2 BACKGROUND INFORMATION ON WASTE

WASTE STREAMS AND FACILITIES

Introduction

2.1 Over the plan period there needs to be the biggest change in waste management there has ever been. This radical change must happen quickly, now for household waste and, in less than five years time, for commercial and industrial wastes. How the country should manage radioactive wastes also needs to be resolved as soon as possible though this will take longer.

2.2 Without adequate waste management facilities economic growth will be constrained, waste will not be managed in the most environmentally friendly ways, industry will face escalating costs and council tax payers could have to meet multi-million pound “fines” for not achieving the targets set by Government.

2.3 However on the positive side, very high levels of investment in waste management will be required, and the new equipment and facilities will create new jobs. Maximising local benefit from these is one of the objectives suggested for the plan.

2.4 Well designed, managed and maintained 21st century waste management facilities should, with some exceptions, be able to be accommodated on many industrial estates. Many of the processes would be fully enclosed and within buildings which would have negative pressure and other emission controls. There is no reason for them to be regarded as “bad neighbour uses”. For many of them the main environmental impact will be traffic generation.

2.5 All types of waste management facilities tend to generate significant volumes of traffic. For example a 50,000 tonnes/year Materials Recovery Facility would receive around thirty bin lorry loads of waste each day. A busy Household Waste Recycling Centre can be visited by well over 100,000 vehicles/year. Good access to a suitable road network will be needed for most types of facilities. Ideally larger facilities should also have potential for rail or sea-borne transport.

Types of Waste Management Facilities

2.6 This section outlines the types of waste management facilities that are available, and may be required for in Cumbria.

Bring sites

2.7 These are for municipal waste and include the thirteen Household Waste Recycling Centres (one of these is within the Lake District National Park) and the hundreds of bottle, paper and clothing banks at supermarkets, village halls and similar locations. The Household Waste Recycling Centres (HWRCs) are provided by the County Council in its role as the waste disposal authority. They are where people can take bulky household items and recyclable materials that are not collected by the bin lorries. There are very considerable differences in the populations that are served by these.
BACKGROUND INFORMATION ON WASTE

2.8 Household Waste Recycling Centres will require sites of around 0.5 hectares with adequate space for cars to queue at peak periods without disrupting road traffic. Modern facilities are usually designed with two levels so that containers can be filled conveniently, but can be on one level and can also be contained within a building.

Waste management facilities

2.9 The main types of facilities for managing waste are listed and described in Box 1, starting with those for collecting, separating or sorting waste before treatment.

2.10 A range of techniques and technologies is available, some of them are new to this country and other new ones are being developed. Whilst it is not a function of this plan to propose specific treatment methods it is important to understand what they involve because of considerations for siting and the suitability of sites proposed in the plan.

2.11 Many of the new waste treatment facilities will require an industrial style building with room for storage areas as well as plant. Buildings may need to be 10 to 20 metres high and 100 metres long. Some would need to operate 24 hours/day. Sites should be large enough to incorporate all the operational requirements of the facility, with flexibility for additional plant as technologies and regulatory requirements change, together with appropriate environmental protection and enhancement measures.

COLLECTION SYSTEMS

2.12 The waste collection systems themselves are not a matter for this plan. However, the way waste is collected can affect the type of waste management facilities that are needed. For municipal waste collections, at present, the emphasis is on householders being given one box for newspapers and one for bottles and cans and two separate bins for green garden waste and for residual waste. This system has to be backed up by bulking/transfer stations and composting sites which are generally open windrow.

2.13 There is a limit to how many separate boxes and bins most households can cope with. Also, in many places the street scene is becoming disfigured by the multiplicity of waste containers which now stand at the kerb side. These matters have implications for the recovery of all recyclable materials and the facilities that will be needed.

2.14 A change to collecting all dry recyclable wastes in one bin, rather than a limited number in separate boxes, would require a Materials Recovery Facility (MRF) in which the wastes would be separated. Other technologies would be able to cope with a wholly unseparated waste stream.

