Nottinghamshire and Nottingham

# Waste Core Strategy


Proposed Submission Document


Nottinghamshire County Council

Nottingham City Council

# Your last chance to comment.


## Foreword

We all produce waste at home or work and we have to find better ways of managing this. To this end Nottinghamshire County Council and Nottingham City Council have worked together to produce a draft 'Waste Core Strategy' that sets out how and where we should manage our waste over the next 20 years. To make waste management more sustainable the strategy is proposing an ambitious 70 % recycling target for all wastes by 2025, which along with some more energy recovery, could see the amounts going to landfill fall to just 10 % of the waste we produce.

To achieve this target, a range of new waste management facilities will be needed. The strategy proposes that major new plant should be built within or close to main urban areas as this is where most of our waste is produced. Smaller and medium sized facilities will also be needed in other parts of the county to complete the infrastructure.

This strategy has been shaped by the outcome of several major informal public consultation exercises. The next key stage is for the strategy to be submitted to Government for an independent examination. This will be held by a planning inspector who will assess if the strategy is sound and can be adopted by the Councils. However, before we submit you have a further opportunity to make formal representations on the draft strategy. Your representations can seek changes to any parts of the strategy you object to or you can also make representations in support of all or parts of the strategy.

Councillor Richard Butler
Cabinet Member for Environment
Nottinghamshire County Council

Councillor Jane Urquhart
Portfolio Holder for
Planning and Transportation
Nottingham City Council

# Guide to this document

This is the draft of the Nottinghamshire and Nottingham Waste Core Strategy which we intend to submit to the Secretary of State for examination later this year. The Waste Core Strategy is being prepared jointly by Nottinghamshire County Council and Nottingham City Council to cover our combined administrative areas and sets out our general approach and key planning policies for the development of future waste management facilities. It is the first of three separate waste policy documents and will be a key part of the formal Development Plan for both areas.

Following earlier, informal, stages of consultation this is your chance to make formal representations on any part of the Waste Core Strategy. This formal period for making representations will last eight weeks and will run from **5 March to 30 April 2012.**

An independent Inspector will then be appointed to hold a public examination to consider the soundness of the Waste Core Strategy. The Inspector will produce a schedule for the examination setting out those issues he or she wishes to cover. You may have the opportunity to speak at the examination to present your case, but this will be at the discretion of the Inspector. Everyone who responds to this consultation, or who has already asked to be notified, will be kept informed of the timetable for the examination.

If the Inspector decides that it is sound, we will then adopt the Waste Core Strategy, along with any binding changes required by the Inspector. If, however, it is not found sound, we will need to make further amendments and re-consult, or we may have to withdraw the plan and start again.

## How to make representations on the Waste Core Strategy

If you would like to make formal representations on the Waste Core Strategy you can do this online via our website at **www.nottinghamshire.gov.uk/wastehaveyoursay**, email us, or download the representation form from the website. You can also ask us to send you copies of the representation form to fill in if you do not have access to a computer or the internet. If you prefer to make your representation in writing please make sure that you state clearly which part of the Waste Core Strategy you are referring to (i.e. the policy, paragraph, plan or table number), include your name and address and whether you support or object. If you are making an objection please also make sure that you explain what you think should be changed and why.

To contact us, please use the details below:

**Planning Policy Team**
Nottinghamshire County Council
County Hall
West Bridgford
Nottingham
NG2 7QP

08449 80 80 80 (customer service centre)

www.nottinghamshire.gov.uk/wastehaveyoursay

Previous comments from earlier consultation stages, and a summary of our response, are also available for you to view on our website.

## Want to find out more?

If you would like to know more about the background to this Waste Core Strategy, you can view all the supporting documents and evidence on our website or contact us at the address shown above. Copies can also be viewed at County Hall, West Bridgford, Nottingham City Council's office at Loxley House, Station Street, Nottingham, and at your local district council office during normal opening hours. Reference copies of the Waste Core Strategy have also been placed in main libraries – please check for local opening hours. If you would like to purchase a copy of the Waste Core Strategy, this costs £10 including postage.

## Alternative formats

This information can be made available in alternative formats or languages on request.

## Please make sure we receive your representation by 30 April 2012.

## Preface

Nottinghamshire County Council and Nottingham City Council have prepared this Waste Core Strategy in accordance with the 2004 Planning and Compulsory Purchase Act and the Town and Country Planning (Local Development) (England) Regulations 2004 (as amended). It is the first of three separate waste policy documents that we are preparing and is a key part of the formal Development Plan for both Nottinghamshire and Nottingham. Together these documents will replace our Waste Local Plan adopted in January 2002.

This proposed submission draft of the Waste Core Strategy follows a wide-ranging and continuous process of consultation with local and neighbouring councils, the waste industry, trade organisations and local businesses, residents and local community groups, interest groups, and the relevant statutory bodies and utility companies.

# Steps to prepare the Waste Core Strategy

1

## Issues and options

An informal consultation on the key waste issues facing Nottinghamshire and what reasonable choices we have. Responses to this stage helped us to decide which options to take forward.

2

## Preferred approach

Having looked at all the options we consulted again on those that we thought were most suitable for Nottinghamshire. This has helped us produce our draft Waste Core Strategy.

3

## Submission

We will submit our draft Waste Core Strategy to the Government following a six week period for formal consultation on our proposals.

4

## Examination

This is an independent examination by a Government Inspector who will look at whether the Waste Core Strategy is sound and take account of any representations made in Step 3.

This usually involves a public hearing.

5

## Adoption

This is the final stage if the Waste Core Strategy is found sound. The Inspector may make minor changes to the strategy but if serious problems are found he/she will declare it 'unsound' and it will have to be withdrawn.

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# What is the Waste Core Strategy?

## Introduction

1.1 This Waste Core Strategy is a strategic document which sets out our overall planning policy towards existing and future waste management facilities within Nottinghamshire and Nottingham. It will be the basis for determining planning applications for all future waste management development and gives guidance on the broad location and type of waste management facilities that we want to encourage. It also provides the context for the later policy documents that will follow (see paragraphs 1.3 – 1.4).

## Scope of the Waste Core Strategy

1.2 The Waste Core Strategy sets out our goals for delivering sustainable waste management over the next 20 years, until 2031, although this may be reviewed sooner if monitoring suggests this is needed. It covers nearly all types of waste, apart from radioactive waste[1], and sets out our vision for all levels of waste management including prevention, re-use, recycling, recovery and disposal. It will therefore be relevant to any proposals involving facilities for the storage, sorting, processing or disposal of waste. The geographic area covered by the Waste Core Strategy is shown in Plan 1 on page 16.

1.3 The Waste Core Strategy sets out strategic policy and criteria on the general location and types of facilities that are needed, so that it can guide future development, but it does not identify any specific sites. These will be included in a separate site-specific document which will be used to prioritise which sites should be developed based on their environmental impacts and their contribution to delivering the aims of this Core Strategy.

1.4 We will use the broad locations identified within the Waste Core Strategy, and the supporting criteria- based policies, to help narrow down the choice of sites. We are also preparing a set of more detailed development management policies which will be used to provide appropriate controls on the way that waste management sites are built and operated. These will cover issues such as traffic, dust, noise, odour and other possible impacts.

1 All radioactive waste, other than very low level radioactive waste from hospitals and university research for example is controlled at the national level.

## Replacing our existing waste policies

1.5 The Waste Core Strategy replaces many of the existing saved waste policies contained in the Waste Local Plan which was adopted in January 2002. However, the majority of the environmental protection policies will remain in force until they can be replaced by the separate site specific and development management policy documents. A list of the Waste Local Plan policies which have been replaced is shown in Appendix 1.

## How has the Waste Core Strategy been prepared?

1.6 As well as relevant consultation with key stakeholders and local residents[2], we have also carried out extensive monitoring and appraisal work to help with the development of this strategy. This includes a detailed **Sustainability Appraisal** which has been undertaken, at key stages, to assess the likely impacts of our proposals and an **Equality Impact Assessment.** The early stages of **Strategic Flood Risk Assessment** and a **Habitats Regulations Assessment** have also been completed but further, more detailed, work will be needed to support the development of the site-specific document[3].

1.7 You can find details of these studies and all of the other evidence that has been used to prepare the Waste Core Strategy on our website at www.nottinghamshire.gov.uk/wastecorestrategy. This includes information on existing waste management capacity, future forecasts and relevant national and regional policy as well as information on the different types of waste management technology.

2 See separate statement of consultation.
3 See Glossary for an explanation of these studies.


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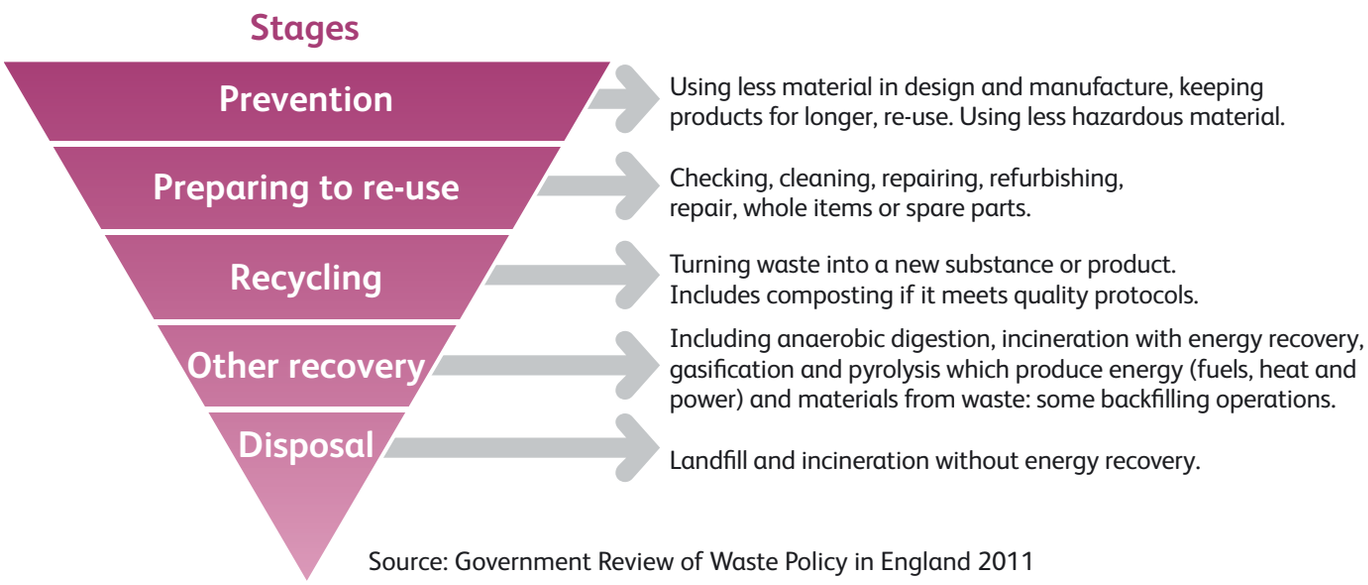
# Key principles and policy background


2.1 The Waste Core Strategy sets out local waste planning policy for Nottinghamshire and Nottingham but this is subject to the wider influences of European and national policy and legislation which together establish the overarching principles for sustainable waste management.

## European

2.2 A series of European Union (EU) directives set out the general principles for waste management across Member States. The Waste Framework Directive, revised in 2008, establishes the 'waste hierarchy' which promotes more sustainable methods of waste management, such as recycling, above less sustainable methods such as landfill (see Fig. 2.1 below.) However, there are advantages and disadvantages with all of the options and the best solution may vary according to the type of waste[4].

**Fig. 2.1 The Waste Hierarchy**




Source: Government Review of Waste Policy in England 2011

2.3 Other key drivers are the Landfill Directive[5] which requires progressive reductions in the amount of biodegradable municipal waste sent to landfill and the Incineration Directive[6] which sets strict operating limits for incinerators and similar plants. The revised Waste Framework Directive also sets minimum levels of energy efficiency for thermal combustion plants (including incineration, gasification, and pyrolysis) to qualify as recovery rather than disposal operations. There are also a series of directives covering packaging, waste electrical and electronic equipment, end of life vehicles and batteries, for example.

4 Government Review of Waste Policy in England 2011, Defra.
5 European Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste.
6 European Council Directive 2000/76/EC on the Incineration of Waste.

2.4 More recently the European Commission adopted its Roadmap to a Resource Efficient Europe[7] which sets out a vision of managing waste as a resource, reducing the amount of waste that is generated per person and using energy recover only for materials that cannot be recycled.

## National

2.5 The national Waste Strategy for England 2007 sets out key targets for the recycling and recovery of household and municipal waste in order to meet the EU Landfill directive requirements. These aim to 'recover' 67 % of municipal waste by 2015, rising to 75 % by 2020. Within this broad recovery target at least 45 % of household waste should be recycled or composted by 2015, rising to 50 % by 2020. Although there are no formal targets for other wastes, the strategy expects to see a reduction in the disposal of the other main waste streams.

2.6 The Government carried out a wide-ranging review of waste policy in 2011. This sets out its commitment to waste prevention and re-use, leading to greater resource efficiency. There is also support for energy from waste where appropriate, and for waste which cannot be recycled, including the increased use of anaerobic digestion as a form of energy recovery. The review also recognises the need to focus on specific waste materials and seeks to promote life cycle thinking in all waste policy and waste management decisions. Whilst the strategy acknowledges that absolute waste prevention may not be achievable, the overall aim is to move towards a 'zero waste economy' in which material resources are re-used, recycled or recovered wherever possible, and only disposed of as a last resort. Wider links between waste and issues such as climate change and renewable energy are also highlighted.

2.7 The Waste Regulations for England and Wales 2011 confirm that the Government will produce a national waste management plan to conform with European requirements and is also working on a Waste Prevention Programme for England. This will look at prevention and re-use measures, improving business practices, product design and manufacture to enable easier upgrade, repair and recycling of products.

2.8 Although a new National Planning Policy Framework is being prepared, waste policy will continue to be set out separately. Existing national policy and guidance for waste is contained in Planning Policy Statement 10: Planning for Sustainable Waste Management, and its companion guide. The key planning objectives are to:

- help deliver sustainable waste management by driving waste management up the waste hierarchy, address waste as a resource and look to disposal as the last option;
- provide for greater community responsibility and enable sufficient and timely provision of facilities to meet community needs;
- help implement the national waste strategy and supporting targets;
- manage waste safely without endangering human health or harming the environment and enable waste to be managed at one of the nearest appropriate facilities;
- reflect the concerns and interests of communities, local authorities and businesses;
- protect green belts but recognise the particular locational needs of some types of waste facilities; and
- ensure that the design and layout of all new development (not just waste related development) supports sustainable waste management.

7 European Commission Communication Com (2011) 571 final September 2011

2.9 PPS10 therefore stresses the need for communities, businesses, developers and local authorities to work together to tackle waste in a more co-ordinated, positive way.

## Regional

2.10 The East Midlands Regional Plan (March 2009) sets out wider planning policies to meet development and infrastructure needs across the region. This includes specific estimates on the minimum level of new waste management capacity, by type, that is likely to be needed within each waste planning authority area.

2.11 It is the Government's intention to abolish regional planning policy but until this happens, the East Midlands Regional Plan will remain part of the overall Development Plan for our area. However the Government has advised that the fact that it is intended to be revoked should be a material consideration in the decision making process of local planning authorities.

## The Local Situation

2.12 Every local authority has a **Sustainable Community Strategy** which sets out its overarching vision for its area and the priorities that help to focus local service delivery and planning policies. Nottinghamshire County Council's current strategy runs from 2010 to 2020 and highlights the main social, economic and environmental challenges facing Nottinghamshire and sets out the Nottinghamshire Partnership's vision for the future and the delivery of infrastructure and services[8]. This is spread across six priority areas focusing on the environment, crime, education, health and wellbeing, economic prosperity and stronger communities. It also reflects the national targets for waste recycling and reducing landfill.

2.13 Nottingham City Council's strategy[9] covers the same period and sets out the One Nottingham Partnership's long term vision for the City focusing on science and innovation, sport and culture, neighbourhoods, children and young people and poverty. Each District Council also produces a similar strategy to address particular local issues within their area.

2.14 Every local authority also has to prepare its own **Local Development Framework** setting out specific planning policies for employment, housing, retail, leisure, and other essential infrastructure development, as well as policies to protect local landscape, natural environment and cultural heritage. As a unitary council, Nottingham City Council is also preparing its own Local Development Framework. The Waste Core Strategy will be part of both the County and City Councils' Local Development Frameworks and will sit alongside those prepared by the Districts. Each Local Development Framework is supported by a detailed **infrastructure delivery plan** highlighting where additional infrastructure is needed and how this will be delivered.

8 Nottinghamshire's Sustainable Community Strategy 2010 - 2020.
9 The Nottingham Plan to 2020: Nottingham City's Sustainable Community Strategy.

2.15 Of particular relevance to waste are the **Municipal Waste Management Strategies** produced by the County Council and City Council which help to co-ordinate how municipal waste is collected and the facilities needed for treatment and disposal. The text below explains more about the different roles played by local authorities in relation to waste management.

2.16 As well as these specific examples, there are many other local strategies which the Waste Core Strategy has to take into account, including the work carried out by the **Local Enterprise Partnership** to promote local skills and investment, the **Green Infrastructure Strategies** prepared by each District and the City Council, Nottingham City Council's **Energy Strategy** and the Nottinghamshire-wide **Framework for Action on Climate Change.**

2.17 The Waste Core Strategy therefore has an important role to play in supporting these wider strategies through the development of appropriate waste management infrastructure and associated employment opportunities, as well as maintaining or enhancing overall environmental quality and safeguarding local amenity.

