Gloucestershire Waste Core Strategy (WCS)

Focused Changes

June 2011

energy transport waste

tackling climate change

committed to a 10% reduction in our carbon emissions by 2012

Gloucestershire COUNTY COUNCIL

Contents

Executive Summary

E.1 This is the Waste Core Strategy (WCS) for Gloucestershire. It explains how the County Council and its partners will address the issue of planning for waste management in Gloucestershire in the period 2012 to 2027.

E.2 Waste is a critically important issue. Each year Gloucestershire households produce nearly 300,000 tonnes of waste. Businesses produce even more, around 375,000 tonnes. Then there's the waste from building sites, farms, used cars, electrical equipment, hospitals and so on. Whilst it's easy to think of waste as someone else's problem this is not the case. We all generate waste and have a collective responsibility to do something about it.

E.3 Future growth means the amount of waste produced in Gloucestershire could increase and we need to plan properly for it. At the moment, most of our waste ends up buried in landfill. This cannot continue. Not only will landfill space eventually run out, we also need to find a more environmentally friendly and cost effective alternative.

E.4 This means reducing the amount of waste we produce and re-using more of our waste. It also means more recycling and composting. Our target is at least 60% recycling and composting for household waste by 2020, 10% higher than the national target over the same period. There will however always be an element of 'residual' waste that cannot be re-used, recycled or composted.

E.5 To manage our waste effectively we need to ensure that appropriate waste management facilities are made available. This will allow us to recover value and energy from the waste such as extracting further recyclables or creating heat and power instead of just burying it. Whilst this won't completely eliminate the need for landfill, it will help to reduce it, which in turn will be better for the taxpayer and the environment.

E.6 Achieving this shift towards more 'sustainable' waste management will not be easy. It will require better education, changes in attitudes and behaviour, policies to guide new development and finding the right sites for new waste facilities. Delivery is critical. The WCS has a key role to play in all of these areas.

E.7 For ease of reference we have divided the strategy into six sections.

E.8 **Section 1** provides a basic introduction to the WCS, what it is and what it is trying to achieve. In short, the WCS aims to provide greater certainty for local people and businesses about what new waste facilities will be built, where and when and seeks to tackle key local issues such as flood risk. It explains that the WCS is not a standalone strategy and has a key role to play in delivering other plans and strategies including the Gloucestershire Sustainable Community Strategy.

E.9 **Section 2** provides the essential background information and evidence for the strategy. This includes a general profile of Gloucestershire highlighting its rich historic and natural environment, the flood risk presented by the River Severn and its tributaries, key transport links and the main settlement pattern which is dominated by Gloucester and Cheltenham.

E.10 Section 2.0 also includes a detailed summary of current waste management arrangements. The four main waste 'streams' in Gloucestershire are municipal waste, commercial and industrial waste, construction and demolition waste and hazardous waste. Other wastes of relevance include agricultural waste, radioactive waste, clinical waste and waste water.

E.11 The amount of municipal and hazardous waste has generally increased in recent years, whilst the trend for commercial and industrial and construction and demolition waste has been much more variable. The other waste types (agricultural, clinical etc.) are managed in much lower quantities.

E.12 Municipal waste is collected by or on behalf of the District Councils, whilst the other types of waste are generally collected by private waste management companies. Most waste is transported by road.

E.13 Once the waste has been collected it will be taken to one of a number of waste management facilities depending on the type of waste where it was collected from and who collected it. The main waste management facilities available in Gloucestershire include bulking and transfer sites, recycling and composting, a limited number of 'other' waste recovery facilities and several landfills including one for hazardous waste.

E.14 Other facilities in Gloucestershire include metal recycling sites (scrap yards etc.) water treatment works, inert waste recovery facilities (dealing with construction waste – bricks, concrete) 'exempt' facilities (relatively low-impact and do not require an environmental permit) clinical waste facilities and facilities for radioactive and agricultural waste.

E.15 Section 2 concludes by identifying ten key issues facing Gloucestershire that the WCS must address.

Key Issue 1

The population of Gloucestershire is forecast to increase to 674,000 by 2033. Coupled with continued economic growth this will influence the amount of waste produced in Gloucestershire across all waste streams. This will in turn dictate the need for new waste management facilities.

Key Issue 2

The two largest urban areas in the county are Gloucester and Cheltenham. This is where most of Gloucestershire's waste is currently produced and this is likely to be the case in the future should growth continue to be focused on these two main settlements.

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Key Issue 3

Gloucestershire has a rich historic and natural environment including extensive areas of AONB and Green Belt and sites of international, national and local nature conservation importance. These are important considerations in terms of the location of new waste management facilities and supporting infrastructure.