2.15 A change to collecting kitchen waste (including food stuffs) mixed with green garden waste would require in-vessel composting because open windrows would not be acceptable.
Types of waste management facilities

Waste Transfer and Bulking Stations

These are where waste is delivered for bulking up before being sent to a larger facility or where it is sorted prior to being transferred somewhere else for recycling, treatment or disposal.

Materials Recovery Facility (MRF)

This is a dedicated facility for the sorting and separation of recyclable materials. It can be expected to handle around 50,000 tonnes/year. At present these are primarily for municipal waste. However, there seem no reasons why they should not be useful for some of the commercial and industrial waste streams.

Aerobic digestion

This is a biological process in which biodegradable wastes are decomposed by micro-organisms in the presence of air. It is usually described as composting which can be either in open windrows or within an enclosed vessel (see below). The residue may be used as a soil conditioner or mulch or sold as a compost.

Open windrow composting

This is a process in which garden wastes are piled in rows usually in the open air but sometimes inside a building. It produces a stabilised compost, water and carbon dioxide. It cannot be used for food wastes. Sites should not be located close to sensitive properties because of odour problems.

In-vessel composting

This composts garden and kitchen wastes in an enclosed vessel or tunnel. It is more controlled than open windrows and can achieve the temperatures needed to destroy bacteria to prevent health risks in accordance with the Animal By-products Regulations. These plants are much less likely than open windrows to cause odour problems but they cannot be guaranteed not to produce odours.

Composting facilities vary in size but can be expected to handle around 25,000 to 30,000 tonnes/year.

Anaerobic digestion

Biodegradable waste is placed in an enclosed vessel and encouraged to break down in the absence of oxygen. The end products are a solid or liquid digestate which may be able to be used as a soil conditioner or a bio-fertiliser, a concentrated liquor which can be re-circulated, or may be able to be used as a fertiliser or disposed through sewage treatment works, and a methane rich biogas. This gas can be burnt to generate electricity and counts as a renewable fuel.
Mechanical and Biological Treatment (MBT)

This is a generic term for mechanical sorting and separation used in conjunction with biological treatment processes such as composting. They dry out and reduce the bulk of the waste and separate it into recyclables such as metals and glass, an organic fraction, and sometimes biogas or a refuse derived fuel or a soil conditioner. There is also usually a reject fraction which will require landfill disposal. The refuse derived fuel can be used in an Energy from Waste Plant or may be able to be used in an existing industrial process such as a cement kiln but not in power stations.

MBT plants would probably have modules of around 50,000 tonnes/year. Their buildings could be 100 metres long and 30 metres wide.

All of the above facilities would be likely to require sites between 1.5 and 2 hectares.

Energy from waste plants (EfW)

Anaerobic digestion has been described separately above. There are several other different technologies for these. They burn residual waste in controlled conditions, after targeted levels of recyclables and biodegradable wastes have been removed, to generate heat and/or electricity. Ideally these plants should be combined heat and power plants and be located near a development that would use the waste heat (normally steam), and where the electricity generated can be fed into the national Grid.

Residual wastes at the end of the process are bottom ash (metals may be able to be separated from this and it may have use as a construction material) and flue gas treatment residues, which may be classified as hazardous waste. Very little waste needs to be landfilled and this is not biodegradable.

For Cumbria’s small volumes of residual waste the most likely plant may be an oscillating kiln similar to one at Grimsby. Refuse Derived Fuel or Energy from Waste plants could have capacities ranging from 20,000 to 200,000 tonnes/year. Experience from other parts of Europe is that these plants replace landfilling not recycling.

The larger type of energy from waste plant would probably need a site of approximately 4.5 hectares.

Advanced thermal treatment plants

These incorporate advanced or emerging technologies and their energy production aspects are classified as renewables. They include Pyrolysis where organic materials are broken down by heat in the absence of oxygen. The process produces a synthetic gas or pyrolysis oil which can be used to generate electricity. A solid char is also produced which may need specialist disposal or additional processing.

An alternative is gasification which operates at a higher temperature than pyrolysis and with oxygen or air and added water. It produces a synthetic gas with a higher hydrogen content than pyrolysis. A solid residue is produced which usually requires landfill disposal.
Mechanical Heat Treatment is another generic option. It can involve pre-treating waste prior to separation by heat or steam, for example in an autoclave. It can be part of the MBT process. It can produce a refuse derived fuel as well as the recyclables. There will be a residue that requires landfill disposal.