## Waste – who does what?

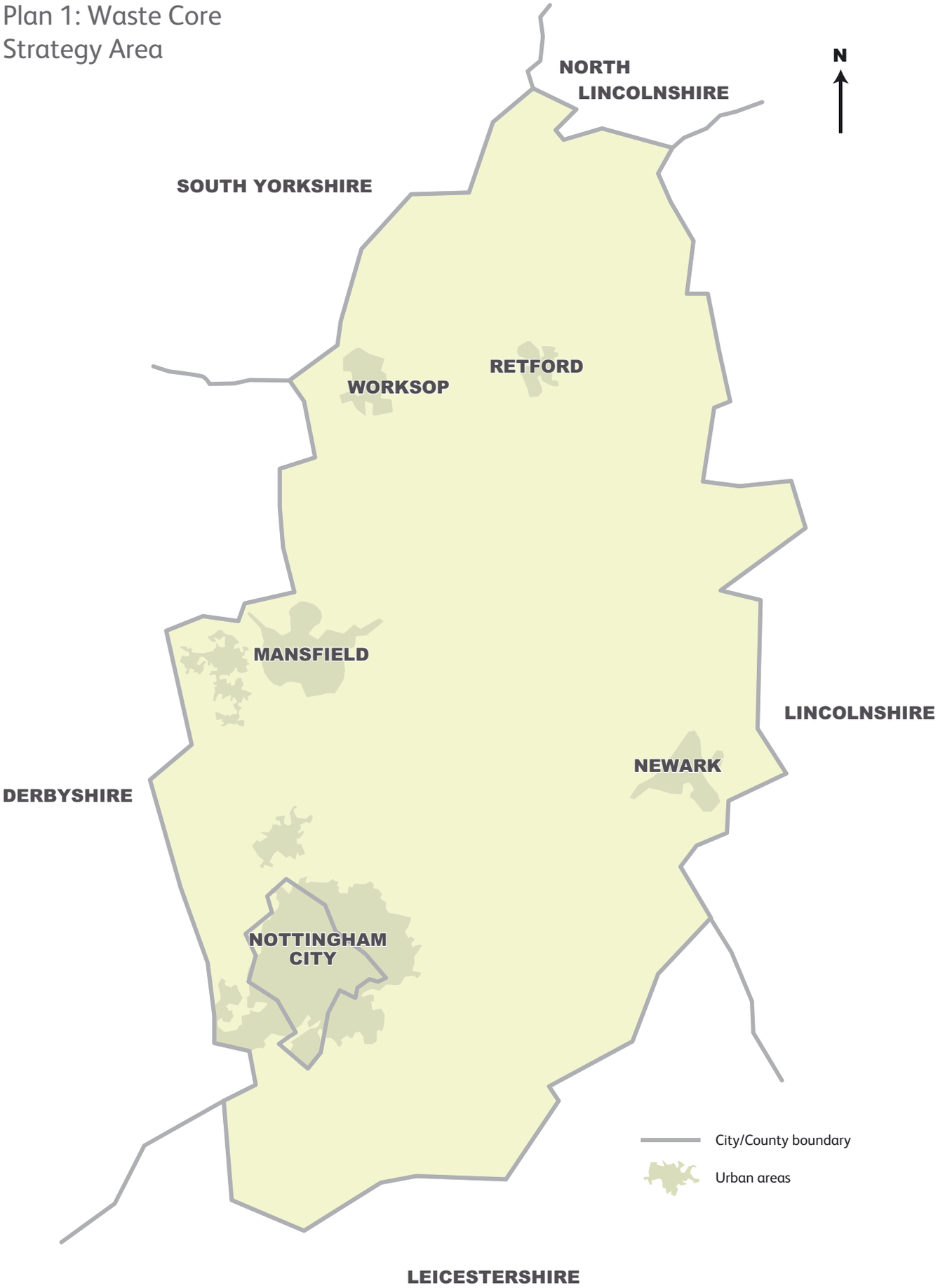
Waste management involves local authorities, private companies and even voluntary organisations who all play a role in collecting, sorting, treating and eventually disposing of, as waste, anything that cannot be re-used or recycled.

**Collection**
Local councils (district and unitary councils) are only responsible for collecting municipal waste. All other waste is collected and managed by private sector companies. This is agreed and paid for by individual businesses, shopkeepers, building contractors etc. outside of the control of the local authority.

**Disposal**
County and unitary councils are responsible for the safe disposal of municipal waste (this includes recycling and composting as well as landfill). This is often done in partnership with private companies who provide the facilities to handle this waste and work to specific targets for recycling and reducing landfill. All other waste is managed commercially by private companies and there are no specific controls over how much is recycled or where it is dealt with.

**Regulation**
Most waste management sites require planning permission. County and unitary councils must therefore prepare planning policies setting out when and where waste development will be acceptable. They are also responsible for deciding all planning applications for waste. The Environment Agency is separately responsible for ensuring that there is no pollution risk from waste sites. The Agency licenses individual sites and carries out regular monitoring.

## Plan 1: Waste Core Strategy Area




Not to scale


Recycling
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# A general overview of the plan area


3.1 Planning effectively for the future means having a good understanding of our current situation and what is likely to change. Physically, the location of our key settlements, transport links and existing waste management infrastructure will influence the location of new facilities whilst, socially and economically, the number of people living and working here will affect the amount and types of waste we produce. It is also important to take account of environmental assets including our countryside, wildlife and heritage, as well as the quality of life and well-being of our communities.

## Location and outlook

3.2 Nottinghamshire is well known for its historic past, linked to tales of Robin Hood and its industrial heritage based on textiles and coal, but it also has an ambitious future with a growing population of over one million people and a diverse and expanding economy. Although part of the East Midlands region, it also shares a boundary with South Yorkshire (see Plan 2). Northern parts of Nottinghamshire therefore have significant employment, housing and trade links with Sheffield, and the metropolitan areas of Barnsley, Rotherham and Doncaster. The more urbanised west of the county is also closely linked with the Derbyshire town of Chesterfield as well as Derby itself. More rural eastern parts have a similar agricultural character to neighbouring parts of Lincolnshire and some villages there are nearer to Lincolnshire towns such as Gainsborough and Grantham than any of the main Nottinghamshire towns. To the south, Nottingham is a major regional centre with close physical links to the neighbouring cities of Derby and Leicester. Consequently there is a significant overlap of housing areas, trade and employment between these three cities.

## Population and geography

3.3 Nottingham, in the south of the county, is one of the UK's eight **Core Cities** and a major centre for employment, retail and tourism. Around two thirds of the county's population live in, or close to, Nottingham. The remainder live in, or close to, the other main towns of Mansfield, Kirkby-in-Ashfield, Sutton-in-Ashfield, Hucknall, Worksop, Newark and Retford. Most of our waste therefore comes from these main urban areas. Both Nottingham and Newark have designated 'growth point' status which means they are likely to be the focus of future housing and employment growth and will require supporting infrastructure including new waste management facilities. Outside these main urban areas, the rest of the county is largely rural with scattered small villages, farmland, woodland and commercial forestry.

## Transport and communications

3.4 Road and rail links to the rest of the UK are generally good, especially via the main north-south routes of the M1, A1 and direct rail links to London from Retford, Newark and Nottingham. Works to widen sections of the A46 will also improve connections to Lincoln and Leicester. East-west links are not currently as good but are improving with the completion of the A617 near Mansfield and the agreed widening of the A453 into Nottingham from the M1. Most freight, including waste, is currently moved by road rather than rail. There is only limited use of the county's network of rivers and canals for transport although there is potential for this to increase. The River Trent, especially, is a major waterway running diagonally from Nottingham to Newark and then northwards to the Humber, forming part of the county's eastern boundary. Although just outside the county, both East Midlands Airport at Castle Donnington and Robin Hood Airport near Doncaster provide national and international passenger and freight services.

## Employment, economy and resources

3.5 Overall, this connectivity makes the county an important centre for warehousing, distribution, and other service based industries, which are generally replacing the more traditional areas of coal-mining, textiles and manufacturing, especially around Mansfield, Worksop and Newark. Here, the legacy of former coal mining and heavy industry has left a surplus of industrial land and opportunities for enterprise and redevelopment. Nottingham and its surrounds also provide a major centre for technology, financial, knowledge and science based industries. Away from our main urban areas, agriculture and forestry are no longer major employers but still make up much of the county's rural landscape, particularly to the south and east. Minerals and energy production are also important in parts of the county, especially sand and gravel extraction from the Trent and Idle Valleys and the four major power stations along the line of the River Trent. Our waste management industry is divided between large, often international firms, smaller family run businesses and local council run sites, mainly located in or around, Nottingham, Mansfield and Newark.

3.6 Nottinghamshire's economy generally compares well to the rest of the UK, and some of our urban areas are expected to be the focus of significant housing and commercial development in future. However, there are also wide inequalities in the rates of employment, income, education and skills across the county, most notably in former mining areas to the north and west and in some parts of Nottingham, making regeneration a priority for these areas.

## Landscape and countryside

3.7 The county's landscape is characterised by rich rolling farmlands to the south, with a central belt of mixed woodland and commercial forestry including the Greenwood Community Forest, giving way to heathland in the north and open, flat agricultural landscapes to the east. Although agriculture is a relatively small industry today, large parts of the county are made up of good quality agricultural land. The six country parks around Nottinghamshire provide valuable areas of open space and the extensive Green Belt around Nottingham covers more than 43,000 hectares but faces significant pressure for new housing development. Landscape and Green Belt issues will therefore affect the location, design and type of new waste development that can be accommodated.

## Nature

3.8 Nottinghamshire supports a wide range of important sites for nature conservation, including one within Sherwood Forest, near Edwinstowe, which is of international importance[10]. These special areas, along with other patches of habitat that make up our countryside, form an essential 'green infrastructure' network which, as well as being of critical importance for our wildlife, also provide us with vital ecosystem services and enhance our health and wellbeing. The quality of our natural environment has, however, suffered in the past from the impacts of development and there has been a significant decline in biodiversity, with losses of ancient woodland, heathland, species-rich grassland, hedgerow and wetland habitats, as well as the species that these habitats support. Some of these historic declines are now being halted, and in some cases reversed, with neglected sites brought into positive management and new areas of habitat created as a result of the activities of partner organisations in the Nottinghamshire Biodiversity Action Group, by initiatives such as Environmental Stewardship and the English Woodland Grant Scheme, and as a result of restoration schemes, including on waste sites. This action is being co-ordinated and quantified through the Local Biodiversity Action Plan.

## Heritage

3.9 Nottinghamshire's heritage is very diverse. Creswell Crags on the Nottinghamshire-Derbyshire boundary has the most northerly Ice Age cave art in the world. The historic landscape of the Trent Valley is an important area for archaeological remains of prehistoric settlement. There is extremely important evidence of Roman field patterns in the north of the county and the modern day A1 and A46 follow the line of old Roman routes. Evidence of Viking influence is apparent in the county's place names. Sherwood Forest boasts a unique heritage of folklore, monasticism and large country house estates (the Dukeries). The county has a fine collection of vibrant historic market towns including Worksop, Newark, Retford, Mansfield and Southwell. They are all rich in architectural and archaeological heritage. The rivers Trent, Idle and Soar, which historically provided important cultural and trade links and the focus of many of our early settlements, are still relied on today by industry, agriculture and the County's power stations. For hundreds of years coal mining and other quarrying was very significant in the west of the county. Nottingham's industrial past was dominated by the textile industry throughout the 18th and early 19th into the 20th centuries and has left a rich built heritage. The city's archaeological and architectural heritage spans thousands of years, evident from the mediaeval castle, caves and taverns. The majority of Nottinghamshire's conservation areas, listed buildings, historic parks, and Scheduled Ancient Monuments are fairing well, but a proportion (around 10%) are in a vulnerable condition or situation.

10 Birklands and Bilhaugh Special Area of Conservation. A large part of central Nottinghamshire is also being considered as a possible Special Protection Area for birds which would provide protection at the international level under EU regulations.

## Water, soil and air

3.10 Much of Nottinghamshire is underlain by important groundwater resources used for industry, agriculture and drinking water. The Rivers Trent and Idle also provide important surface water resources. Whilst water quality is good overall, there are problems with the level of nitrates in the soil in large parts of the county which can in turn affect water quality. The whole of north Nottinghamshire is therefore designated as a nitrate vulnerable zone. Flood risk varies across the county and although there are several areas at risk of localised surface flooding, the main risk comes from the River Trent, especially around Nottingham and Newark and in some of the outlying villages. Air quality is generally good across the county but several **Air Quality Management Areas** have been designated around Nottingham because of known traffic and congestion problems.