Key Issue 4

The presence of the River Severn and its tributaries means that flood risk is a major issue in Gloucestershire. Climate change is likely to exacerbate flood risk, in particular within the relatively low-lying Central Severn Vale area.

Key Issue 5

Transport links in Gloucestershire are generally good. Most waste is however currently transported by road which has environmental impacts. Rail and water offer the potential for sustainable movement of waste subject to issues of viability.

Key Issue 6

Household recycling and composting rates have been steadily increasing in recent years. However there is still some way to go to achieve the Council's target of at least 60% by 2020.

Key Issue 7

With the exception of the last 3 years the amount of MSW has been steadily increasing. The amount of hazardous waste managed in Gloucestershire has also increased. Trends for C&I and C&D have been more variable. Future changes in the amount of waste will dictate the number of new facilities required.

Key Issue 8

Collection arrangements for MSW vary between Districts in terms of the type of waste collected and the frequency of collection. Partnership working should lead to a more co-ordinated approach in the future.

Key Issue 9

There are a range of waste management facilities in Gloucestershire used by the County Council for municipal waste and by private waste management companies for other types of waste. However, there are currently no residual waste recovery facilities for MSW (for the waste that cannot be recycled or composted) and limited recovery capacity for C&I waste, leading to an over-reliance on landfill which needs to be reversed.

Key Issue 10

Landfill is always likely to have a role to play in respect of certain types of waste. Our waste data suggests that there is sufficient hazardous landfill capacity (an estimated 22 years remaining)[1] within the plan period. In terms of non-hazardous landfill, there is capacity of at least 10-13 years at current throughputs. However this is a conservative estimate and the likelihood is that, due to future reductions to landfill as a result of mechanisms such as the Landfill Tax, landfill void could last for significantly longer.

E.16 **Section 3** then looks to the future and considers where we want to be by the year 2027. It identifies five 'key drivers for change' – the main factors that will influence waste management in Gloucestershire in the future; climate change, waste policy (international, national, regional and local), the rising costs of waste management (due to landfill tax etc.), changing technology and significantly, future waste forecasts i.e. how much waste there will be to manage and what additional capacity is needed to manage it.

E.17 To summarise, the forecasts suggest the need to identify the following additional capacity in the period to 2027/8:

Municipal Waste

E.18 For municipal waste there is a need to provide the following:

- A small/limited number of additional recycling/composting facilities to ensure that Gloucestershire's target of at least 60% recycling/composting by 2020 is met (around 9,000 tonnes/year for composting and 10,000 tonnes/year for recycling).

- A residual waste recovery facility (or facilities) able to process around 150,000[2] tonnes per year of residual municipal waste (waste that cannot be recycled or composted). This tonnage is likely to require either one large strategic site of about 5 hectares or 2-3 smaller sites of about 2 hectares each.

- Some level of appropriate supporting infrastructure for the above (e.g. bulking and transfer) but not necessarily new facilities. It may be that existing facilities could be expanded or that sufficient capacity would be available if their full capacity was utilised.

[1] Subject to the outcome of planning application - Reference Number: 09/0028/TWMAJW.
[2] This is an approximate requirement based on the latest available waste flow forecast produced by the Waste Disposal Authority and is based on achieving a 60% recycling rate by 2020.

- Although no additional landfill capacity for municipal waste is required at this time, this situation will need to be regularly monitored and may require additional provision to be looked at around 2020 subject to a number of factors including recycling and composting rates.

Commercial and Industrial Waste

E.19 For commercial and industrial (C&I) waste there is a need to provide the following:

- Waste recovery facilities with sufficient capacity to divert between 143,000 – 193,000 tonnes/year of C&I waste from landfill. This relates to waste recovery in the broadest sense and could include various forms of residual recovery, composting and recycling. This level of provision could be met on 1 large Strategic site (6 to 8 ha of land in total), 2 Strategic sites or possibly 3 to 4 smaller Strategic sites (of minimum 2 ha each).

- Some level of appropriate supporting infrastructure for the above, but not necessarily new facilities. As with municipal waste facilities, it may be that existing facilities could be expanded or that sufficient capacity would be available if their full capacity was utilised.

Construction and Demolition Waste

E.20 For construction and demolition (C&D) waste when assessed against regional targets, there is currently adequate capacity for the management of C&D waste in Gloucestershire. However, based on a National target to reduce C&D Waste to landfill by 50% by 2012, there is a need to divert an additional 85,000 tonnes (top range) per year from licensed landfill. This will be met through inert recycling and recovery processes.

Hazardous Waste

E.21 No additional capacity is required for hazardous waste[3]; however, proposals that would enable the movement of hazardous waste management in Gloucestershire up the waste hierarchy will be supported in principle.