There are also other advanced thermal treatment technologies.

Landfill.

After the removal of recyclables and compostable materials there is still usually a residual fraction of waste that has to be landfilled. Landfill is currently the only realistic option for such materials; however the impact of landfills will change as the nature of the material deposited is affected by pre-treatment in other facilities. Removal of bio-degradable fractions and other pre–treatments will further reduce odour, and possibly visual impact.

**Green Resource Recovery Parks, or Green Energy Parks**

There may be advantages in locating several waste management and re-use/recycling facilities on the same site. These could incorporate Energy from Waste plants, Materials Recovery Mechanical and Biological Treatment, Waste Transfer, and Household Waste Recycling Centres. The disadvantages of only having one or two of these to serve the whole county could be outweighed by the opportunities for delivering a full range of very high quality services. Experience elsewhere is that these can offer considerable development and operating cost savings with less overall environmental impact. It seems likely that sites of around 10 to 15 ha could be needed to accommodate these. This type of facility would probably be backed up by more local intermediate transfer or bulking stations which could have potential for rail links.

**MUNICIPAL WASTE**

2.16 Municipal waste is that which is collected by bin lorries together with the waste that people take to their nearest tip. It includes waste taken to Household Waste Recycling Centres (HWRCs) and to bottle and paper banks.

2.17 It is a relatively small proportion of the total waste stream. Its management is, however, totally within the control of the local authorities who have long term contracts which can make investment decisions easier. Facilities provided for municipal waste may also receive wastes from the commercial and industrial sectors. This is encouraged in the consultation paper for the review of the national waste strategy although it does not make it clear how sufficient capacity can be secured.

2.18 The Government has set progressive and very challenging targets for recovering, recycling and composting municipal waste and has set limits on the tonnes of this waste that can be landfilled.
Where we are now

2.19 In the year 1 April 2004 to 31 March 2005 the total household waste for all of Cumbria was 318,000 tonnes. Total municipal waste, which includes a small amount of commercial waste that is collected by the District Councils, was 355,000 tonnes. Table 2.1 below shows how that waste was managed.

<table>
<thead>
<tr>
<th></th>
<th>2004-2005</th>
<th>Percentage of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recycled</td>
<td>43,300</td>
<td>14%</td>
</tr>
<tr>
<td>Composted</td>
<td>38,000</td>
<td>12%</td>
</tr>
<tr>
<td>Landfilled</td>
<td>237,000</td>
<td>74%</td>
</tr>
<tr>
<td>Total</td>
<td>318,000</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 2.1 Management of Cumbria Household Waste 2004-2005

2.20 In 2005/6 municipal waste was around 358,000 tonnes, successfully slowing the previous increases to less than a 1% increase from 2004/5. Despite an increase in population the amount of household waste actually decreased by 1%. The amount recycled or composted also increased by around 15% in a year.

<table>
<thead>
<tr>
<th></th>
<th>2005-2006</th>
<th>Percentage of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recycled</td>
<td>50,700</td>
<td>16%</td>
</tr>
<tr>
<td>Composted</td>
<td>43,500</td>
<td>14%</td>
</tr>
<tr>
<td>Landfilled</td>
<td>220,400</td>
<td>70%</td>
</tr>
<tr>
<td>Total</td>
<td>314,600</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 2.2 Management of Cumbria Household Waste 2005-2006

2.21 There are currently five municipal waste disposal contracts based around the four landfill sites at Hespin Wood, Distington, Flusco and Bennett Bank and the Transfer Stations at Carlisle, Barrow and Kendal. Map W1 overleaf shows the location of the major waste facilities; landfills, major transfer stations handling municipal waste and household waste recycling centres, which are also listed in the accompanying table.