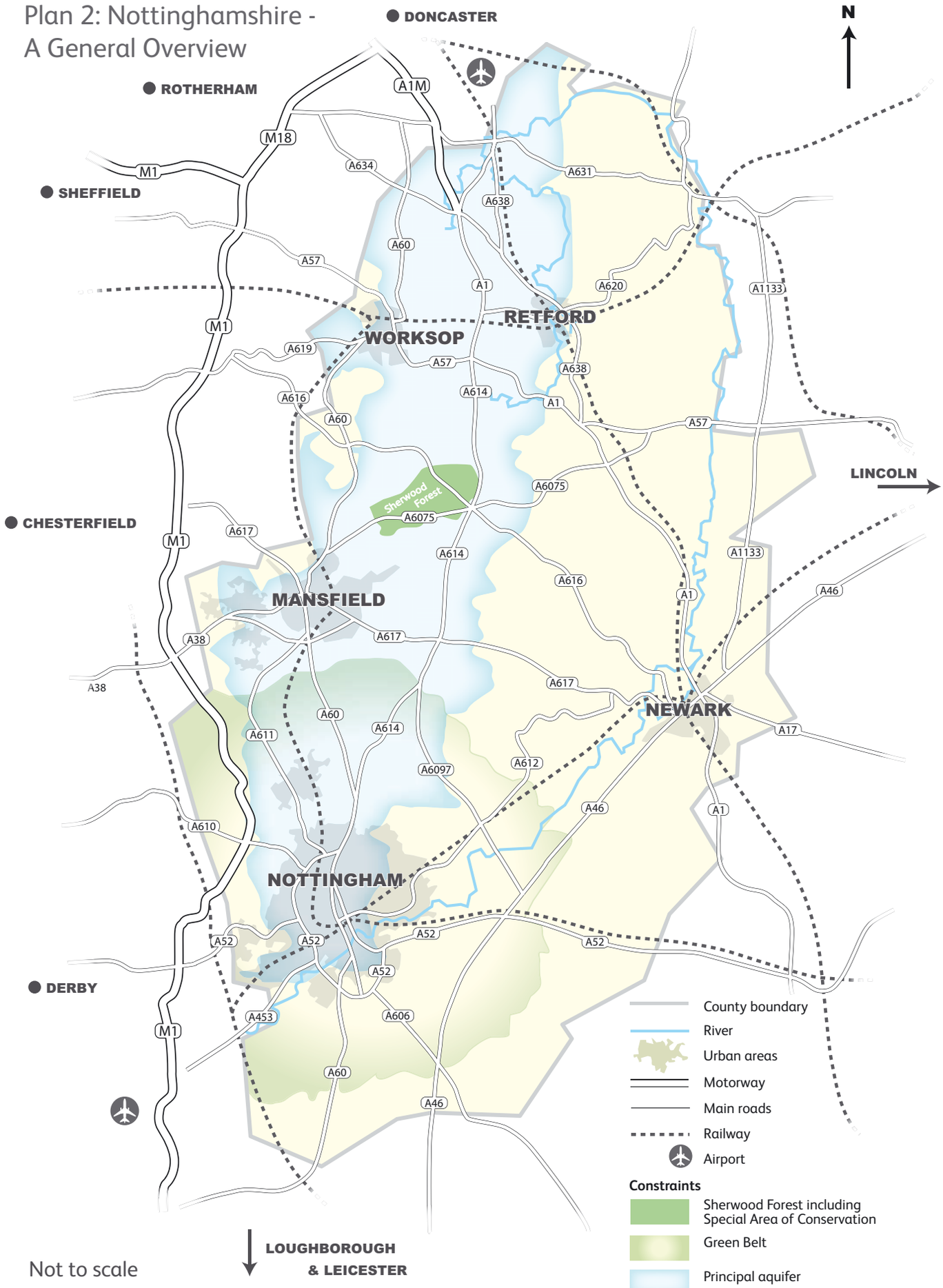
## Health

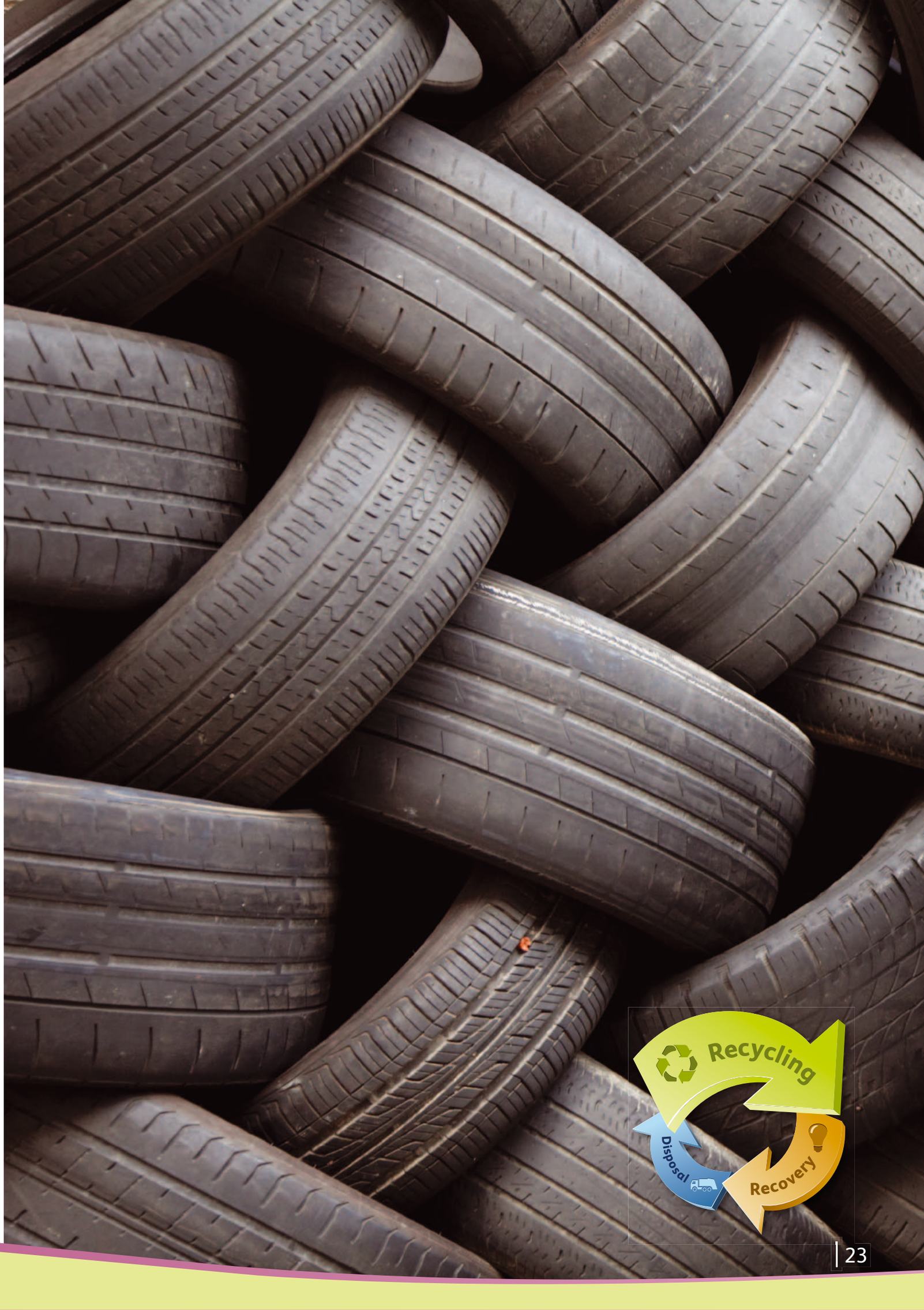
3.11 Overall health indicators are slightly worse than both the regional and national average although life expectancy has recently grown closer to the national average. There are also wide variations in life expectancy with a twelve year gap in average life expectancy between the least and most deprived wards. In some areas low levels of income, and high levels of unemployment and stress, are seen as having a significant impact on health and wellbeing. The main urban areas of Nottingham, Mansfield and Ashfield are worst affected, whilst more rural, affluent areas within Rushcliffe and Gedling generally fare far better. Obesity, amongst both children and adults is also a concern in line with national trends.

## Climate

3.12 Parts of Nottinghamshire have already experienced more frequent and heavier flooding than we had become used to and, overall, this pattern is expected to continue. In common with the rest of the UK there is also an increased likelihood of higher average temperatures, drier summers, wetter winters and more frequent and extreme storms.

## Plan 2: Nottinghamshire - A General Overview

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# Waste management context


4.1 Alongside the more general social, environmental and economic profile in the previous chapter, this chapter looks in more detail at how much waste is produced here and how this is managed. By comparing this to our forecast future needs we can decide roughly how much, and what type of, additional waste management capacity will be required.

## What currently happens to our waste?

4.2 The most recent estimates suggest that Nottinghamshire and Nottingham produce just over 2.5 million tonnes of waste a year[11]. This is significantly below the previous average of around 4 million tonnes a year. Some of this fall is thought likely to be the result of the recession which has affected consumer spending, manufacturing, and construction especially, but it may also be partly due to growing waste awareness and resource efficiency amongst waste producers.

4.3 The most significant waste streams are construction and demolition waste from building and civil engineering projects, commercial and industrial waste from businesses and manufacturing, and municipal waste which comes mainly from households but can include a small amount of trade waste. Although there are many other sources of waste, these tend to be less significant in terms of the planning issues they raise.

### Municipal waste

4.4 Nottinghamshire and Nottingham produced 560,000 tonnes of municipal waste during 2009, down from a peak of 650,000 tonnes in 2006[12]. Recycling rates have increased significantly over the last ten years with 42 % of our municipal waste now recycled or composted. The waste is either collected from kerbside, or through the county-wide network of **household waste recycling centres** and **bring sites.** Once collected, the waste goes to **materials recovery facilities** in Nottingham and Mansfield, to be sorted and bulked up, and is then transferred on to specialist re-processors who take the plastic, glass, paper etc. Green garden waste goes to composting sites around Nottingham. Around 30 % of our combined municipal waste is burned to produce heat and energy through the Eastcroft Incinerator in Nottingham. The remaining waste is either disposed of at one of the county's four remaining **non-hazardous** landfill sites or goes to neighbouring sites in Derbyshire and Doncaster.

11 This figure excludes waste from collieries and power stations which is referred to separately.
12 Defra municipal waste figures www.defra.gov.uk.

## Commercial and industrial waste

4.5 Local businesses and industry are estimated to have produced around 900,000 tonnes of commercial and industrial waste in 2009[13]. This has declined from an estimated 1.3 million tonnes in 2006. It is estimated that around 52 % of this waste was recycled[14]. The majority of recycling facilities and transfer stations for commercial and industrial waste are in Nottingham and Mansfield although there are some facilities in Worksop, Newark and Hucknall. It is not clear how much, if any, of this waste is used for energy recovery but there are no significant energy recovery facilities for this waste within Nottinghamshire or Nottingham. Approximately, 300,000 tonnes was landfilled within Nottinghamshire during 2009 but there is very little information on how much of this waste originated here or how much of our waste is landfilled outside the county.

## Construction and demolition waste

4.6 Construction and demolition waste has historically made up more than half of the waste produced within Nottinghamshire and Nottingham but this is estimated to have fallen in recent years to around 1 million tonnes per year. There are no local figures but national estimates suggest that the majority of construction and demolition waste (between 80 % and 90 % ) is either re-used or recycled, in some way[15]. There are 5 permanent aggregates recycling sites in Nottingham, Mansfield, and Sutton and a number of temporary sites at quarries or landfill sites. However most recycling now takes place as a temporary activity on construction sites and is therefore not recorded. The remaining waste is disposed of to landfill or managed through exempt sites. Disposal of inert construction and demolition waste has fallen over the last 10 years from more than 500,000 tonnes a year to around 230,000 tonnes in 2009. Typically this waste is used to restore old mineral voids or similar sites although some is also used as daily cover and engineering material at non-hazardous landfill sites.

## Mining and power station waste

4.7 The volume of waste from these industries has declined with the closure of many of our collieries and several power stations. However, Nottinghamshire's three remaining coal fired power stations between them produce around 900,000 tonnes of fly and bottom ash per year. Some of this is suitable for use in block making or as an aggregate/bulk fill in engineering projects such as road building but the amount that is recycled in this way will vary according to demand. Each power station has dedicated disposal or storage capacity for the ash with nearly 600,000 tonnes disposed of locally in 2010.

13 Survey of Commercial and Industrial Waste Arisings, Defra, 2010.
14 National average from Defra survey as above.
15 Construction, Demolition and Excavation Waste Arisings, Use and Disposal for England 2008, Waste Resources Action Programme (WRAP).

## Agricultural waste

4.8 Estimated figures suggest that almost 600,000 tonnes of agricultural waste is produced each year but much of this is likely to be natural waste such as animal slurries which can be managed on-farm[16]. Only around 40,000 tonnes of material like plastic, rubber, metal, oil and chemicals is estimated to be produced across the East Midlands, meaning that Nottinghamshire's production is likely to be very small. However this waste still has to be managed at licensed facilities.

## Clinical waste

4.9 Approximately 3,000 tonnes of clinical waste per year is produced within Nottinghamshire from hospitals, doctor's surgeries and 'yellow bag' waste from residential homes and individual households Most of this waste is treated or disposed of at sites within Nottinghamshire although a small amount is exported to the Midlands and Yorkshire. Roughly 4,000 tonnes of clinical waste is also imported for treatment at facilities here. The Eastcroft Incinerator in Nottingham includes a separate clinical waste plant that can treat approximately 6,000 tonnes a year.

## Waste water and sewage

4.10 There are more than 60 sewage treatment works across Nottinghamshire. These range from major plants to small rural pumping stations and between them treat an average daily flow of 316 million litres of effluent. Although the water companies consider that this current capacity is adequate, additional treatment capacity is likely to be needed over the next 20 years in order to meet the demands of projected housing and employment growth around Nottingham, Mansfield and Worksop in particular.

## Hazardous waste

4.11 Nottinghamshire produces just under 70,000 tonnes of hazardous waste a year[17]. Relatively little of this waste is treated at facilities within Nottinghamshire, with the majority exported to surrounding counties, or other parts of the UK in some cases. However, Nottinghamshire also imports around 50,000 tonnes of hazardous waste each year for treatment meaning that we manage roughly the same amount of hazardous waste that we produce. This scale of waste movement is because hazardous waste is generally produced in such small quantities that it is often more economic for this type of waste to be managed regionally or even nationally. For example, Nottinghamshire does not have any sites that are geologically suitable for disposing of hazardous waste and therefore has to rely on sending hazardous waste for disposal to other counties. Currently the nearest hazardous waste landfill site is at Kings Cliffe in Northamptonshire.

16 East Midlands Regional Waste Strategy, EMRA, January 2006.
17 Environment Agency data for 2010.

### Radioactive waste

4.12 All high level radioactive waste such as that from nuclear power stations is managed nationally and is treated or disposed of at specially designed sites. Locally, very small levels of low level, non-nuclear, radioactive waste are produced by hospital X-Ray departments, universities and industry, for example, but this can be disposed of safely in existing landfill sites or by incineration[18].

## What is our existing waste management capacity?

### Municipal waste

4.13 There are 14 Household Waste Recycling Centres (HWRCs) serving Nottinghamshire and one dedicated site in Nottingham. Together these sites manage around 100,000 tonnes of municipal waste a year. The City Council has identified a possible need for another site to boost existing provision. The City and District Councils also maintain approximately 350 bring sites at supermarkets, shopping centres, leisure centres and schools. The County Council has recently completed a long-term programme of improvements to its HWRC network including the recent development of new sites at Worksop and Newark. As well as the local HWRC network, there is a large purpose-built Materials Recovery Facility in Mansfield which sorts up to 85,000 tonnes a year from the district councils' kerbside collections. There are also two large third-party sites in Nottingham that are able to take both municipal and commercial and industrial waste.

4.14 There are also five composting sites focussed around Nottingham and Newark which can take approximately 85,000 tonnes of municipal waste a year. This brings our estimated recycling and composting capacity for municipal waste to around 300,000 tonnes a year.

4.15 Most waste transfer stations handle commercial and industrial waste as well as municipal waste. Currently four sites in Nottinghamshire are used to bulk up waste from the HWRCs, and local kerbside collections, and manage around 50,000 tonnes of municipal waste a year. Two sites just outside Nottinghamshire, in Derbyshire and Lincolnshire, are also used for about 40,000 tonnes. A new municipal waste transfer station is proposed in Newark to address the shortfall in this part of the county. Three transfer stations in Nottingham handle approximately 30,000 tonnes of the City's waste.

4.16 The existing incinerator at Eastcroft, in Nottingham, takes up to 160,000 tonnes of municipal waste a year but has permission for a third line to take an additional 100,000 tonnes of either municipal or commercial and industrial waste. There are no other energy recovery facilities for municipal waste within the Waste Core Strategy area. Proposals have been put forward for facilities in Rainworth, Nottinghamshire, Derby and at Shepshed in Leicestershire but these sites were refused planning permission and are currently subject to legal proceedings. A 150,000 tonne facility is currently under construction near Lincoln and there is an operational energy from waste incinerator in Sheffield which can take up to 225,000 tonnes per year.

18 Defra Non-nuclear Radioactive Waste Strategy - Scoping Report, January 2009 estimates less than 15 tonnes per annum.

4.17 Disposal capacity has fallen significantly over the last ten years with only four non-hazardous landfill sites remaining. At the end of 2010 there was sufficient capacity for around 4.7 million $m^3$, or 4 million tonnes, of waste but not all of this capacity is likely to be available. The only site close to Nottingham is within a clay quarry linked to a neighbouring brickworks. The rate of waste disposal is therefore limited by how much clay is extracted each year. The three other landfill sites are at Newark, Worksop and Retford. All of our non-hazardous landfill sites also take commercial and industrial waste as well as some construction and demolition waste which is used for engineering and cover. At current rates these sites will be used up well within the plan period and there is the added problem that these existing sites are not very well located in terms of serving the main urban areas around Nottingham and Mansfield/Ashfield. Derbyshire is also facing a shortage of disposal sites and some municipal waste from Derby comes to Nottinghamshire sites. Lincolnshire and parts of south Yorkshire currently have some spare landfill capacity although this is again remote from our main shortfall area (see Plan 4).

## Commercial and industrial waste

4.18 Recycling facilities for commercial and industrial waste seem quite limited with most capacity focused on two large Materials Recovery Facilities in Nottingham. Trade waste is not accepted at the City or County's HWRC sites. There are other, smaller, recycling facilities in Worksop and Hucknall and specialist facilities for glass and wood in Kirkby-in-Ashfield and outside Retford. Overall these facilities provide 600,000 tonnes a year of recycling capacity. Scrapyards and metal recycling sites are much more widespread with more than 30 sites in and around Nottingham, Mansfield, Worksop, Retford and Newark providing close to 1 million tonnes of metal recycling capacity.

4.19 There are also more than 40 waste transfer stations which between them handle almost half a million tonnes of commercial and industrial waste a year, with some sites also taking hazardous or specialist wastes. Traditionally these sites just bulked up the waste for onward transfer but a wider range of range of recycling operations is now carried out at some sites, making them closer to Materials Recovery facilities.

4.20 There are no energy recovery facilities for commercial and industrial waste within the plan area although the permitted extension to the Eastcroft Incinerator, in Nottingham, could take up to 100,000 tonnes a year in future. The only other potential capacity is the Sheffield incinerator which is licensed to take some commercial and industrial waste.

4.21 Nottinghamshire and Nottingham's commercial and industrial waste that is not recycled or sent elsewhere for energy recovery, is therefore landfilled. Commercial and industrial waste accounts for around two thirds of the waste that is disposed of in our remaining non-hazardous landfill sites.

19 There are also several restricted user sites which take small quantities of inert waste from a specific source but these sites are not available for general use.

## Construction and demolition waste

4.22 The 6 permanent aggregates recycling sites in Nottingham, Mansfield, Sutton and Retford provide enough capacity to recycle up to 1 million tonnes of concrete, rubble and spoil a year and temporary sites at quarries and landfill sites provide further aggregates recycling capacity. Several of the large Materials Recycling Facilities are also able to take construction and demolition waste. However, with the majority of this waste now recycled on-site, current recycling capacity is seen as adequate.

4.23 The majority of waste transfer stations take construction and demolition waste in some form and took almost 150,000 tonnes in 2010. However their actual capacity may be much higher as construction and demolition waste volumes are known to have fallen significantly.

4.24 There is only one significant landfill site for inert construction and demolition waste, at Mansfield Woodhouse, meaning that disposal capacity is very limited with no provision for the other main urban areas, including Nottingham[19].

**Table 1 Summary of Existing Waste Treatment Capacity ('000 tonnes per annum).**

| | Municipal | Commercial and Industrial | Construction and Demolition |
|---|---|---|---|
| Recycle | 300 | 1,600 | 1,000 |
| General | - | 600 | - |
| Metal | - | 1,000 | - |
| Aggregates | - | - | 1,000 |
| Compost | 85 | - | - |
| Recovery | 260 | - | - |
| Transfer | 80 | 500 | - |

Source: Environment Agency data for 2009 and County and City Council planning records.

## How much additional Capacity will we need?

4.25 Estimating how much waste will be produced in future is very difficult as this is driven by factors such as how well the local economy is performing, the relative cost of different types of waste management, and the impact of any Government taxes or legislation. Existing data for some wastes is also very limited meaning that any estimates can only give a very broad indication of anticipated future arisings.

4.26 The East Midlands Regional Plan, published in March 2009, sets out best and worst case estimates of future waste arisings for each Waste Planning Authority until 2025. For Nottinghamshire and Nottingham this suggests anywhere between 5 and 7 million tonnes of waste per year depending on the level of future waste growth[20]. Table 2 below shows the best case estimate whilst Table 4, overleaf, shows the overall amount of capacity that the Regional Plan expects us to provide (see paragraph 4.29).

**Table 2 East Midlands Regional Plan - Estimated Waste Arisings ('000 tonnes per annum).**

| | 2015 | 2020 | 2025 |
|---|---|---|---|
| Municipal | 772 | 772 | 772 |
| Commercial and Industrial | 1,300 | 1,267 | 1,234 |
| Construction and Demolition | 2,725 | 2,725 | 2,725 |
| **Total** | **4,797** | **4,764** | **4,731** |

4.27 These estimates are based on data from 2002/03. Since then there has been a significant fall in actual waste volumes. Rising disposal costs and both national and local initiatives to cut waste are also likely to encourage a continued reduction in the proportion of waste produced. However, this does not mean that there will be not be any waste growth in future. Longer term economic recovery along with planned new housing and employment development across Nottinghamshire make it essential that the Waste Core Strategy takes a flexible approach towards possible future waste growth.

4.28 A more recent estimate of future waste arisings was produced in 2010 as part of work carried out on behalf of all of the East Midlands Waste Planning Authorities. This resulted in a single lower estimate of up to 5 million tonnes a year and was broadly in line with the best-case estimate in the East Midlands Regional Plan (Tables 2 & 3).

