of the Trust is to 'Develop local markets for recyclate in Wales'. Their Local Government Support Division operates in co-operation with Flintshire and other local government organisations to enable partnerships to best realise the value of their supply of recyclate (recyclable materials). The division can also research and provide information on waste treatment technologies and green procurement initiatives. It also serves to provide a bridge between the public and private sector.

## **Organics Association**

7.32 The Association for Organics Recycling is the leading trade organisation for the biodegradable waste management industry in the UK. It is a valuable source of information relating to organic materials.

## **Local Service Board (LSB)**

7.33 The Flintshire Local Service Board was established in 2008. Its work is based around four principal work streams:

- ▶ Effective and trusting partnership relationships as a set of local leaders
- ▶ Discharging the responsibilities of the LSB - this includes producing a meaningful and fit for purpose Community Strategy
- ▶ Consistent and effective governance and performance of strategic partnerships, e.g., Community Safety Partnership, Health, Social Care and Well Being Partnership, Children and Young People's Partnership and Regeneration Partnership
- ▶ Identifying common issues as public bodies/employers, for example energy use, waste management, training and development