2.22 The non-inert landfill sites are estimated to have around 5.5 million cubic metres remaining capacity with planning permission, see table 2.3. Hazardous wastes are taken out of the county for disposal.
### BACKGROUND INFORMATION ON WASTE

#### Table 2.3 Remaining Capacity at Non-Inert Landfill Sites

<table>
<thead>
<tr>
<th>Site name</th>
<th>cubic metres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bennett Bank</td>
<td>300,000</td>
</tr>
<tr>
<td>Distington</td>
<td>65,000</td>
</tr>
<tr>
<td>Flusco</td>
<td>1,700,000</td>
</tr>
<tr>
<td>Hespin Wood</td>
<td>1,800,000</td>
</tr>
<tr>
<td>Lillyhall</td>
<td>1,500,000</td>
</tr>
<tr>
<td>Thackwood</td>
<td>200,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5,565,000</strong></td>
</tr>
</tbody>
</table>

2.23 There are well over four hundred bottle banks and other similar facilities at locations such as supermarkets and village halls. These play a vital role in removing recyclable/re-usable materials from the waste stream. Most, if not all, of these are regarded as not needing planning permission.

2.24 There are thirteen Household Waste Recycling Centres in Cumbria including one that is within the Lake District National Park. The sites are very popular and their use has more than doubled in recent years. However the recycling rates achieved could be significantly improved if they had more space for additional segregation of waste and better circulation. Alternative provision should be made to replace the temporary sites at Millom and Frizington, which for planning reasons should be closed. There is no doubt that some of the twelve existing Centres within the plan area are inadequate for the task ahead and that they need to be substantially improved.

2.25 There are open windrow composting facilities at Lillyhall and Hespin Wood landfill sites, at Goldmire Quarry and at Silloth and smaller ones on farms.

2.26 At the present time (June 2006) the two bidders for the long-term municipal waste management contract have submitted their final proposals to the County Council.
### BACKGROUND INFORMATION ON WASTE

<table>
<thead>
<tr>
<th>Map ref</th>
<th>Site Name</th>
<th>Map ref</th>
<th>Site Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bennet Bank, Barrow</td>
<td>12</td>
<td>Clay Flatts, Workington</td>
</tr>
<tr>
<td>2</td>
<td>Lillyhall, Workington</td>
<td>13</td>
<td>Glasson Estate, Maryport</td>
</tr>
<tr>
<td>3</td>
<td>Distington, Workington</td>
<td>14</td>
<td>Allithwaite Rd, Grange over Sands</td>
</tr>
<tr>
<td>4</td>
<td>Hespin Wood, Carlisle</td>
<td>15</td>
<td>Hobsons Lane, Kirkby Stephen</td>
</tr>
<tr>
<td>5</td>
<td>Flusco, Penrith</td>
<td>16</td>
<td>Morecambe Rd, Ulverston</td>
</tr>
<tr>
<td>6</td>
<td>Thackwood, Eden</td>
<td>17</td>
<td>Syke Rd, Wigton</td>
</tr>
<tr>
<td>7</td>
<td>Kendal Fell, Kendal</td>
<td>18</td>
<td>Flusco, Penrith</td>
</tr>
<tr>
<td>8</td>
<td>Kingmoor Works, Carlisle</td>
<td>19</td>
<td>Yeathouse, Frizington</td>
</tr>
<tr>
<td>9</td>
<td>Ormsgill Yards, Barrow</td>
<td>20</td>
<td>Redhills Quarry, Millom</td>
</tr>
<tr>
<td>10</td>
<td>Project Furness, Barrow</td>
<td>21</td>
<td>Canal Head, Kendal</td>
</tr>
<tr>
<td>11</td>
<td>Bousteads Grassing, Carlisle</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2.4 Key to Map W1: Landfills, Transfer Stations and Household Waste Recycling Centres
Figure 2.1 Map W1
Where we need to be

2.27 The amount of bio-degradeable municipal waste that is sent to landfill has to be reduced by about two thirds by 2018. In order to meet statutory targets the amount diverted from landfill by recycling and composting needs to more than double from the 2004/05 figures by 2010 and to increase more than threefold by the end of the plan period. Comments about the figures for 2005/6 are made in the previous section.

2.28 The Government has recently (February 2006) published a consultation draft revision of the national waste strategy which includes higher targets for recycling and composting household waste. These are 40% by 2010 and 45% by 2015.