**Table 3 Revised Estimate of Waste Arisings ('000 tonnes per annum).**

| | 2015 | 2020 | 2025 |
|---|---|---|---|
| Municipal | 637 | 653 | 669 |
| Commercial and Industrial | 1,472 | 1,472 | 1,472 |
| Construction and Demolition | 2,725 | 2,725 | 2,725 |
| **Total** | **4,834** | **4,850** | **4,867** |

Source: RPS Study 2010.

20 The best case scenario assumes zero growth for all waste after 2015. The worst case scenario assumes continued waste growth based on 2002/03 levels.

4.29 Within the East Midlands Regional plan, there are indicative estimates of the minimum amount of waste management capacity that each Waste Planning Authority is expected to provide to 2025 but this does not take account of existing capacity. This apportionment is based on meeting existing national and regional targets for municipal waste recycling and landfill reduction. No provision is made for any additional recycling of commercial and industrial or construction and demolition waste. The Waste Core Strategy is therefore required to show how it will provide sufficient capacity to meet projected recycling, recovery & disposal needs. No specific provision is made for re-use as the Waste Core Strategy cannot provide facilities for this.

**Table 4 Estimated Future Waste Capacity Requirements as set out in the East Midlands Regional Plan 2009 ('000 tonnes per annum).**

| | 2015 | 2020 | 2025 |
|---|---|---|---|
| **Municipal** | | | |
| Recycle/Compost | 386 | 386 | 386 |
| Recover | 162 | 214 | 214 |
| Dispose | 224 | 172 | 172 |
| **Commercial and Industrial** | | | |
| Recycle/Compost | 546 | 532 | 518 |
| Recover | - | - | - |
| Dispose | 754 | 735 | 716 |
| **Construction and Demolition** | | | |
| Recycle/Compost | 1,346 | 1,346 | 1,346 |
| Recover | - | - | - |
| Dispose | 337 | 337 | 337 |
| **Total Capacity** (Exc. Re-use) | **3,755** | **3,722** | **3,689** |

4.30 Meeting this level of provision would require a moderate increase in existing recycling capacity for municipal waste. As there are no targets for commercial and industrial waste built into this apportionment, no increase in recycling capacity would be required. However, the figures suggest that an additional 350,000 tonnes of construction and demolition recycling capacity would be required, based on current capacity being approximately 1 million tonnes per year. In practice, there has not been any evidence of demand for additional recycling facilities, possibly because of the downturn in the construction industry and/or the majority of this waste now being recycled on-site, meaning there is less need for dedicated facilities.

4.31 Sufficient energy recovery capacity is in place to meet the forecast requirement for municipal waste. However, no assumptions were made about energy recovery for commercial and industrial waste hence no specific need was identified. Disposal requirements take account of the EU Landfill Directive targets to limit the disposal of biodegradable municipal waste, but disposal rates for other wastes were forecast to continue unchanged.

4.32 Meeting the disposal rates envisaged in the Regional Plan would therefore mean providing sufficient capacity to manage more than 1 million tonnes of non-hazardous waste a year or the equivalent of more than 20 million $m^3$ of voidspace over the life of the Waste Core Strategy[21]. At this rate of disposal our remaining landfill capacity would be used up within 3-4 years and we would need to find the equivalent of three or four large new landfill sites. However, since the Regional Plan estimates were produced, actual landfill rates have fallen sharply to less than half the amount forecast. This is probably due to a number of factors including the economic downturn, the impact of the landfill tax and higher recycling rates. Whilst there cannot be any guarantee that disposal rates will not increase in future, the combination of increasing costs and changing behaviour is likely to mean that landfill rates stabilise, or decline, in future as other waste management options increase.

4.33 The Regional Plan estimates set out the maximum allowed landfill of biodegradable municipal waste but, given the environmental difficulties of providing further disposal capacity within Nottinghamshire, the Waste Core Strategy will look to provide only for residual levels of disposal in line with the waste hierarchy. This approach is set out in Policy WCS2 and its supporting text (see paragraphs 7.6 – 7.14) At current rates this will mean finding a further 3-4 million $m^3$ of non-hazardous, and a similar amount of inert, disposal capacity towards the end of the plan period. However, this will be reviewed if disposal rates continue to fall.

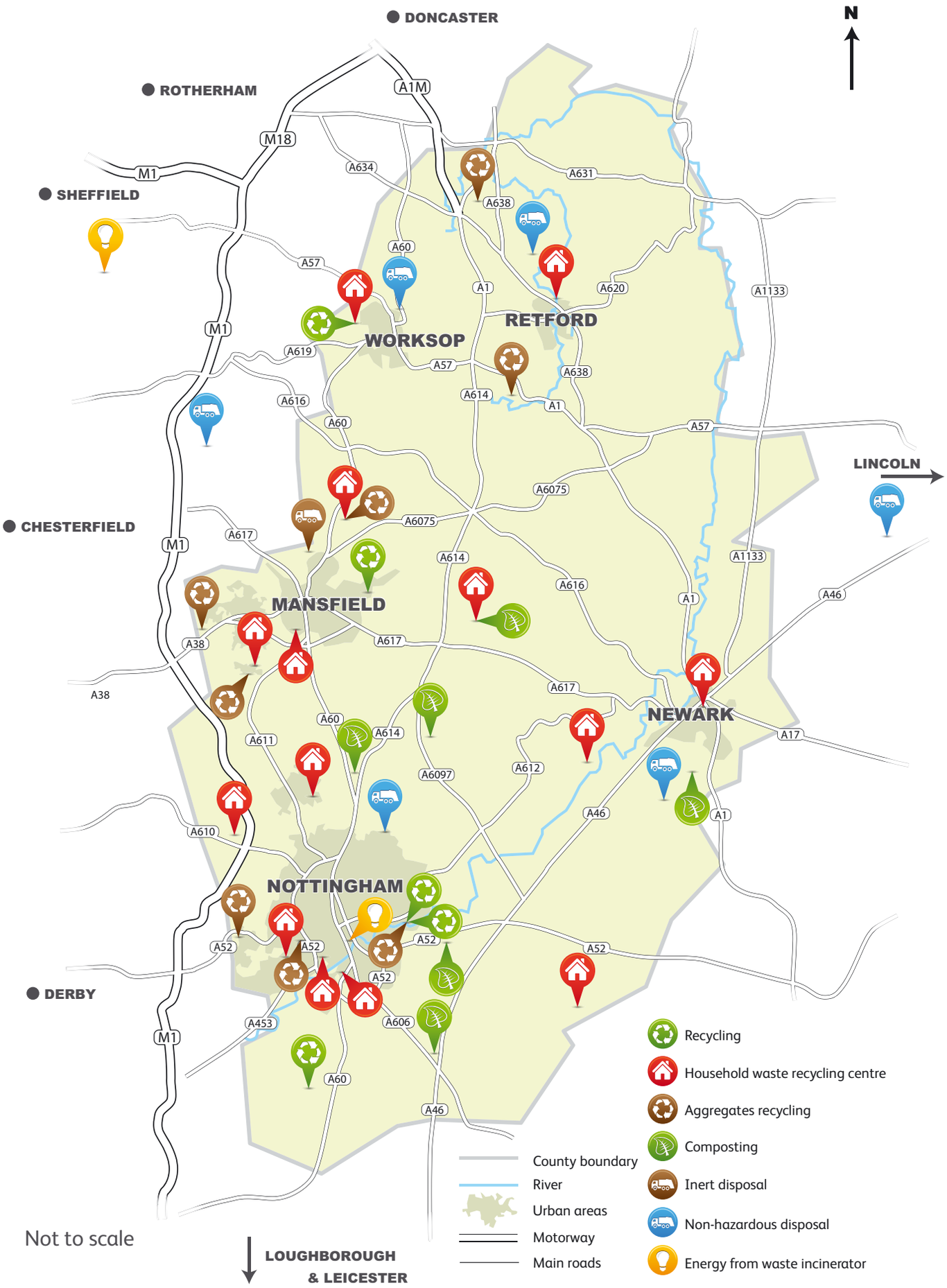
4.34 We would only need a moderate increase in existing waste treatment capacity to meet the indicative apportionment set out in the Regional Plan. However this is focused on municipal waste and does relatively little to tackle other wastes. As set out in Chapter 7, the Waste Core Strategy is taking an ambitious approach to sustainable waste management and will take a lead in driving the management of all waste up the waste hierarchy. Our overall vision and strategic objectives are set out in chapter 6 and this leads to a policy target to increase recycling of all waste to 70 % in line with targets that are now emerging in other parts of the UK (see Policy WCS2). This is intended to drive a reduction in disposal to less than 10 % of our annual waste arisings.

4.35 Achieving this will require the provision of additional recycling capacity for municipal and commercial and industrial waste especially and the possibility of additional energy recovery capacity to divert waste from landfill. An indication of the likely additional waste management infrastructure required is given in Chapter 7.

21 This assumption is based on the amounts of municipal, commercial and industrial waste forecast for disposal in table 4 but also allows for an additional 20 % of inert waste that is needed to provide daily cover and for site engineering purposes.

# Plan 3: Significant existing waste management facilities

(Some key neighbouring facilities shown)




Recycling
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# Issues and Challenges for the future

5.1 Looking at the local situation, as shown in our **evidence base**, there are a number of key issues that the Waste Core Strategy needs to address over the next 20 years. As well as overcoming existing problems and possible constraints to development, there are also opportunities to contribute towards the wider aims of other plans and strategies for our area. Together these issues and opportunities have helped us to decide on the vision and objectives for the Waste Core Strategy which is set out in Chapter 5.

## Delivering sustainable waste management

5.2 Sustainable waste management is about more than just providing the right amount and type of waste management facilities, in the right locations. It is also about changing the way we think about waste to recognise its material value and encourage measures to prevent or re-use waste before then making provision for waste to be recycled, recovered and finally disposed of in that order. There is also a need to overcome existing perceptions of waste management so that essential new facilities are recognised and accepted as a valuable and necessary part of our physical infrastructure.

5.3 A challenge for the Waste Core Strategy is therefore how to encourage and coordinate better use of our resources and improve waste management practices amongst key stakeholders such as the district and borough councils, local businesses, the waste industry, residents and voluntary groups. This includes raising awareness about the waste management needs and impacts of other development such as housing, shopping centres and offices. Alongside wider initiatives, these steps will all help the move towards a zero waste economy.

## Providing sufficient waste management capacity

5.4 The Waste Core Strategy needs to provide sufficient capacity to manage an estimated 5 million tones of waste by 2030/31. This means developing around 1-2 million tonnes worth of new recycling, composting or energy recovery capacity primarily for municipal, commercial and industrial waste. We also have to ensure that there is appropriate provision to help us meet existing and future statutory or local recycling targets (see paragraphs 2.5 - 2.9).

5.5 Although our long term aim is to avoid landfill there will still be a need for some residual waste disposal. With less than 8 years of non-hazardous and inert disposal capacity remaining, the Waste Core Strategy must guide the provision of further capacity where needed.

## Managing population and economic growth

5.6 The population and economy of Nottinghamshire is planned to expand. This will mean more buildings and roads, as well as more local businesses and households that will produce waste. More than 85,000 new houses are planned across Nottinghamshire over the next 20 years[22]. Nottingham and Newark are earmarked for significant new housing and employment development and other urban areas are also likely to see at least some growth. Eastern parts of Nottinghamshire may also be affected by growth in neighbouring Gainsborough and Lincoln.

5.7 Whilst we will work closely with communities, developers and local authorities to try and prevent or reduce waste at source, it is clear that we will still need additional waste management capacity, both to meet this growth and to help us manage existing waste more sustainably through recycling and recovery rather than disposal. This will also include the provision of additional or improved sewage infrastructure where needed.

## Meeting local needs

5.8 The idea of communities taking responsibility for their own waste is at the heart of sustainable waste management. Providing an adequate network of appropriate waste management infrastructure to minimise the distance over which waste is transported is therefore a priority for the Waste Core Strategy. This will involve overcoming shortcomings in the existing distribution of our waste management infrastructure, especially in northern and more rural areas and reinforcing existing provision where appropriate.

## Protecting our environment, health and quality of life

5.9 One of the underlying principles of sustainable waste management is to make sure that waste is managed safely without risk to the environment or human health[23] and balancing the possible impacts against the need for development is always a critical part of any planning decision. The Waste Core Strategy therefore has to ensure that development is focussed on the most appropriate locations in order to protect areas that are important for nature conservation, landscape, open space and cultural heritage, avoid harm to our natural resources, and maintain local amenity and quality of life.

22 Nottinghamshire County Council sources based on Local Development Frameworks.
23 Planning Policy Statement 10 (PPS10): Planning for Sustainable Waste Management, ODPM 2005.

5.10 Significant constraints on future waste management development include the County's major sandstone aquifers which restrict possible disposal locations and the possible designation of a large area of central Nottinghamshire between Hucknall and Worksop as an internationally important Special Protection Area for birds. Air quality concerns from transport also mean that reducing the distance waste travels and encouraging alternative methods of transport, such as water or rail, has to be a priority. Pollution controls are imposed and regulated by the Environment Agency but planning decisions need to take account of concerns over possible emissions and/or impacts on amenity where this creates a potential land-use conflict. Ensuring the adequate provision of appropriate waste management facilities also has an important part to play in creating a safe and healthy environment for all.

5.11 As well as maintaining existing environmental quality, planning policies can also be used to secure wider benefits from new development. This could include opportunities to increase woodland coverage and provide new areas of heathland, in line with national and local biodiversity targets, and the provision of new areas of open space for relaxation and recreation to help with physical and mental well-being.

## Coping with changing climate

5.12 Whatever the reasons for climate change, we need to ensure that the impact of future development does not make existing problems worse. With the likelihood of higher temperatures, more frequent storms and a greater risk of flooding, we also have to make sure that our future waste management infrastructure is designed and located to withstand these impacts.

## Floodrisk

5.13 The wide flood plain along the River Trent is a major constraint for new development, particularly around Nottingham and Newark but a combination of surface and river flooding also presents a localised risk for parts of Hucknall, Sutton-in-Ashfield, Kirkby-in Ashfield, Mansfield, Warsop and Worksop. This limits the types of waste infrastructure that could be developed here. Planning policies within the Waste Core Strategy, and subsequent development management and site specific policies, will therefore have a key role in locating development in lower risk areas and ensuring that new facilities do not make existing problems worse and are themselves able to withstand likely flood impacts.

## Energy and the low carbon agenda

5.14 The UK is committed to reducing energy consumption, promoting renewable and low carbon energy sources and de-centralising energy supply. Some energy from waste technologies have the potential to offset fossil fuel use and are seen as low carbon or even renewable in some cases[24]. Making appropriate use of energy from waste including the anaerobic digestion of organic waste and efficient, modern combined heat and power plants (incineration, gasification or pyrolysis) for other waste could therefore provide ways of providing local sources of energy and contributing to the wider low carbon agenda. Nottingham already benefits from the largest district heating scheme in the UK and there may be opportunities to expand upon this network. We can also seek to ensure that all future waste management development is itself more energy efficient. Also, by encouraging more sustainable waste management involving the re-use, recycling or recovery of materials, we can continue to make use of the energy that is already embodied in those materials.

## Supporting our economy

5.15 Despite our generally diverse and expanding economy there is a need to tackle the wide variations in employment, skills and income, especially in some of the former mining and manufacturing areas which are highlighted locally as being in need of regeneration. Parts of Nottingham, Mansfield, Ashfield and Bassetlaw are particularly affected by low employment and deprivation. Waste management is not currently a major employer but the need for more treatment and/or disposal facilities, along with the move towards greater separation and sorting of waste materials as a resource, is likely bring opportunities in both the construction and operation of these facilities.

5.16 The Waste Core Strategy can therefore play a positive role in encouraging innovative new waste management technologies and investment in employment sites to support wider employment and regeneration goals.

## Sustainable development and infrastructure

5.17 To manage future growth sustainably we need to make the most of existing buildings, land and transport infrastructure. Planning policies can contribute to this by locating facilities close to existing transport networks, re-using land and buildings wherever possible and ensuring that facilities are close to the main sources of waste. In some cases, it may be preferable to extend existing waste treatment or disposal facilities rather than build new ones.

24 National Policy Statement for Renewable Energy Infrastructure (EN-3), Department of Energy and Climate Change, July 2011. Government Review of Waste Policy in England, Defra, 2011. Waste Wood as a Biomass Fuel: Market Information Report, Defra, April 2008.


Recycling
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# Vision and strategic objectives

A sustainable vision

## Developing a vision for sustainable waste management

6.1 Building on the issues, challenges and opportunities identified in Chapter 5, we have developed our vision for delivering sustainable waste management facilities across Nottinghamshire and Nottingham over the next 20 years. The vision is in line with national and regional policy and supports the wider Local Development Framework, and Sustainable Community Strategy, objectives of all of the local authorities in our area.

6.2 The starting point for this vision is to put dealing with our waste sustainably at the heart of everything we do. This means communities, businesses and developers taking responsibility for their own waste and the local authorities creating a positive planning framework that supports the move towards even higher levels of recycling and the wider goal of a zero waste economy.

### Vision

'By 2031 Nottinghamshire and Nottingham's communities, businesses and local authorities will be taking responsibility for managing their waste locally and sustainably. Together we will be producing less waste, re-using more and striving to exceed national recycling targets. Disposal will be the last resort once all other options have been exhausted. We will be supported by an ambitious and innovative waste industry that values waste as a resource and there will be sufficient waste management capacity to deal with the amount of waste generated in Nottinghamshire and Nottingham.

The geographical spread of our waste management facilities will be closely linked to our concentrations of population, with large facilities around the Nottingham urban area, Mansfield and Ashfield and medium sized facilities close to Worksop, Retford and Newark. Resource recovery parks will make use of excellent transport links to serve a wide area and will be part of wider development supporting green energy or other sustainable technologies. Rural communities will benefit from small scale community led schemes and farm based initiatives to provide local recycling facilities but this will not compromise the protection of our Green Belt.

All waste-related development will protect, and where possible enhance, our environment, wildlife, landscape and heritage. Individual developments and our overall approach to waste management will successfully manage the possible impacts of climate change. The quality of life and health of those living and working in, or visiting, Nottinghamshire and Nottingham will be protected.'

## Strategic Objectives

6.3 To help deliver this vision we have set out seven strategic objectives for the Waste Core Strategy:

**SO1 Strengthen our economy –** promote a diverse local economy that minimises waste production and maximises the re-use, recycling and recovery of waste by making the most of opportunities for businesses, local authorities and communities to work together and use waste as a resource. Encourage investment in new and innovative waste management technologies and learn from best practice elsewhere. Promote opportunities within the waste sector for new job creation and training/skills development.

**SO2 Care for our environment –** protect our landscape, countryside, wildlife and valuable habitats from harmful development and make the most of opportunities to enhance existing open space and provide new habitats. Protect water, soil, and air quality across the county. Protect after our heritage assets and their settings, including archaeological remains and protect the character of our townscapes.

**SO3 Community well-being –** protect local amenity and quality of life from impacts such as dust, traffic, noise, odour, visual impact etc. and address local health concerns. Make sure that local people have the chance to be involved in decisions about new waste management facilities by providing more information, encouraging wider involvement and targeting key groups or individuals where appropriate.

**SO4 Energy and climate –** encourage the efficient use of our natural resources by promoting waste as a resource to be re-used, reduce the need to transport waste, minimise energy use and encourage use of combined heat and power where this can help to offset fossil fuel use. Accept that some change is inevitable and manage this by making sure that all new waste facilities are located and designed to withstand the likely impacts of flooding, higher temperatures and more frequent storms.

**SO5 Sustainable transport –** encourage alternatives to road such as water and rail where practical. Locate sites close to sources of waste and/or end-markets to reduce transport distances and make use of existing transport links to minimise the impact of new development.

**SO6 Meet our future needs –** aim to be self-sufficient by providing enough sites to manage the equivalent of our own waste arisings over the plan period – making sure that there is a mix of site types, sizes and locations to help us manage waste locally wherever possible. Manage our waste sustainably by meeting current and future targets for recycling and recovering our waste and moving away from landfill. Safeguard suitable existing and/or potential future sites where appropriate. Locate new waste facilities to support new residential, commercial and industrial development across the county.

**SO7 High quality design and operation –** make sure that all facilities are designed and operated to the highest standards. Improve the understanding, acceptance and appearance of waste management facilities which are an essential part of our infrastructure.

## How will the Waste Core Strategy deliver these objectives?

6.4 Delivering this overall vision and achieving this level of behavioural change will involve many different groups and organisations working together. However the Waste Core Strategy has a key role to play in providing the right environment for this to happen and the following text highlights policies within Chapter 7 of this joint Waste Core Strategy will help to deliver these objectives.

**SO1** **WCS1** and **WCS2** promote waste awareness, resource efficiency and sustainable waste management whilst **WCS8** supports innovation in the waste sector which will all benefit the local economy.

**WCS3, WCS4, WCS5** and **WCS6** promote appropriate development locations and guide investment decisions by the waste industry whilst **WCS7** supports the extension of existing facilities where appropriate.

**WCS14** encourages high quality design which should improve the understanding and acceptance of waste management infrastructure.

**SO2** **WCS3, WCS4, WCS5** and **WCS6** promote appropriate development locations whilst **WCS12,** and saved policies in the adopted Waste Local Plan, will protect the environment, natural resources and local amenity.

**SO3** **WCS3, WCS4, WCS5** and **WCS6** promote appropriate development locations whilst **WCS12,** and saved policies in the adopted Waste Local Plan, will protect local amenity.

**SO4** **WCS1** promotes waste as a resource and **WCS2** promotes sustainable waste management including energy recovery where appropriate.

**WCS3** and **WCS4** promote waste treatment and disposal locations close to where waste is produced whilst **WCS10** seeks to minimise the distance waste is transported by road.

**WCS13** seeks to minimise impacts on, and increase adaptability to, climate change.

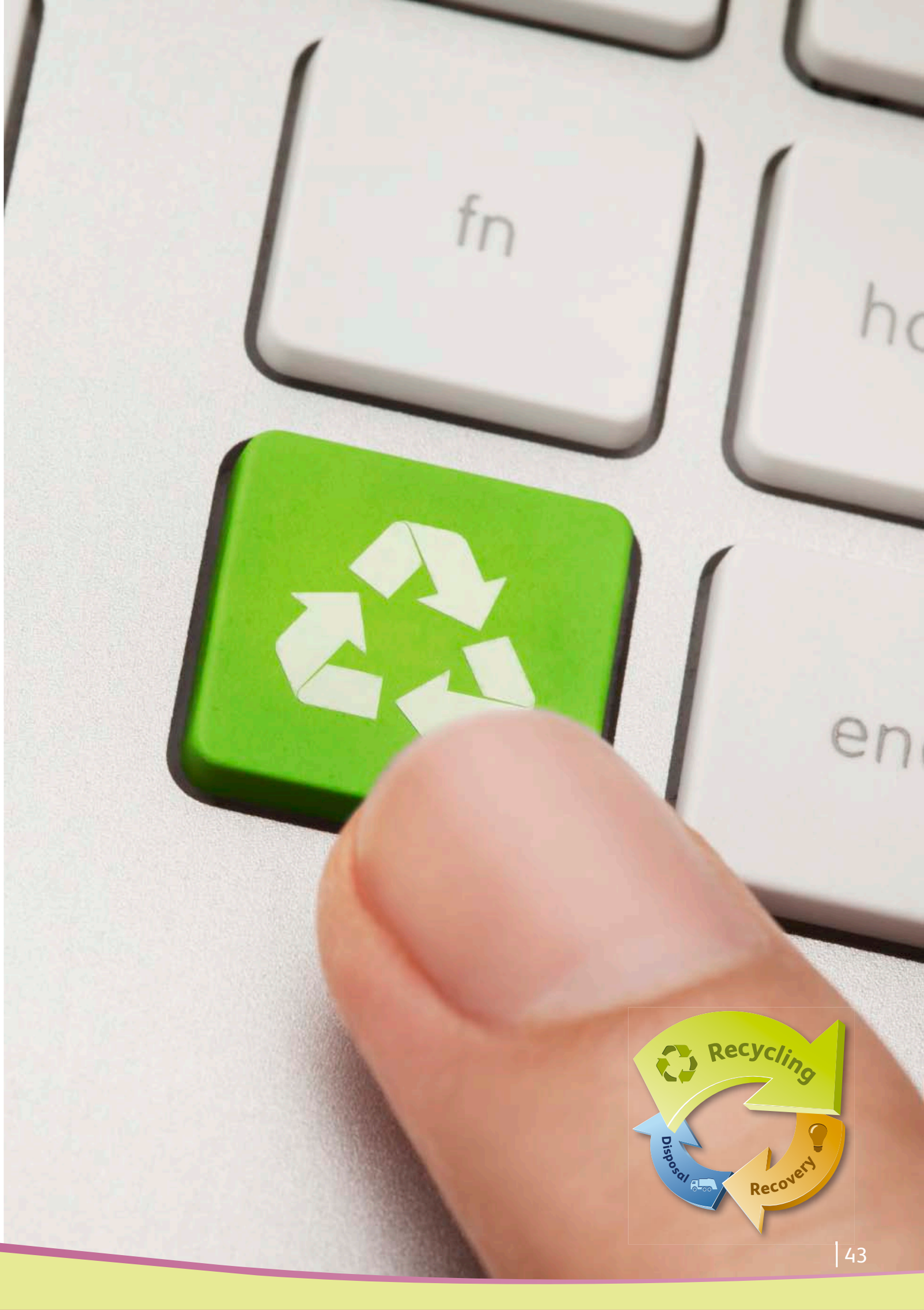
**SO5** **WCS3** and **WCS4** promote waste treatment and disposal locations close to where waste is produced which should help to minimise the need to transport waste whilst **WCS10** specifically seeks to maximise the use of alternative forms of transport and minimise the distance waste is transported by road.

**SO6** **WCS2** promotes sustainable waste management and **WCS9** safeguards existing and proposed sites for waste use.

**WCS11** ensures we make sufficient future provision to manage at least the equivalent of our own needs and addresses the issue of cross-boundary movements to allow for the reasonable movement of waste where this is shown to be sustainable.

**SO7** **WCS12** and **saved policies** in the adopted Waste Local Plan will protect the environment, natural resources and local amenity.

**WCS14** specifically encourages high standards of design, landscaping and sustainable construction in order to improve the acceptance of waste facilities.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# Waste Core Strategy Policy

Our core waste policies

7.1 This chapter sets out our core policies for the future management of waste in Nottinghamshire and Nottingham in terms of the general type and broad location of facilities. It does not set out detailed policies on the exact location of sites or how they should be operated as these will be contained in subsequent documents as explained in Chapter 1. All policies within the Waste Core Strategy should be read as a whole and not taken in isolation and should take account of the relevant supporting text. Other planning policies within the Local Development Frameworks of the City Council and District Councils and the County Council's Minerals Local Plan may also be relevant.

## Waste prevention and re-use

7.2 We will use the Waste Core Strategy to encourage more sustainable waste management at the local level wherever possible, but planning policies alone cannot enforce these changes. However, we will promote greater awareness, understanding and cooperation on waste issues amongst local residents, businesses and local authorities.

7.3 This will include looking at how we buy goods and services to see where we can cut waste and make better use of existing resources. We will also encourage others to do the same by supporting national campaigns and local initiatives, and working alongside other local authorities, businesses, residents' groups and voluntary organisations to reduce waste. This will build on existing examples such as the Nottinghamshire Schools Waste Action Club, the Nottinghamshire Waste Partnership and the Sustainable Developer Guide and the City Council's partnership with Family First to promote the re-use of furniture, white goods and waste electrical equipment. The County and City Councils are also working together with districts to raise local awareness about food waste in support of the national Love Food Hate Waste campaign.

7.4 PPS10 and the East Midlands Regional Plan look to all planning authorities, including local district and borough councils, to consider the waste implications of new development. This can include measures such as re-using construction waste on site, making use of recycled materials in construction and the provision of adequate space for the collection, sorting and separation of waste within the layout of the development (e.g. within new residential development or as part of a new industrial estate or retail park). There is also now a legal requirement for all development costing more than £300,000 to be accompanied by a waste audit known as a Site Waste Management Plan. Waste and resource issues are also increasingly being addressed through building regulations and schemes such as BREEAM and the Code for Sustainable Homes[25].

25 BREEAM sets approved standards for best practice in sustainable building design, construction and operation. This system of certification is widely used by local authorities and other public bodies to require minimum standards of energy and resource efficiency in new development, including waste issues. The Code for Sustainable Homes is a voluntary scheme that goes further than current building regulations to promote even higher standards of sustainable design covering energy/CO2, water, materials, surface water runoff (flooding and flood prevention), waste, pollution, health and well-being, management and ecology.

7.5 Major new development such as new housing estates can also place an extra burden on existing local authority waste collection and disposal services, including local Household Waste Recycling Centres and transfer facilities. Local councils should therefore consider whether this justifies requesting planning contributions from developers towards additional waste infrastructure requirements.

### Policy WCS1 - Waste awareness, prevention and re-use

Nottinghamshire County and Nottingham City Councils will lead by example and work together with district and borough councils, the waste industry, local businesses, communities and voluntary groups to improve waste awareness and encourage measures aimed at waste prevention and re-use.

All new development should be designed and constructed to minimise the creation of waste, maximise the use of recycled materials and assist the collection, separation, sorting, recycling and recovery of waste arising from the development.

## Delivering sustainable waste management facilities

7.6 Alongside helping to support wider waste management aims and objectives, the key role of the Waste Core Strategy is to ensure that there is a modern, efficient network of waste management facilities to treat or dispose of the waste that is produced safely and sustainably. This means ensuring that we have the right facilities, in the right places, at the right time to meet our future needs.

7.7 We have to meet EU, national, and regional recycling targets and tackle our own pressing shortage of disposal space. The Waste Core Strategy therefore needs to drive the move towards more sustainable waste management solutions for all waste.

7.8 The underlying aim is to move waste up the hierarchy and, although there is no requirement to go beyond the existing recycling targets, by being more ambitious we can send out a strong message about what we want to see happen to our waste. In line with other parts of the UK[26] we therefore plan to work towards recycling or composting 70 % of municipal, commercial and industrial, and construction and demolition waste by 2025. In practice construction and demolition waste recycling and re-use is already above this level so the main impact of this target will be to boost recycling provision for municipal, commercial and industrial waste.

26 The national Waste Strategy for Wales includes a 70 % overall recycling target (N.B. this includes incinerator ash and is generally seen as being 63 % in actual terms). Scotland's Zero Waste Plan includes a 70 % recycling target for all waste by 2025.

7.9 Achieving this high recycling rate will require significant investment from local authorities and the waste industry to provide additional waste collections and recycling infrastructure. The collection of food waste, for example, is seen as a key way of improving recycling rates but will need separate collection systems and the development of anaerobic digestion or in-vessel composting facilities. In the short to medium term making such changes may be very difficult, because of the lack of available funding, but the purpose of the Waste Core Strategy is to set out our long term aspirations.

7.10 Where it is not possible to recycle waste, the next most sustainable option is to recover energy from it. This can also provide a local source of heat or power for other nearby development, helping to meet the Government's aims of decentralising energy supplies and providing alternative forms of renewable or low carbon energy to offset the need for fossil fuels[27]. There are many different forms of energy recovery ranging from thermal methods such as incineration, pyrolysis or gasification, to biological methods, such as anaerobic digestion, which can also count towards recycling targets as described above. Other than using anaerobic digestion to treat food waste, national policy and guidance is clear that the planning system should not make any preference in terms of the type of energy recovery technology used as these are treated equally within the waste hierarchy as long as they meet defined levels of energy efficiency.

7.11 National and regional studies suggest that much of the waste that is currently sent to landfill could be recovered for energy[28]. We therefore think the Waste Core Strategy should support the development of appropriate energy recovery facilities where these help to reduce the amount of waste going to landfill. This needs to be balanced carefully so that the scale of any proposed energy recovery facilities does not preclude future increases in recycling. We also want to see a reduction in the amount of waste going to landfill so that this becomes a last resort

7.12 As set out in our vision, our general approach will therefore be one of providing for increased recycling, supported by some energy recovery and a declining role for landfill. Tables 5 and 6 assess likely future waste management needs and illustrate the amount of additional waste management capacity that is likely to be required in order to meet our goal of recycling or composting 70% of our waste. If future recycling rates reach this level and the proportion of waste disposed of can be can be reduced to 10% or less, we would need around 20% of our waste to be recovered for energy. On the other hand, if higher recycling rates are not achieved then this would mean greater demand for either energy recovery or landfill.

27 National Policy Statement for Renewable Energy Infrastructure (EN-3), Department of Energy and Climate Change, July 2011.
28 Defra Commercial and Industrial Waste Survey 2009: Final Report, Jacobs, May 2011.

**Table 5 indicative additional treatment capacity requirements to meet aspirational targets in Policy WCS2 ('000 tonnes per annum)**

| | Municipal | Commercial and Industrial | Construction and Demolition |
|---|---|---|---|
| Recycling/ Composting* | 180 | 400 | 900 |
| Energy Recovery | - | 300 | - |

* excludes metal recycling element

**Table 6 indicative additional disposal capacity requirements to meet aspirational targets in Policy WCS2 ('000m3)**

| | Non Hazardous | Inert |
|---|---|---|
| Disposal | 3,600 | 3,200 |

7.13 We recognise that there is a risk that these targets may not be achieved and that there needs to be some flexibility in our approach. If annual monitoring evidence shows that the 70% recycling and composting target is unlikely to be achieved then this may become a material consideration in determining planning applications for other types of waste management facilities and may even trigger an early review of this policy.

7.14 In practice the future provision of waste facilities may need to reflect a sliding scale of either more or less of each facility type as we progress towards our long term goal. However our presumption will be towards facilities that are higher up the waste hierarchy

## Policy WCS2 - Future waste management provision

Future waste management proposals should accord with our aim to achieve 70% recycling or composting of all waste by 2025. Proposals will therefore be assessed as follows:

a) priority will be given to the development of new or extended waste recycling, composting and anaerobic digestion facilities;

b) new or extended energy recovery facilities will be permitted only where it can be shown that this would divert waste that would otherwise need to be disposed of and the heat and/or power generated can be used locally or fed into the national grid;

c) new or extended disposal capacity will be permitted only where it can be shown that this is necessary to manage residual waste that cannot economically be recycled or recovered.

## Broad locations for new waste management facilities

7.15 As set out in our vision, we want to promote a pattern of appropriately sized waste facilities in the areas where they are most needed - i.e. where most waste is likely to be produced. This approach will help local authorities and the waste industry to develop a modern, safe and efficient network of waste facilities that can manage waste close to where it is produced. The Waste Core Strategy has therefore adopted a broadly hierarchical approach based on population and geography to focus sites where they are most needed. This approach is supported by a more detailed set of site criteria (see Policy WCS6) to establish the types of locations that would be considered suitable for different types of waste management use/facilities.

7.16 Nottingham and its surrounding built up areas, including Hucknall, Arnold, Beeston, Carlton, Stapleford, West Bridgford and Clifton, is a major centre for population and employment and could see significant growth in future. This area also shares significant employment and housing market links with the neighbouring cities of Derby and Leicester. The other main urban concentration is focused around Mansfield and the Ashfield towns of Sutton-in-Ashfield and Kirkby-in-Ashfield (Mansfield/Ashfield) which are all clustered closely together. The development of new, or extended, waste facilities to serve these areas is therefore key to managing planned future employment and housing growth.