2.29 Some years ago the County Council adopted a target of providing this type of site within a distance of 5 miles of 90% of the population. At the present time it is estimated that 69% of people have access to a site within this distance (see Map W2 overleaf). Diminishing returns tend to apply when seeking to increase the number of people with easy access to sites. Some parts of Cumbria have reasonably convenient access to sites in other counties. The largest geographical areas without a site are around Alston and parts of the Lake District National Park.

2.30 The target of serving 90% of the population is being reviewed in the Joint Municipal Waste Management Strategy. The review will take into account the increases in kerbside separation and collection. If the target is kept additional sites would be needed for the remaining larger settlements which are; Milnthorpe, Brampton, and Cockermouth, and also at Keswick within the National Park.
Picture 2.1 Map W2. Areas within 5 miles of an HWRC
BACKGROUND INFORMATION ON WASTE

What does the plan need to provide?

2.31 In order to secure more sustainable waste management the plan will need to make provision of new sites for new types of waste management facilities at progressive stages of the waste management process. It is required to make provision for the requirements identified in the Regional Spatial Strategy. The County Council has reservations about these regional predictions, and some of the assumptions that have been made. However, it is considered that the regional figures can be used as the basis for the number of additional facilities that are likely to be needed during the plan period. Details of likely capacities of different types of facilities were included in Box 1.

2.32 The amount of additional landfill capacity required, if any, will depend on the technologies that are used in the earlier stages of waste management. For example there would be very little ash or residue for landfilling with an Energy from Waste plant.

The Regional Spatial Strategy’s Predicted Requirements for Municipal Waste

2.33 The RSS stipulates the capacity required for a number of types of waste management as shown in table 2.5. Composting, materials recovery and residual waste treatment are expressed in tonnes per year, changing over the period of the plan. The residual landfill requirement is given as a capacity for each 5 year period, thus requiring a total of 2,910,000 cubic metres.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Composting (tonnes/year)</td>
<td>55,000</td>
<td>55,000</td>
<td>55,000</td>
</tr>
<tr>
<td>Materials Recovery Facilities (MRF) (in tonnes/year)</td>
<td>75,000</td>
<td>115,000</td>
<td>115,000</td>
</tr>
<tr>
<td>Residual waste treatment (in tonnes/year)</td>
<td>100,000</td>
<td>210,000</td>
<td>345,000</td>
</tr>
<tr>
<td>Residual landfill capacity (in cubic metres)</td>
<td>1,655,000</td>
<td>725,000</td>
<td>530,000</td>
</tr>
</tbody>
</table>

Table 2.5 RSS Predicted Requirements for Municipal Waste

2.34 It seems likely that towards the end of the plan period provision may need to be made for additional landfill capacity for the residual municipal wastes. However, this could depend on the type and capacity of facilities that are developed higher in the waste hierarchy. This will depend, at least partly, on which of the two bidders for the municipal waste management contract is successful.

2.35 There may also be issues about the distribution of landfill capacity throughout the county because existing authorised capacity is predominantly in the north. Residual municipal waste from part of the south of the county is currently taken to a site in Lancashire which will close at the end of 2006.
COMMERCIAL AND INDUSTRIAL WASTE

Where we are now

2.36 These wastes streams are about twice the volume of municipal waste and include wastes from factories, offices and shops. The data about their volumes and types is inadequate for the purposes of Waste Development Frameworks. This is a national problem, much more comprehensive information will be available from the Environment Agency but not until 2008.

2.37 In the meantime, the waste planning authorities in the North West Region are commissioning research which should provide information by early 2007. The North West Development Agency’s Wider Waste Action Plan is also focussing on these wastes and their minimisation.

2.38 The only sites for hazardous waste management are an incinerator at the SmithKlineGlaxo complex near Ulverston and part of the Lillyhall landfill site, which is anticipated to be ready soon.

Where we need to be

2.39 For commercial and industrial wastes the only target in the Government’s Waste Strategy 2000 was that by 2005 waste sent to landfill should have been reduced to 85% of its 1995 figure. No mechanisms for achieving this were identified.