7.17 Functionally these main urban areas are closely linked and the availability and concentration of suitable employment land and transport links make these the most appropriate locations for the development of major waste infrastructure. However, there may also be a need for other, small or medium sized, facilities within these areas.

7.18 Newark, Worksop and Retford are sizable towns and locally important centres for housing and employment. Newark, in particular, faces significant growth over the next 20 years. These three areas will therefore need further waste management provision both to cope with future growth and support the move towards more sustainable methods of waste management. Whilst unlikely to need larger facilities, these locations are likely to require a number of small-medium sized waste management facilities.

7.19 Elsewhere there may be a need for small-scale facilities to meet local community needs but these should be designed and located to fit in with the character of the surrounding area. These small-scale, local facilities are most likely to be for waste recycling, composting or transfer but small-scale anaerobic digestion may also be suitable where this can provide a local source of energy (see paragraphs 7.35 and Policy WCS 6). There may also be wider benefits in terms of providing a more diverse range of local employment opportunities. Such facilities will be supported where these would meet a clear local need and can be accommodated without introducing industrial style development or intensive uses into village, neighbourhood or countryside areas. In line with guidance in PPS10, the emphasis should be on the re-use of existing buildings and previously developed land wherever possible. This could include the re-use of appropriate agricultural, forestry or other buildings for example.

### Policy WCS3 - Broad locations for waste treatment facilities

The development of large-scale waste treatment facilities will be supported in or close to the built up areas of Nottingham and Mansfield/Ashfield.

Smaller/medium sized waste treatment facilities will be supported in the above areas and in, or close to, the built up areas of Newark, Retford and Worksop.

Small-scale waste treatment facilities will be supported in all locations where these will help to meet local needs and fit in with the local character.

Development of facilities within the open countryside and within the Green Belt will be supported only where such locations are justified by a clear local need, particularly where this would provide enhanced employment opportunities and/or would enable the re-use of existing buildings.

## Finding suitable sites for waste disposal

7.20 Policy WCS 3 is focused on the development of new or extended waste treatment facilities. However, we must also make provision for the disposal of residual waste where necessary. There are currently four remaining non-hazardous landfill sites in Nottinghamshire, but local provision for the main urban areas around Nottingham and Mansfield/Ashfield is limited to just one site which has limited annual capacity. This is therefore the main shortfall area where new non-hazardous capacity is required.

7.21 Opportunities for new non-hazardous landfill sites are extremely limited due to the presence of several major aquifers. The risk of groundwater contamination therefore rules out the possibility of using former sand quarries to dispose of non-hazardous waste and there are very few, if any, other existing quarries that are geologically suitable. Most of our gravel sites, for example, lie within the flood plain. Other environmental concerns about odour, leachate and landfill gas also mean that disposal sites for non-hazardous waste should be located away from other sensitive uses such as housing.

7.22 With such extensive constraints on possible locations for disposal this means we may have to look on a county-wide basis for new non-hazardous waste disposal sites although priority will be given to sites closer to the main urban areas wherever possible.

7.23 Given these difficulties, it makes sense to consider extending our four remaining sites where it is practical to do so. This would mainly involve over-tipping at these sites (i.e. raising the height) but there may be a need for some limited sideways extensions in order to create a sensible and stable landform. However this will only be acceptable if it will not create any additional environmental impacts or make any existing problems worse. If this is not possible, or does not provide sufficient capacity, then it will be necessary to find new sites. In this case, the most suitable options are likely to be the reclamation of old colliery tips that are either derelict or have been poorly restored, or former mineral workings or areas of derelict land where disposal would provide the only viable reclamation option. If none of these options can provide adequate future capacity then it may be necessary to consider the possibility of land-raising (i.e. tipping above ground) on greenfield sites. Exporting our waste for disposal in other counties is a possibility but this would only be sustainable if there were neighbouring sites close to our main waste producing areas. Although there is surplus capacity in South Yorkshire and Lincolnshire, exporting waste would not be consistent with our objective to minimise the distance that waste is transported (SO5 Sustainable Transport).

7.24 There is a wider choice of possible locations for inert waste disposal as this poses less risk to groundwater and does not require the same level of site preparation and engineering as non-hazardous waste. This means that most of the county's existing or proposed sand and gravel quarries could potentially be suitable and it is also more economic to develop smaller sites, thus increasing the choice of possible sites. Although other local needs may arise, our priority is to maintain suitable inert disposal capacity to serve Nottingham and the Mansfield/Ashfield area. Policy WCS 4 below sets out a preferred sequence of search for both non-hazardous and inert waste disposal sites although it is expected that inert disposal needs will be met from extensions and existing and future mineral voids.

7.25 Nottinghamshire is not geologically suitable for the disposal of hazardous waste and therefore no provision can be made within the Waste Core Strategy for hazardous waste disposal. However the county does treat hazardous waste from surrounding areas at a number of facilities.

## Policy WCS4 - Disposal sites for non-hazardous and inert waste

Where it is shown that additional landfill capacity is necessary, priority will be given to sites within the main shortfall areas around Nottingham, and Mansfield/Ashfield. Development outside this area will be supported where it can be shown that there is no reasonable, closer, alternative. Preference will be given to the development of sites in the following order:

a) the extension of existing sites

b) the restoration and/or re-working of old colliery tips and the reclamation of mineral workings, other voids and derelict land where this would have associated environmental benefits;

c) disposal on greenfield sites will be considered only where there are no other more sustainable alternatives.

## Dealing with power station waste

7.26 The management of power station ash is a particular issue for Nottinghamshire which has three coal fired power stations in the Trent Valley located at Ratcliffe-on-Soar, Cottam and West Burton. Two types of ash are produced. Furnace bottom ash (FBA) is a coarse clinker like material that has an established ready market for use in the manufacture of building blocks and does not currently raise any waste management issues. Pulverised fuel ash (PFA) is a fine grey sandy material which can be recycled as a secondary aggregate or cement additive but is very sensitive to market influences. Historically the amount of PFA produced far exceeded demand. As a result pipelines were built to pump large quantities of PFA into old sand and gravel workings that could then be reclaimed back to agriculture. However, following the decline in coal-fired power generation, there has been a significant fall in the amount of PFA that is produced.

7.27 Today no ash is pumped into sand and gravel workings and disposal is mainly limited to onsite land-raising at Cottam power station. At West Burton, PFA is mostly stockpiled and sold as needed. PFA from Ratcliffe on Soar power station can be stockpiled but sales tend to be higher because of its more central location and good road access.

7.28 Overall, there is just over 4 million tonnes of capacity remaining at existing PFA disposal sites but future PFA disposal requirements are difficult to assess because this depends on power generation rates and ash sales[29]. Nationally, the long term future of coal fired power generation is uncertain especially when new emission controls come into force in the 2020s.

7.29 The most sustainable waste management strategy for power station ash is to promote recycling by allowing the creation of temporary stockpiles of ash to be sold at a future time. Where the prospect of selling ash looks remote then using the ash to infill and reclaim sand and gravel workings is likely to be the next best option. The shortage of inert waste to restore these sites means that PFA disposal could provide a rare opportunity to reclaim workings back to agriculture, helping to maintain the local landscape character. If disposal within sand and gravel workings or other derelict voids is not possible then the only other reasonable option is to dispose of the ash above ground (i.e. land-raise) close to the power station so as to minimise transport. In the longer term, such sites could be re-worked to recover PFA for sale and land-raising schemes should therefore be planned and built with this in mind.

### Policy WCS5 - Power station ash

Proposals to temporarily stockpile ash within or on land adjacent to coal fired power stations will be permitted where this will help maximise recycling.

For ash that cannot be recycled in the foreseeable future, priority will be given to proposals that will use the ash to fill and reclaim mineral workings or other derelict voids. Land-raising of ash for disposal will only be acceptable when no other reasonable options exist.

29 Environment Agency landfill capacity data 2010.

# What types of site are suitable for waste management?

7.30 Although this Waste Core Strategy does not allocate specific sites, it establishes the broad principles that will be used to narrow down future site choices within the site-specific document and to assess planning applications. Policy WCS 6 therefore sets out a criteria-based approach to show the types of locations that are likely to be suitable for different types of waste management facility.

## Recycling and waste transfer

7.31 As there are a wide range of different waste management technologies, and others may emerge in future, it is not realistic to prescribe every possible situation but many types of facility share similarities in their scale, appearance or the processes involved. For example larger materials recycling and waste transfer facilities will need a large warehouse type building within which to carry out the sorting and separation of materials and to store the resulting bales of paper, plastic etc. for collection. They will need good road access although the potential for alternative forms of transport such as rail or water would be an advantage. These uses are therefore well suited to industrial estates and business parks, especially alongside other storage and distribution type uses. Household Waste Recycling Centres would also be appropriate, as they need to be accessible by both car and HGV, although being close to the main residential areas they serve is also important.

7.32 Smaller, community scale facilities such as bring sites (bottle banks) should be located within easy walking distance of residents or at sites that people are already likely to visit such as shopping centres, supermarkets, leisure centres, village halls etc. Where community run facilities such as small scale, local, recycling or composting schemes are proposed, these should look to re-use existing buildings or previously developed land wherever possible.

7.33 Other types of recycling carried out in the open air such as scrap yards and aggregates recycling need to be located well away from uses sensitive to noise and dust[30]. They will also need areas for stockpiles and storage and are best suited to general industrial areas alongside other processing and manufacturing type uses. Operations should preferably be enclosed within a building to minimise environmental impacts but this may not always be feasible. Temporary aggregates recycling facilities may be appropriate at quarries or landfill sites where this can encourage greater re-use and recycling and they are linked to the life of that facility[31].

30 De-pollution of end of life vehicles (.i.e. removal of fuel, oil, gases etc.) must be carried out within a building.

31 Crushing and screening of construction and demolition waste (soils, aggregate etc.) is often carried out on site as part of the construction/demolition project. This does not normally require specific planning permission.

## Energy recovery

7.34 Larger energy recovery plants (including incineration, gasification, pyrolysis, and possibly anaerobic digestion) will require a large industrial type building with a tall stack or chimney and, in some cases, may have visible plant or pipe-work on the outside. These are therefore best located near other industrial uses of a similar scale and bulk with good road and/or rail or water access for transport. They should also be close to other uses that can make use of the heat and electricity generated or close to a suitable connection to the national grid. Mechanical biological treatment plants combine several different waste treatment processes and are therefore likely to require a single large building or a cluster of smaller buildings on one site. These would again therefore be suited to industrial estates and areas allocated for employment use.

7.35 Anaerobic digestion takes place within sealed tanks or silos. Large scale plants would again therefore be suited to general industrial areas. However, smaller plants may also be suitable in agricultural areas as they are similar to the types of storage tanks and silos found on farms. This would however depend on the scale and design of the plant and whether it can be accommodated alongside or within existing buildings for example. As anaerobic digestion is also used for sewage treatment, it may also be suitable within or alongside waste water and sewage treatment plants.

## Composting

7.36 Composting is generally suited to rural locations although special care would need to be taken where this involves a building, or permanent processing plant, in order not to introduce an industrial process into a rural area. Open air schemes will need to be a minimum distance away from uses that are sensitive to possible bio-aerosols. In-vessel or enclosed schemes are more likely to require a building and should therefore be located within or close to existing farm development. Where such schemes would involve significant vehicle movements they should be located within industrial areas.

## Resource and energy parks

7.37 Some types of waste management facility can benefit from being located close together as this can minimise the distance waste is transported and increase opportunities for materials to be recovered and potentially re-used. This could include recycling and waste transfer operations but could also include other non-waste uses that make use of the recycled product/material. In some cases there may also be scope for energy recovery facilities to provide heat and/or power to other local premises/businesses. These could include anaerobic digestion schemes, incineration, gasification, pyrolysis or other emerging technologies. These schemes are often referred to as Resource Recovery Parks, or Energy Parks, where there is a strong emphasis on low carbon or renewable energy technologies.

## Waste water and sewage

7.38 Waste water and sewage treatment facilities can vary from very large scale plants to serve main urban areas to small rural plants serving a single village. They do not generate significant vehicle movements and their main impacts can be visual or odour. For this reason sites should be away from housing and should be designed to minimise their impact on the surrounding landscape. However, the choice of sites will be limited by operational requirements such as pumping distances and the need to discharge treated water into a suitable watercourse.

## Disposal

7.39 As explained in paragraph 7.21 above, waste disposal operations are only suitable in a very limited range of locations. As far as possible these need to be sited away from sensitive uses such as housing but should also be within reasonable reach of our main urban areas in order to minimise the distance waste has to travel for disposal. Old colliery tips and mineral voids are generally located within the countryside and waste disposal provides a way of restoring these sites and creating areas of new open space or wildlife habitat. Landfill within the Green Belt is also acceptable where this would achieve the restoration of such sites. Land-raise schemes may be appropriate on derelict land where this would provide the best means of reclamation and could be considered on greenfield sites if there are no other options. However this would not be acceptable within the Green Belt because of the visual impact on the otherwise open character of the landscape.

7.40 The criteria-based approach in Policy WCS 6 sets out what type of development is likely to be acceptable in which locations. Where other circumstances arise that the Waste Core Strategy could not foresee, proposals will be determined on their merits.

## Policy WCS6 - General Site Criteria

**Waste management facilities will be supported in the following general locations, as shown in the matrix below, subject to here being no unacceptable environmental impacts:**

**Community sites –** locations where people already travel for local services e.g. local shopping centres, leisure centres, supermarkets, schools etc.

**Employment land –** areas which are already used for, or allocated for employment uses such as industrial estates, business or technology parks etc.

**Derelict land/other previously developed land –** land that is no longer needed or has been abandoned. This could include former colliery land in need of restoration, old quarries, disused railway land etc.

**Open countryside/agricultural land –** rural land, including farmland, which is not covered by any environmental designation, especially where this enables the re-use of farm or forestry buildings.

**Green Belt –** land within the Green Belt. This could include derelict or previously developed land, old quarries etc.

● Likely to be suitable for medium or larger facilities. ○ Only likely to suitable for smaller facilities.

| | | | | | |
|---|---|---|---|---|---|
| **Combined Facilities** | | | | | |
| Resource recovery park | | ● | ● | | |
| **Recycling** | | | | | |
| Bring sites | ○ | ○ | | | |
| Household Waste Recycling Centre | | ● | ● | | |
| Materials Recovery Facility | | ● | ● | ○ | ○ |
| Aggregates | | ● | | | |
| Metal | | ● | | | |
| **Composting** | | | | | |
| Enclosed/In-vessel | | ● | ● | ○ | ○ |
| Open air | | | | ● | ● |
| **Energy Recovery** | | | | | |
| Anaerobic Digestion | | ● | ● | ○ | ○ |
| Mechanical Biological Treatment | | ● | ● | | |
| Refuse Derived Fuel processing | | ● | ● | | |
| Incineration | | ● | ● | | |
| Gasification | | ● | ● | | |
| Pyrolysis | | ● | ● | | |
| **Waste Transfer** | | | | | |
| Transfer station | | ● | ● | ○ | ○ |
| **Waste Water Treatment** | | | | | |
| Waste water treatment | | ● | ● | ○ | ○ |
| **Disposal** | | | | | |
| Landfill | | | ● | ● | ● |
| Landraise | | | ● | ● | |

## Extensions to existing waste management facilities

7.41 In most cases extending existing facilities is likely to be more economic, and have less environmental impact, than finding and building new ones. This makes better use of existing buildings, processing plant and transport infrastructure. Re-development and/or expansion of a site may enable a wider range of waste to be managed as well as increasing overall capacity. However this may not always be the most sustainable option if an existing site is poorly located or close to sensitive uses. Proposals would therefore need to show that this would not create any unacceptable environmental impacts from additional noise, increased traffic or visual impact for example.

### Policy WCS7 - Extensions to existing waste management facilities

The extension, or redevelopment or improvement of existing waste management facilities will be supported where this would increase capacity or improve existing waste management methods, and/or reduce existing environmental impacts.

## New and emerging technologies

7.42 As new methods of waste treatment are likely to emerge over the next 20 years, the Waste Core Strategy needs to maintain a flexible approach towards the development of new, sustainable technologies for waste management including related research and development facilities. Such development will therefore generally be supported, especially where this contributes towards our objective to promote a modern, efficient and sustainable waste industry etc. (see **SO1**)

### Policy WCS8 - New and emerging technologies

Waste management facilities making use of new or emerging technologies will be supported where this will lead to the more efficient and sustainable management of waste.

## Safeguarding waste management sites

7.43 Waste management sites are an essential part of our infrastructure and it is important that both appropriate existing facilities and suitable future sites are protected from other uses, such as housing, that might restrict existing operations or their ability to expand in future. This could lead to the unnecessary loss of existing infrastructure. Similarly, sites that have been identified for potential future waste management use should be safeguarded from this situation. Policy WCS 9 below therefore protects both existing permitted waste management sites, and also any allocations or areas of search/preferred areas that may be identified in the Site Specific Document.

7.44 Safeguarding will be carried out through the implementation of policy WCS 9 and in consultation with the relevant district or borough council to ensure that this does not unreasonably restrict other development. By taking a more flexible approach it may be possible to accommodate non-waste development by making changes to the proposed layout of any housing or mixed use scheme, for example. This could include using parking or landscaping areas to provide a buffer zone from any existing or potential waste use. Regular monitoring of site allocations and areas of search/ preferred areas will also be needed to ensure that the use of land for non-waste uses is not unduly restricted if it becomes clear that it the site is no longer required or suitable for that use.