2.40 The future requirements for managing commercial and industrial wastes are not as clear as those for municipal waste. This is mainly due to the lack of information about how they are managed now.

What does the plan need to provide?

2.41 There is wide consensus that by around 2010/12 the commercial and industrial sector will undergo massive changes in the way it manages wastes because landfill will be so expensive by then. The sector is likely, by then, to be looking for the same types of waste treatment facilities that have been described for municipal waste.

2.42 In order to secure more sustainable waste management the commercial and industrial waste sector will need to make provision for new sites at progressive stages of its waste management processes. However, it is not known how many of the additional facilities could be provided in-house on existing sites. For the purposes of the plan it is assumed that half of the capacity that is needed will be provided in-house and will not require sites to be identified.

2.43 The plan is required to make provision for the requirements identified in the Regional Spatial Strategy although those estimates were made on the basis of the inadequate information that was available and will probably need to be reviewed. However, it is considered that the regional figures can be used as the basis for the number of additional facilities that are likely to be needed during the plan period.
The Regional Spatial Strategy’s Predicted Requirements for Commercial and Industrial Wastes

2.44 The draft Regional Spatial Strategy estimates that, to 2020, the arisings of commercial and industrial wastes within Cumbria will require:-

- Treatment/recycling capacity for 385,000 tonnes/year
- Thermal capacity for 15,000 tonnes/year
- Landfill capacity for 350,000 tonnes/year (a total over the plan period of twelve years of 4,200,000 tonnes).
- No composting facilities.

RADIOACTIVE WASTE

Introduction

2.45 These are categorised as High, Intermediate, Low or Very Low Level Wastes according to their levels of radioactivity. The question of their long term management and disposal are issues for the whole of the UK. With the decommissioning of nuclear sites much larger volumes, and different types, of waste will be generated.

Where we are now

2.46 West Cumbria has, by far, the largest concentration of nuclear facilities in the UK. This makes planning policies for managing their wastes particularly important. However, every part of the country generates Very Low Level and Low Level Wastes from hospitals, some industries and research establishments. Most of the Low Level Waste is, at present, brought to Cumbria for disposal. Areas that have nuclear facilities, including power stations, will also be generating large volumes of decommissioning wastes.

2.47 The County Council considers it is important that every waste planning authority in the country includes policies and proposals in its development plan for managing Low and Very Low Level Wastes. In addition those authorities with nuclear facilities need to have policies and proposals for managing decommissioning wastes.

2.48 The types of radioactive wastes and their management are described in Box 2.

BOX 2

Types of radioactive waste and their management

High Level (HLW)

Liquid high level waste, mostly from reprocessing, is stored to cool at Sellafield and is then subject to a process of vitrification pending a national policy decision for its long term management.
Intermediate Level (ILW)

Most of the UK’s intermediate level waste (this is waste which does not have to be cooled) is transferred into passive storage at Sellafield. This is pending agreement on a national long term waste management strategy. Proposals to further investigate an underground site for final disposal of ILW near Sellafield were rejected by the Secretary of State in 1997.

Low Level (LLW)

Much of the UK’s low level waste is currently sent to the Nuclear Decommissioning Authority’s Repository near Drigg which at the present time is operated by British Nuclear Group. Around two thirds of the Low Level Waste that is currently being placed within the Repository is from the Sellafield complex. A small proportion has been from industries and hospitals within the county the rest has been from other nuclear sites and waste producers throughout the UK.

The present facility, Vault 8, has limited remaining capacity and will be full by mid-2008. The County Council’s Development Control and Regulation Committee recently granted planning permission for the temporary stacking of additional containers of waste above that vault but only until 2010.

A small proportion of LLW is incinerated.

Small quantities of LLW with lower activity levels are put into conventional landfills under a process known as Controlled or Special Precautions Burial.

Very Low Level or High Volume Low Activity wastes (VLLW or HVLA)

These are wastes that do not need the engineered disposal facilities such as Vault 8 at the site near Drigg. There are two landfill sites within Sellafield. Some are disposed of in small quantities into conventional landfill sites where the waste is diluted by much larger volumes of non-radioactive wastes. Much greater volumes of these wastes will arise from decommissioning.

Where we need to be

2.49 The question of how High and Intermediate Level wastes are managed is a contentious subject and the Government has accepted that a more open and transparent approach should be adopted. Following the 2002 White Paper "Managing Radioactive Waste Safely" the Committee on Radioactive Waste Management (CoRWM) was set up in 2003 to recommend the best option or combination of options for the long-term management of the UK’s higher level radioactive wastes. CoRWM will report to Government in July 2006. CoRWM’s draft recommendations are that in the long term the best option is geological disposal in a facility or facilities located several hundred metres underground. They believe the process leading to the creation of such facilities may take several decades and therefore should be underpinned by robust interim storage provision.
BACKGROUND INFORMATION ON WASTE

2.50 An intensified period of research and development aimed at reducing uncertainties at a general and site specific level in the long term safety of geological disposal is proposed by CoRWM. This will include research and development on alternative management options.

2.51 CoRWM have recommended that community involvement should be based on the principles of communities expressing a willingness to participate (volunteerism). Willingness to participate would be based on the provision of community packages of benefits that are designed to facilitate participation and ensure that a radioactive waste facility is acceptable to the host community in the long term.

2.52 The present position is that the County Council agrees that geological disposal is the appropriate preferred option provided that it is phased geological disposal with the wastes retrievable for some time into the future when succeeding generations decide to close the facility or alternatively retrieve and manage the waste in some other way.

2.53 Until national policy is formulated (and the implementation process is underway) it is not appropriate to discuss issues and options at this stage. It is not clear how best to incorporate matters about High and Intermediate Level radioactive wastes in the plan preparation process. If a partial Waste Development Framework review could commence in 2007 it would be necessary to establish and agree how the review would fit into the process and procedures for preparing and adopting the Framework.

2.54 DEFRA has undertaken a review of national policy for Low Level Waste which has been published for public consultation between March and May 2006. It is considered to be appropriate and necessary for this Development Framework to include policies on Low Level Waste once the national framework should become clear during 2006.

2.55 At the same time that CoRWM and DEFRA are reviewing policy on a “top down” basis each of the twenty or so nuclear sites in the country is currently preparing its own “bottom up” Integrated Waste Strategy. It is clear that these separate approaches will need to be coordinated. The County Council intends to engage with the Sellafield Integrated Waste Strategy preparation process and to continue to contribute to the one for Windscale.

2.56 The Nuclear Decommissioning Authority estimates that, for the rest of the country excluding Cumbria, an additional 2 Million cubic metres of solid Low Level Waste will need long term management over the next century (although a much shorter timescale is likely due to an accelerated programme). This does not include an estimated 18 Million cubic metres of Low Level Waste, mostly contaminated soils from the Sellafield complex. These figures highlight the extent of the nuclear legacy within the county.

2.57 In the DEFRA consultation paper it is assumed that the site near Drigg in west Cumbria has substantial authorised remaining capacity. This misunderstanding has led to a draft policy recommending that its use as a national asset should be maximised.
The Government’s description of this facility as the UK’s Low Level Waste Repository does not reflect any decision made by either the County or Borough Council. The site does not have planning permission to be such a repository. The County Council has submitted objections to the assumptions or misunderstandings that have been made in the consultation paper and to the failure to acknowledge the difficulties that the county will have in managing just the wastes that will arise within Cumbria.

What does the plan need to provide?

It seems inappropriate for the plan to make provision, at this time, for High and Intermediate Level Radioactive wastes for the reasons explained in the previous sections.

With regard to Low Level Waste the County Council has expressed its view that, before decisions can be made about the long term future of the Repository near Drigg and about its use for additional long term storage/disposal of wastes, answers are needed to three major concerns:

- The impacts of climate change, sea level rise and coastal erosion on the site’s long term integrity;
- The radiological capacity of the site taking account of wastes that were tipped there between the 1950’s and 1980’s;
- The licensability of the site by the other regulators.

An issue could be whether any further provision should be made in Cumbria for long term management or disposal of Low Level Radioactive Wastes. However, as a general principle, it is considered that all plans should seek to manage all wastes as near as possible to where they are produced. On that basis the issue would be whether it is possible, in this plan, to make provision to enable facilities to be developed for all of the Low Level Radioactive Waste that arises within Cumbria.