### Policy WCS9 - Safeguarding waste management sites

The following sites will be safeguarded for waste management facilities:

a) Existing authorised waste management facilities and sites which have a valid planning permission that has not yet been implemented; or

b) Sites allocated or shown as Areas of Search/Preferred Areas in the Site Allocations Document

## Encouraging sustainable transport

7.45 Minimising the distance waste has to travel for appropriate treatment or disposal is a key objective of the Waste Core Strategy (see SO5) and is one of the main reasons for focusing most new development in, or close, to our large urban areas. Most of our waste is currently transported by road but encouraging alternative forms of transport, such as water or rail, can help to reduce the environmental impact of waste management in terms of possible emissions and congestion. Over very short distances, transport by pipeline or conveyor may also be an option. Making use of alternative, more sustainable, forms of transport is likely to depend upon the size and type of site as well as the type of waste involved. For example, it would not be practical or cost effective to use rail to transport waste over relatively short distances, but where there are opportunities to make use of existing or planned rail or wharf connections, these should be encouraged.

7.46 Opportunities to move waste by rail or water, in particular, are therefore most likely to arise in relation to larger development but all waste management proposals should nevertheless look at ways of transporting waste more sustainably where possible.

### Policy WCS10 - Sustainable Transport

All waste management proposals should seek to maximise the use of alternative forms of non-road transport such as such as rail, water, pipeline or conveyor and minimise the distance waste is transported by road.

## Meeting future needs and managing our own waste

7.47 As far as possible we want to be self-sufficient in managing our own waste but this is not always practical as waste movements do not necessarily stop at local authority boundaries. This is recognised in PPS10 which states that waste should be managed at one of the nearest appropriate installations, which, in some cases, may not be within the local authority area where it was produced. Particularly in the more remote areas of Nottinghamshire it may make environmental and economic sense for the waste to be managed at a facility in a neighbouring county, if this is closer or means that the waste will be managed further up the waste hierarchy. It is not always viable to have facilities for every waste type in one area and some wastes, such as hazardous waste, are very specialised or are only produced in relatively small quantities. In these cases it may be better to use regional or even national facilities. For example, although Nottinghamshire has some hazardous waste treatment facilities it is not geologically suitable for hazardous waste disposal and has to rely on sites elsewhere, including one in Northamptonshire which is currently the only such site in the East Midlands.

7.48 The Waste Core Strategy therefore has to take a pragmatic approach and we will therefore ensure that we make provision for at least the equivalent of our own waste arisings whilst allowing for the possibility of a reasonable exchange of waste movements.

7.49 It is likely that during the life of the Waste Core Strategy we may be faced with proposals that could take waste from a wider catchment area. We will therefore maintain a flexible approach and work with neighbouring authorities and applicants to understand the overall level and type of waste management provision and to establish whether there are wider social, economic or environmental sustainability benefits from these facilities being located here. However, in all cases, proposals will need to be able to demonstrate that they would make a significant contribution to meeting Nottinghamshire's needs.

### Policy WCS11 - Managing our own waste

Additional waste management capacity, sufficient to manage at least the equivalent amount of waste produced within Nottinghamshire and Nottingham, will be permitted.

Waste management proposals which are likely to treat or dispose of waste from areas outside Nottinghamshire and Nottingham will need to demonstrate that:

a) they will make significant contribution to meeting the waste management needs of Nottinghamshire and Nottingham; or

b) there are wider social, economic or environmental sustainability benefits that clearly support the proposal.

## Protecting our environment and quality of life

7.50 Maintaining and, where possible, enhancing the quality of our environment, whilst providing a suitable network of appropriate waste management facilities is at the heart of waste planning. The Waste Core Strategy has an important role to play in getting this balance right but it will also be supported by the saved policies from our Waste Local Plan until the separate Development Management Policies document is prepared (see paragraph 1.4). All proposals will therefore also need to be in accordance with relevant local planning policies set out within each of the District/Borough Council's Local Development Frameworks.

7.51 All waste related development should take account of its surroundings and be located, designed and operated to minimise any potentially harmful impacts, especially to air, water and soil. Consideration will also be given to whether proposals are likely to result in an unacceptable cumulative impact in combination with other waste existing development. Development should be located away from areas of important landscape, heritage and nature conservation value, flood-risk and unstable land. Where such locations are unavoidable, appropriate mitigation will be required. Facilities should be designed to fit in with their surrounding landscape or townscape and built and operated to the highest standards to minimise possible impacts such as noise, dust, mud, vibration, litter, odour, traffic nuisance and light pollution in order to protect local amenity.

7.52 Disruption to green infrastructure assets should be avoided and all waste development proposals should make the most of opportunities to enhance the local environment either during restoration or as part of the development itself. This could take the form of providing additional public open space or rights of way, the creation of wildlife areas, landscape improvements, provision of community education facilities or similar measures.

7.53 Sites of international importance are specifically protected under national legislation and any proposal that would be likely to have a significant effect on a European site, either alone or in combination with other plans or projects, would not be in accordance with the development plan. This protection applies to candidate[32] sites as well as those that have already been designated. The Councils are aware that a possible Special Protection Area is under consideration for part of Nottinghamshire which could therefore become a candidate site. If a Special Protection Area is subsequently identified and sent to the European Commission for designation, the Councils will assess the implications of this and what action is necessary to deal with any issues raised.

32 A candidate site is one which has been put forward for designation but not confirmed.

### Policy WCS12 - Protecting our environment

New or extended waste treatment or disposal facilities will be supported where it can be demonstrated that there would be no unacceptable impact on overall environmental quality or the quality of life of those living or working nearby and where this would not result in an unacceptable cumulative impact. All waste proposals should seek to maximise opportunities to enhance the local environment through the provision of landscape, habitat or community facilities.

## Managing Climate Change

7.54 Both the County and City Councils are committed to tackling the causes and effects of climate change and are founder signatories to the Nottingham Declaration on Climate. Managing climate change is a key focus of national planning policy and calls for a twin approach of seeking to limit further impacts whilst adapting to whatever change may already be occurring.

7.55 Locally, the key impacts on waste facilities are likely to be the increased risk of flooding and storm damage. This could damage essential waste management infrastructure and is a significant pollution risk if a landfill or sewage works were to be overrun by flood water. The impact of longer, drier spells could also cause odour problems during the storage and transportation of biodegradable waste but these can be tackled through the use of sealed waste containers and enclosing operations within a building or limiting the length of time waste can be stored before treatment or disposal for example. The detailed impacts will be controlled through our saved policies, the subsequent development management policies and relevant policies from the District Councils' Local Development Frameworks.

7.56 The key concern of the Waste Core Strategy is therefore to guide the appropriate location and design of new or extended waste facilities to ensure that we have an appropriate and resilient network of waste infrastructure to meet future needs.

### Policy WCS13 - Managing Climate Change

All new or extended waste management facilities should be located, designed and operated so as to minimise any potential impacts on, and increase adaptability to, climate change.

## Health

7.57 Modern, well run waste management facilities should pose little, if any, risk to health or the environment. The Environment Agency is responsible for the detailed regulation and monitoring of waste facilities and will set specific limits in terms of emissions to air, soil and water on a site-specific basis and in line with national and international guidelines. All waste management facilities therefore have to operate in accordance with an environmental permit or meet very strict criteria to allow an exemption. In the case of open-air composting, the Agency may also specify that facilities should be a minimum distance from any sensitive uses, such as housing, in order to minimise the risk of bio-aerosols. The Agency also maintains controls over the location of waste disposal sites through its Policy and Practice for the Protection of Groundwater.

7.58 The factors that are likely to affect health such as air, water and soil quality can only be assessed properly at the application stage. When determining waste planning applications expert advice will therefore be sought from the Environment Agency, local environmental health officers, the primary care trusts[33] and the Health Protection Agency, as appropriate. Although the saved Waste Local Plan Policies, our subsequent development management policies and relevant local policies in the District Local Development Frameworks will control issues that are likely to affect nuisance and amenity (see SO3), the primary controls over pollution are implemented through the separate environmental permitting regime[34].

33 In 2013 the County and City Councils will take on the public health role of the primary care trust for their respective areas.
34 The Environment Agency is the body responsible for the regulation of waste facilities under the Environmental Permitting (England and Wales) Regulations 2010.

## The design of future waste management facilities

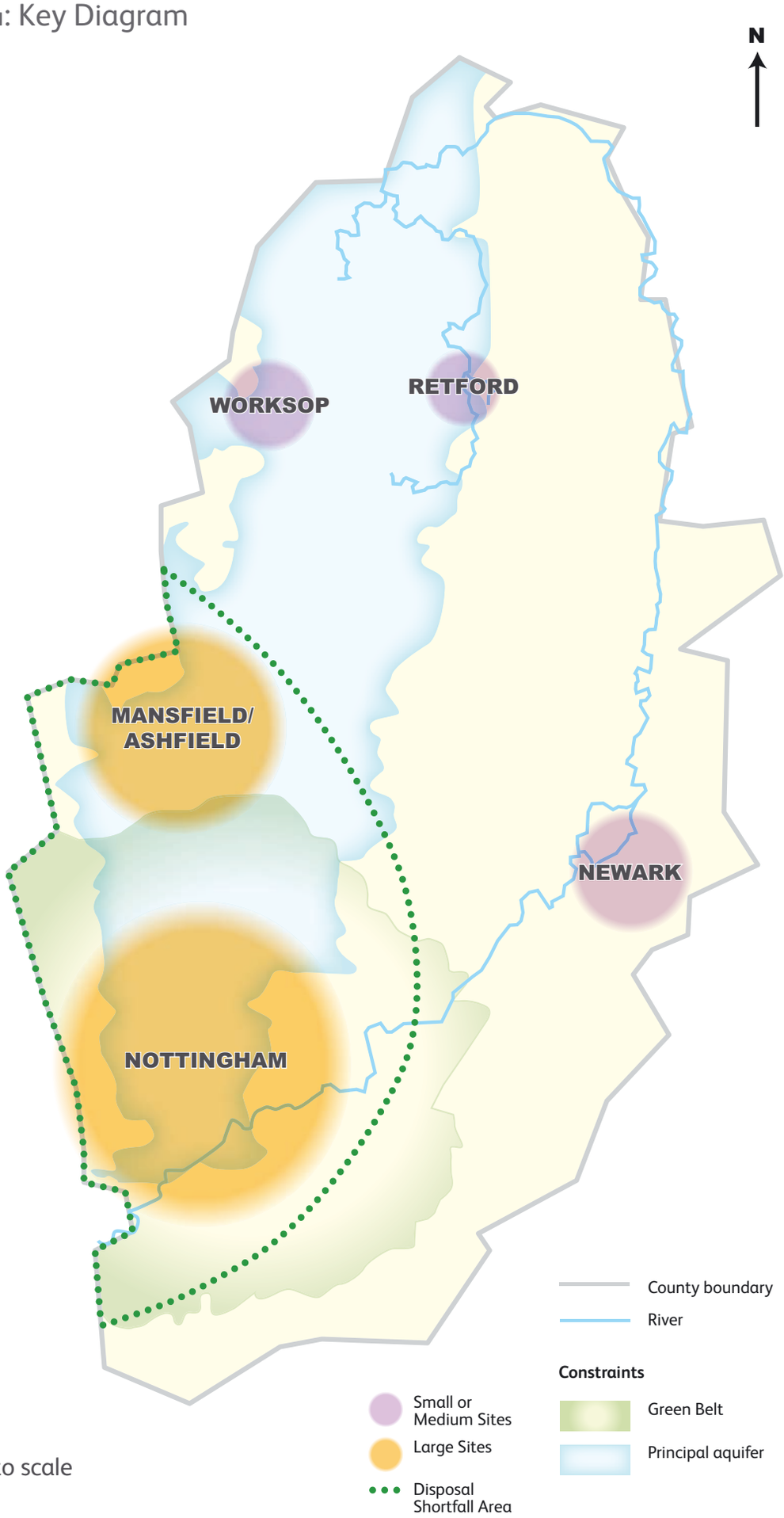
7.59 Waste management facilities have often been seen as having a negative impact on their local area because of fears that sites might be untidy or unpleasant. Whilst this might have been true of some older sites, modern sites are well designed, operated and regulated. Enclosing the majority of operations within a building means that most of the problems associated with older sites can be overcome. Promoting high quality design of waste facilities can also be a tool to help reinforce the importance of waste as a resource. For example many of the waste treatment facilities operating today take materials such as clean, pre-sorted glass, paper, card, plastic and metal. The best examples of these can sit comfortably alongside even high-tech industrial or business parks.

7.60 Policy WCS 6 sets out detailed criteria for the locations of different types of waste management facilities and more detailed guidance on site design and operation will be contained within the separate development management policies document. However, Policy WCS 14 below will ensure that all new facilities help to promote an innovative and sustainable waste management industry and improve the understanding and acceptance of essential waste management infrastructure. This is in line with our strategic objective on the design and operation of waste facilities (SO7) and supports wider economic and environmental goals (see SO1 and SO2).

### Policy WCS14 - Design of waste management facilities

All new or extended waste management facilities should incorporate high standards of design and landscaping, including sustainable construction measures.

## Plan 4: Key Diagram




Not to scale


Recycling
Recovery
Disposal


# Monitoring and Implementation

8.1 The Waste Core Strategy has been prepared using a wide ranging evidence base to set the context and focus the delivery of our strategic policies and objectives. Regular monitoring is essential to ensure that our policies are effective, being applied consistently and having the intended effect. This will also help us to see when or where specific policies or targets may need to be revised and to respond to any changes in national policy or legislation or changes in local circumstances.

8.2 Achieving our objectives and implementing the policies within the Waste core Strategy will rely on the actions of not just the County and City Councils and the waste industry but also the district councils, local communities and businesses and the voluntary sector. It is therefore important that there is a clear understanding of who will deliver the relevant waste management infrastructure and any supporting measures set out in the Waste Core Strategy and the relevant timescale.

8.3 We have therefore developed the following comprehensive monitoring and implementation framework to help us achieve this.

## Table 7 Monitoring and Implementation Framework for the Waste Core Strategy

| Indicators/Targets | Responsible organisations - implementation | Main Constraints Risks, obstacles for monitoring | Monitoring |
|---|---|---|---|
| **WCS1 Waste Prevention** | | | |
| a) Improvements in waste awareness especially, waste prevention and re-use measures.<br>(b) New development has minimised waste production and includes sustainable waste management proposals when in use. | (a) Local Authorities, businesses, voluntary sector.<br>(b) The building and construction industry, District unitary. | (a) Costs of implementation, poor response to initiatives. Probable lack of data.<br>(b) Costs, lack of awareness and innovation. | No specific targets or timescales apply. Following to be monitored:<br>Local campaigns & initiatives to influence behaviour to be recorded along with outcome of any survey data linked to them.<br>Relevant planning decisions will be monitored to assess if waste reduction measures etc are happening. |
| **WCS2 Sustainable waste management** | | | |
| By 2025 Municipal, commercial and industrial waste will reach following targets:<br>70 % minimum recycling (includes AD).<br>20 % max energy recovery.<br>10 % max waste disposal.<br>Construction and demolition waste – no change from current levels (estimated at 70 % +).<br>Other waste? | Local Authorities, the waste industry.<br>Voluntary sector, public. | Costs to local Authorities. Commercial risks, poor public, business response.<br>Planning delays, proposals or do not come forward.<br>Other than municipal waste - data limited and/or unreliable. | Specific targets apply but huge variations in quality of data between the main types of waste will affect what can be monitored.<br>Municipal waste – reliable and detailed annual waste management data provide excellent indicators for assessing progress towards meeting the various targets. Intermediate targets to be set for 2015 and 2020 of 50 % and 60 % to provide an indication of the 2025 targets being achievable.<br>The impact of any planning permissions for new municipal waste facilities will be monitored to assess likely impact of future waste management trends.<br>Any plans to change waste collection management practices to be monitored to assist forecasting.<br>Commercial and industrial waste –no reliable local data exists on actual waste arisings and management of this waste. This means that monitoring progress towards meeting the targets can at best be based on circumstantial (often national) evidence.<br>Planning permission for new commercial and industrial waste facilities will be monitored, to provide evidence of future local trends.<br>Waste disposal rates to be monitored, but as geographic origin of waste not recorded this will only provide circumstantial evidence of possible trends.<br>Waste management trends in adjacent areas will also be monitored to provide evidence of wider trends and possible impacts of cross boundary movements. |
| **WCS3 Broad locations** | | | |
| New waste treatment facilities are located as follows:<br>Large scale - Nottingham built up area, Mansfield and Ashfield.<br>Medium scale – above plus Newark, Worksop and Retford.<br>Small scale – above plus appropriate rural locations.<br>Development in open countryside / Greenbelt limited to re-use of buildings, enhanced employment opportunities. | Local Authorities, the waste industry.<br>Voluntary sector, public (small scale facilities only ) | Suitable proposals do not come forward.<br>Relevance of major and other facilities serving areas outside Nottinghamshire uncertain as consultation results inconclusive. | The number and capacity of new proposals permitted according to the broad location and significance in terms of meeting targets in Policy WCS2 will be monitored. |
| **WCS4 Disposal of non-hazardous and inert waste** | | | |
| Disposal preferences are prioritised as follows:<br>Extensions.<br>Reclamation of old colliery tips mineral workings, derelict land.<br>Greenfield sites (only as a last resort). | Waste industry. | (1) & (2) very limited options thought to exist for non-hazardous waste. Proposals may not come forward.<br>Replacement capacity outside county falls outside policy scope but could be a viable option especially if still local. | Permitted waste disposal capacity will be monitored to assess conformity with PPS10 guidance on landbanks and expected need for new capacity.<br>Planning decisions on proposed new waste disposal planning permissions will be monitored. Key data to include type of site as set out in WCS4 , types of waste, disposal capacity, projected annual inputs and main sources (if known).<br>Waste disposal planning permissions in adjacent areas also to be monitored if these are acting as replacements to Nottinghamshire sites. |