The scale of the problem is that there will be an estimated 18 million cubic metres of Low Level Waste arising at Sellafield. It is not clear yet what proportion of this would need off-site facilities, for example, at the site near Drigg or new site(s) elsewhere or would remain on site.

MINERAL WASTES

Introduction

These are by far the largest volume of wastes that are produced. They arise mainly at quarries and a proportion of them would be incorporated into final site restoration schemes. The mineral wastes that are most relevant to this plan are those which can potentially be used as secondary aggregates as an alternative to primary land won materials.
BACKGROUND INFORMATION ON WASTE

Where we are now.

2.64 The amount of waste produced at quarries is partly dependent on their geology. Some of the waste will be weathered rock and soils, known as overburden, which have to be removed before workable rock can be worked. Other waste can be shales, mudstones and other rocks which lie between the beds of useable rock. Some quarries now have increased proportion of waste materials as an unintentional consequence of the Aggregates Levy. This “tax” of £1.60/tonne has made some of the lower grade products from quarry processing plant unsaleable. They were previously sold as general fill materials.

Where we need to be

2.65 One of the aims of national and regional policies is that 26% of aggregate supplies should be from alternatives to primary land won aggregates. These alternatives are secondary aggregates which are those from mineral wastes and recycled aggregates (mostly from construction and demolition materials).

2.66 Policies and proposals for these are included in the Minerals section under Alternative Aggregate Materials.

AGRICULTURAL WASTES

2.67 These have been exempt from the Environment Agency’s licensing regime but this has recently changed and they are now regarded as “controlled wastes”. This will bring on-farm burning and burial of wastes under regulatory control. At the moment it is not clear what implications this will have for planning control.

2.68 It is proposed that this plan will have relevant development control policies for agricultural wastes but will not identify sites specifically for managing these wastes.

CONSTRUCTION AND DEMOLITION WASTE

Where we are now

2.69 The data about the volumes of these wastes is inadequate for the purposes of Local Development Frameworks. This is a national problem and much more comprehensive information should be available from the Environment Agency but not until 2008.

2.70 In the meantime the waste planning authorities in the North West Region are commissioning research which should provide information by early 2007. The wastes that are most relevant to this plan are those which can potentially be used as recycled aggregates as an alternative to primary land won materials.
Where we need to be

2.71 One of the aims of national and regional policies is that 26% of aggregate supplies should be from alternatives to primary land won aggregates. These alternatives are secondary aggregates (from mineral wastes) and recycled aggregates (mostly from construction and demolition materials). Because of inadequate data we do not know how much of these wastes already replaces primary aggregates or what the scope is for increasing the contribution from these sources.

2.72 In this plan policies and proposals for these are included in the Minerals section under Alternative Aggregate Materials. The Development Control Policies include ones relating to the siting of facilities.

OTHER WASTES

Where we are now

2.73 There are several scrapyards and end-of-life vehicle dismantlers within the county and these play an important role in moving waste up the hierarchy. Waste water treatment facilities (sewage treatment) are also essential parts of the waste infrastructure.

Where we need to be

2.74 Whilst End of Life Vehicle dismantling and materials recovery are likely to become increasingly important it is not clear what additional facilities are likely to be needed.

2.75 With regard to waste water treatment United Utilities has indicated that its Asset Management Plan for 2005-2010 will involve improvements to 10 sites. These are Cark Tank; Great Salkeld; Lowick Green; Mealbank; Penny Bridge; Plumpton North; Swarthmoor (Three Bridges); Torver; Croglin and Halton Roof. These are all very small treatment work, some of which are in the Lake District National Park, and improvements may involve new treatment facilities and/or pumping stations.

2.76 In addition United Utilities anticipate the need to build additional sludge treatment facilities. The proposed locations and nature of these are not yet known.

What does the plan need to provide?

2.77 It is suggested that no Core Strategy proposals or policies or site allocations are needed for these other wastes. The Generic Development Control policies should provide an appropriate context for considering specific proposals. (see paragraph 9.1)