| Indicators/Targets | Responsible organisations - implementation | Main Constraints Risks, obstacles for monitoring | Monitoring |
|---|---|---|---|
| **WCS5 Power station ash** | | | |
| Waste management preferences are:<br>Temporary stockpiles for future recycling.<br>Reclamation of sand and gravel workings other voids.<br>Land-raising adjacent station with long term recycling an option if possible. | Power companies. | Limited data of ash production and management.<br>(2) Will depend on cooperation of mineral operator and suitable voids being available – options likely to be limited to sites close to station to be viable. | Poor data on how waste ash is managed limits monitoring trends. Planning decisions on new power station ash management proposals will be monitored. |
| **WCS6 General site criteria** | | | |
| New waste management facilities to be located in types of site (e.g. employment land, green belt) appropriate to the nature of that development. | Local Authorities, waste industry.<br>Voluntary sector, public. | No targets or other quantified basis for measuring success. | Data on number, size and types of facility and conformity to policy will be collected. Planning refusals based at least in part on non-compliance with this policy also to be monitored. |
| **WCS7 Extensions to waste management facilities** | | | |
| Extensions or improvements to existing sites to form a significant element of new waste management capacity. | Waste Industry. | No targets or quantified means of measuring success. No actual local assessment if extensions are generally suitable. | Data on planning decisions for proposals to extend /improve existing sites will be recorded and compared to proposals for new sites. |
| **WCS8 New technologies** | | | |
| New technologies are developed. | Waste Industry. | No targets or quantified means of measuring success. Future role of new technologies unpredictable. | Data on planning decisions for proposals that rely on new technologies will be recorded along with expected impacts of meeting targets set out in Policy WCS2. |
| **WCS9 Safeguarding Waste management sites** | | | |
| Existing and allocated waste management sites remain available for waste management facilities. | Waste Industry.<br>City and District Councils . | No targets, no clear means of measuring success.<br>Sites to be safeguarded not defined on proposals map - safeguarding issues could be overlooked. | Number of instances of safeguarding issues being raised and outcome to Nottinghamshire monitored. |
| **WCS10 Sustainable transport** | | | |
| Number of waste management facilities that use alternatives to road transport increase. | Waste Industry. | Costs and no real evidence that viable alternatives exist – no targets possible.<br>Policy aspirational. No waste currently transported other than by road. | Data on planning decisions for proposals to use alternative transport proposals to be monitored.<br>Where possible environmental benefits e.g. number of HGV equivalent movements replaced to be assessed. |
| **WCS11 Self-sufficiency** | | | |
| Nottinghamshire and Nottingham become net self-sufficient in waste management quantities. Any large scale proposal will help fulfil this policy (assuming it mainly takes local waste). | Waste Industry. | Suitable proposals must come forward. Lack of data - degree of current self-sufficiency unknown. | Data on the capacity of new or extended waste management facilities and main sources of waste will be collected. The results will be used to help assess degree of self –sufficiency. |
| **WCS12 Environmental protection** | | | |
| No proposals permitted that would cause an unacceptable environmental impact.<br>Environmental improvements to be secured where possible – no targets set. | Waste Industry. | Main Impact of policy may be to discourage unacceptable proposals from being submitted in first place – but this will not be assessable. | Data on planning decisions (and planning applications being withdrawn) based on environmental impacts being considered unacceptable by the WPA will be monitored. Proposals that secure environmental improvements will also be monitored. |
| **WCS13 Climate change** | | | |
| New proposals are resilient to climate change. | Waste Industry. | No targets, local impact of climate change uncertain. | Information on planning proposals that include specific climate change measures will be monitored. Planning refusals on grounds that include poor location / resilience to climate change risks will also be monitored. |
| **WCS14 Design** | | | |
| All new waste management facilities are well designed and use sustainable construction techniques. | Waste Industry. | No targets. Design elements subjective. | Information on planning proposals that have applied good design principles will be monitored. |

# Glossary

**Air Quality Management Area –** An area where an assessment of air quality by the local authority indicates that national air quality objectives are not likely to be met. A Local Air Quality Action Plan must be put in place in such an area.

**Anaerobic digestion –** a process where micro-organisms break down bio-degradable waste within a warm, sealed, airless container. This produces bio-gas, which can be used to generate heat and electricity, a fibrous residue which can be used as a soil nutrient, and leachate which is used as a liquid fertiliser.

**Bio-aerosol –** An suspension of airborne particles that contain living organisms or that were released from living organisms. It may contain bacteria, fungal spores, plant pollen or virus particles.

**Bring site –** banks of containers provided at supermarkets, local shopping centres and schools for example, where householders can deposit glass, paper, card, tins, plastics and textiles for recycling.

**Commercial and industrial waste –** waste that is produced by businesses such as factories, shops, offices, hotels. The waste materials are largely the same as those found in municipal waste such as paper, card and plastic although many manufacturing firms will produce large quantities of a specific waste such as metal, rubber or food waste for example.

**Construction and demolition waste –** waste from the construction industry that is produced during road building, house building or demolition for example. This typically includes inert materials such as concrete, rubble, bricks and soils but can also include wood, metal and glass.

**Core Cities –** a united local authority voice to promote the role of England's eight largest city economies outside London in driving economic growth. Nottingham is one of the eight cities.

**Disposal –** the final stage in the waste hierarchy where waste that has no useful or economic purpose is discarded. This could either be buried below ground within a landfill site or in an above ground land-raising scheme.

**Energy recovery –** the broad term used to cover the group of different technologies that can be used to recover energy from waste e.g. anaerobic digestion, gasification, pyrolysis, mechanical biological treatment and incineration.

**Energy Strategy –** identifies the key technologies and programme required to enable areas to play their part in meeting the national and local targets on carbon reduction and low or zero carbon energy generation.

**Equality Impact Assessment –** an analysis of the policies to assess the implications of them on the whole community to help to eliminate discrimination and tackle inequality.

**Evidence base –** an up-to-date information base produced by Local Authorities on key environmental, social and economic characteristics of their area, to enable the preparation of development plan documents.

**Climate Change Framework for Action in Nottinghamshire –** sets out a comprehensive approach to tackling the causes and effects of climate change, published on behalf of the Nottinghamshire Agenda 21 Forum.

**Composting, open air –** waste is composted in long open-air windrows which are turned regularly until the compost matures. This can take up to 12 weeks and is only suitable for green waste (i.e. vegetable and plant matter). It cannot be used for kitchen or catering waste.

**Composting, enclosed –** the windrows are laid out within a large building which helps to contain dust and odour and the compost can be protected from the weather. This process is only suitable for green waste.

**Composting, in-vessel –** the waste is composted inside a purpose built container or silo, often within a building. This gives greater control over the breakdown of the waste, meaning that it can be used to compost kitchen and catering waste, as well as green waste. This process is also quicker than conventional open-air methods.

**Gasification –** mixed waste is partially combusted at very high temperatures and converted into a gas. Residual waste left from the process is then burned or landfilled.

**Green Infrastructure Strategy –** the strategic vision to protect, enhance and extend networks of green spaces and natural elements of an area.

**Greenfield site –** land that has not previously been developed including agricultural land, woodland, forestry, allotments, parks or other land that has not had a permanent structure placed on it. This can also include land where any previous use has blended into the landscape so that it now seems part of the natural surroundings.

**Habitats Regulations Assessment –** a formal assessment of the impacts of the plan on the integrity of a Special Protection Area, Special Area for Conservation or proposed SPA and Ramsar site.

**Hazardous landfill –** sites that take waste that are considered to be more harmful because of their potentially toxic and dangerous nature. Examples include clinical waste, oils, chemical process wastes, some contaminated soils and asbestos. As these post a significant risk to the environment or human health, such sites require greater control measures.

**Household waste recycling centre –** purpose-built sites where householders can bring bulky waste to be sorted and recycled.

**Incineration –** the controlled burning of waste, either to reduce its volume, or its toxicity. Energy recovery from incineration can produce heat or power. Current flue-gas emission standards are very high. Ash residues must be disposed of at specialist facilities.

**Inert landfill –** sites that only take waste that is physically and chemically stable. Most inert waste comes from construction and demolition projects and tends to be bricks, glass, soils, rubble and similar material. As this waste does not break down in the ground it will not give off any gas or leachate. Inert sites do not therefore post any risk to the environment or human health.

**Infrastructure delivery plan –** a document detailing the infrastructure identified as being needed to support the delivery of the Core Strategy. It explains the approach taken to identify the infrastructure, how it will be delivered and an assessment of the potential risks associated with doing so.

**Local authority collected waste –** this term has been introduced to distinguish between the municipal waste that is collected from households, and some non-household sources by local authorities (District and Unitary Councils), and the wider definition of municipal waste that has now been introduced by the European Union which includes those elements of commercial and industrial waste that are the same as found in municipal waste. References to municipal waste within this Waste Core Strategy are intended to refer to the municipal waste collected by local authorities as this reflects the wording of existing guidance and monitoring arrangements.

**Local Development Framework –** comprises a portfolio of local development documents that together provide the framework for delivering the spatial planning for the strategy.

**Local Enterprise Partnership –** locally-owned partnerships between local authorities and business that play a central role in determining local economic priorities and undertake activities to drive economic growth and the creation of local jobs.

**Materials Recovery/Recycling Facility –** a site, usually within a building, where recyclable materials are collected and then sorted either mechanically or manually and bulked up to be taken for re-processing.

**Mechanical biological treatment –** uses a varying combination of mechanical sorting to remove recyclable materials, alongside biological processes such as anaerobic digestion or composting. This can also include energy recovery in the form of incineration, gasification or pyrolysis. Any remaining waste is then turned into refuse derived fuel or sent to landfill. Plants can process mixed household waste as well as commercial and industrial wastes.

**Municipal waste –** all household waste and any other non-household waste collected by local authorities. The European Union has recently introduced a new definition of municipal waste which includes those elements of commercial and industrial waste that are the same as found in municipal waste. To differentiate the UK Government has introduced a new term of 'local authority collected l waste' and this is what is referred to within this Waste Core Strategy as municipal waste.

**Municipal Waste Management Strategy –** an agreed framework for County and District Councils to plan and manage their waste management services in an integrated way. Identified the short, medium and long term requirement for managing municipal waste, the cost of delivering the solution and associated funding issues and the roles and responsibilities of the County and District Councils and the public to make the solutions work.

**Non-hazardous landfill –** sites that take a wide range of waste, typically municipal (household), commercial and industrial wastes such as paper, card, plastic, timber, metal and catering wastes. These are wastes that will naturally decompose over time and give off gas and leachate.

**Previously developed land –** land which is or was occupied by a permanent structure, including the curtilage of the developed land and any associated fixed surface infrastructure.

**Pyrolysis –** mixed waste is partly combusted at very high temperatures and converted into a gas. Residual waste left from the process is them burned or landfilled.

**Reclamation –** where a site, often derelict or disused, is brought back into use but for a different purpose than that it was originally used for. An example of this would be infilling a quarry with waste and creating an area of woodland, open space or development land.

**Resource recovery park –** a concept based on the idea that companies which produce waste could locate alongside companies that are able to re-process that waste in a business park the environment. This could also include companies that research alternative uses for waste products.

**Strategic Flood Risk Assessment –** the aim of the SFRA is to map all forms of flood risk over the plan area and use this as an evidence base to locate development primarily in low flood risk zones.

**Sustainability Appraisal –** an appraisal of the economic, environmental and social effects of a plan, applied from the outset of the plan process to allow decisions to be made that accord with sustainable development. Required under UK and EU law.

**Sustainable Community Strategy –** document prepared by Local Strategic Partnerships setting out a long-term vision and associated action plan for promoting or improving the social, economic and environmental conditions of a local area in a sustainable way.

**Treatment –** any form of processing that is intended to prepare waste for re-use, recycling, or recovery – includes recycling, composting anaerobic digestion biological, chemical or other process and incineration, gasification, and emerging technologies as well as the sorting, separation, bulking up and transfer of waste. In the context of this Waste Core Strategy treatment does not include disposal.

**Waste Transfer Station –** a site, either within a building or open air, where waste materials are taken to be bulked up before being taken to other facilities for treatment or disposal. Some also carry out basic sorting operations, making them similar to Materials Recovery/Recycling Facilities.

# Appendix 1

## Waste Local Plan policies replaced by the Waste Core Strategy

The following policies within the Nottinghamshire and Nottingham and Waste Local Plan (adopted January 2002) have been replaced:

**Chapter 3 – Environmental Protection**

**W3.16 –** Bulk Transport of waste

**Chapter 5 – Waste Recycling**

**W5.1 –** Household Waste Recycling Centres – Areas of Search
**W5.2 –** Household Waste Recycling Centres in Disposal Sites
**W5.3 –** Mini Recycling Centres
**W5.4 –** Material Recovery Facility – Eastcroft
**W5.5 –** Material Recovery Facilities – Industrial Estates
**W5.6 –** Material Recovery Facilities – Waste Disposal Sites
**W5.7 –** Permanent Aggregate Recycling Centres
**W5.8 –** Mobile Aggregate Recycling Centres
**W5.9 –** Recycling Soils
**W5.10 –** Scrapyards – Areas of Search
**W5.11 –** Scrapyards – Existing Sites

**Chapter 6 – Waste Treatment & Energy Recovery from Waste**

**W6.1 –** Future Provision of Municipal Incinerators
**W6.2 –** Clinical Incinerators
**W6.3 –** Other Technologies
**W6.4 –** Refuse Derived Fuel
**W6.5 –** Energy Recovery from Incineration – Environmental Impact
**W6.6 –** Energy Recovery from Incineration – Economic Viability
**W6.7 –** Energy Recovery from Waste Disposal – Environmental Impact
**W6.8 –** Energy Recovery from Waste Disposal – Economic Viability

**Chapter 7 – Composting & Landspreading**

**W7.1 –** Commercial Composting Sites – Areas of Search
**W7.2 –** Commercial Composting – Waste Disposal Sites
**W7.3 –** Small Scale Composting Schemes in Agricultural Areas

**Chapter 8 – Waste Water & Sewage Treatment**

**W8.1 –** Future Requirements

**Chapter 9 – Waste Transfer Stations**

**W9.1 –** General Waste Transfer Stations – Areas of Search

**Chapter 10 – Waste Disposal**

**W10.1 –** Waste Disposal in Mineral sites, other Voids and Colliery Spoil Heaps
**W10.2 –** Waste Disposal in Derelict or Degraded Land
**W10.3 –** Waste Disposal in Greenfield Sites
**W10.4 –** Bentinck Void & Colliery Tip - Allocation

# Appendix 2

## Indicative size of waste treatment and disposal facilites

### Table 8 – Indicative size of waste treatment facilities ('000 tonnes per annum)

The table below sets out our assumptions about the likely size and capacity of the different types of waste facilities in relation to policies WCS3 and WCS6. It is not intended to be absolute as what is regarded as small, medium or large is likely to change over time as technologies advance and will therefore be informed by future monitoring. These assumptions have been developed from research studies, other waste plans and discussions with the waste management industry.

| | Large | | Medium | | Small | |
|---|---|---|---|---|---|---|
| | Capacity (tpa) | Area (ha) | Capacity (tpa) | Area (ha) | Capacity (tpa) | Area (ha) |
| **Combined Facilities** | | | | | | |
| Resource recovery park | 300+ | 75+ | 200 | 25-75 | <100 | 10-25 |
| **Recycling** | | | | | | |
| Bring sites | - | - | - | - | - | - |
| Household Waste Recycling Centre | 25+ | 0.5 | 15 | 0.4 | <5 | 0.3 |
| Materials Recovery Facility | 100+ | 2-3 | 50 | 1-2 | <20 | 0.5-1 |
| Aggregates | 100+ | 2-3 | 50 | 1-2 | <20 | 0.5-1 |
| Metal | 100+ | 2-3 | 50 | 1-2 | <20 | 0.5-1 |
| **Composting** | | | | | | |
| Enclosed/In-vessel | 100+ | 5-6 | 50 | 2-3 | < 10 | 1-2 |
| Open air | 50+ | 3-4 | 25 | 2-3 | <10 | 1-2 |
| **Energy Recovery** | | | | | | |
| Anaerobic Digestion | 40+ | 1-3 | 20 | 0.5-1 | <5 | 0.5 |
| Incineration | 300+ | 4-5 | 200 | 3-4 | <100 | 2-3 |
| Gasification/ Pyrolysis | 100+ | 2-4 | 50 | 1-2 | <25 | 0.5-1.5 |
| MBT/ RDF processing | 150+ | 4-5 | 100 | 3-4 | <50 | 1-2 |
| **Waste Transfer** | | | | | | |
| Transfer station | 50 + | 1-1.5 | 25 | 0.5-1 | <10 | 0.5 |

### Table 9 – Indicative size and capacity of waste disposal facilities (million m3)

| | Large | | Medium | | Small | |
|---|---|---|---|---|---|---|
| | Capacity (tpa) | Area (ha) | Capacity (tpa) | Area (ha) | Capacity (tpa) | Area (ha) |
| **Disposal*** | | | | | | |
| Inert | 1+ | 20+ | 0.5 | 10 | 0.1 | 5 |
| Non-hazardous | 4+ | 50+ | 2.5 | 25 | < 1 | 10 |

* site areas shown have been estimated using an average depth of 10 metres.

## Contacts:


Email: development.planning@nottscc.gov.uk

08449 80 80 80

**Planning Policy Team**
Nottinghamshire County Council
County Hall
West Bridgford
Nottingham
NG2 7QP

www.nottinghamshire.gov.uk/wastehaveyoursay



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Nottinghamshire and Nottingham

# Waste Core Strategy