Other Wastes (agricultural, radioactive, clinical waste and waste water)

E.22 Given the current level of provision and the relatively small amounts of waste managed across these waste streams no additional capacity is required. In relation to waste water,

[3] Subject to the outcome of planning application - Reference Number: 09/0028/TWMAJW.

future demand associated with new housing and employment growth is at present uncertain due to the proposed abolition of the draft Regional Spatial Strategy (RSS). For this reason a criteria-based approach is considered appropriate.

E.23 Having regard to these key drivers Section 3.0 then sets out the spatial vision and strategic objectives for the WCS.

Our Vision for 2027

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'By 2027 Gloucestershire is a clean, green, healthy and safe place in which to live, work and visit. Residents and businesses are fully aware of the economic and environmental importance of waste management, including its impact on climate change and proactively minimise their waste production to achieve 'zero-growth' across all waste streams by 2020.

Opportunities for re-using, recycling and composting waste are maximised across all waste streams. Effective joint working through the Gloucestershire Waste Partnership (GWP) has led to a more consistent and co-ordinated approach towards municipal waste collection across the county with everyone able to recycle and compost a broad range of materials easily and conveniently. At least 60% of household waste is recycled and composted by 2020.

The 'residual' municipal and commercial waste that cannot reasonably be re-used, recycled or composted is seen as a valuable resource and is managed through a number of 'strategic' waste recovery sites (>50,000 tonnes/year) located in the central area of the county, proximate to the main urban areas along the M5 corridor including Gloucester and Cheltenham.

Strategic sites will be located so as to maximise the potential use of heat and power and give priority to the re-use of previously developed land and buildings.

'Local' facilities (<50,000 tonnes/year) including supporting infrastructure such as waste transfer and bulking are dispersed more widely around the county including those more distant rural areas such as the Forest of Dean and the Cotswolds.

These strategic, local and existing waste facilities form an integrated sustainable waste management system ensuring enough capacity is made available to meet ~~for~~ Gloucestershire's needs.

Gloucestershire's communities, key landscape/environmental assets and land liable to current and future potential flood risk, are safeguarded from the adverse impacts of waste management activities.

The continuing role of landfill is recognised but increasingly seen as a last resort'.

E.24 The strategic objectives are:

Strategic Objective 1 – Waste Reduction

To raise awareness of waste issues amongst Gloucestershire residents and businesses in order to generate collective responsibility for waste, ensure it is seen as a potential resource and to reduce the amount of waste produced, with zero-growth achieved across all waste streams by 2020.

Strategic Objective 2 – Re-use, Recycling and Composting

To make the best use of Gloucestershire's waste by ensuring that residents and businesses re-use as much of their waste as possible and that if waste cannot be re-used, it can easily be recycled or composted to achieve the following:

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- *At least 60% household waste recycled/composted by 2020 with an aspiration for 70% by 2030.*
- *By 2012, through inert recycling and recovery to reduce the amount of C&D waste currently going to licensed landfill by 50%.*

Strategic Objective 3 – Other Recovery (including energy recovery)

To recover the maximum amount of value including energy from any waste that cannot be re-used, recycled or composted through the provision of the following:

- *Around 150,000[4] tonnes/year residual waste recovery capacity for municipal waste by 2027.*
- *Recovery facilities with the capacity to divert 143,000 – 193,000 tonnes/year of C&I waste from landfill.*

Strategic Objective 4 – Waste Disposal

To recognise the continuing role of landfill for the disposal of certain residual and hazardous wastes whilst reducing our reliance on landfill as the primary method of waste management in Gloucestershire.

[4] This is an approximate requirement based on the latest available waste flow forecast produced by the Waste Disposal Authority and is based on achieving a 60% recycling rate by 2020.

Strategic Objective 5 – Minimising Impact

To ensure the environmental and social impacts of waste management particularly climate change and risks to human health are minimised by; managing waste close to where it arises, promoting the use of sustainable transport, avoiding current and potential flood risk areas, safeguarding existing and proposed waste sites, promoting high quality sustainable design, protecting national and local areas of landscape and nature conservation importance, and prioritising the co-location of similar or related facilities on existing waste sites or previously developed sites in preference to greenfield locations where appropriate and where the cumulative impact is not unacceptable to the host location.

E.25 Having outlined where we want to be by 2027, **Section 4** sets out the 'spatial strategy' for getting there. 'Spatial' insofar as it deals with how many new waste facilities are needed, where they will be built, who will provide them and how. The strategy is aligned with the five strategic objectives:

- Reduction
- Re-Use, Recycling and Composting
- Other Recovery (including Energy Recovery)
- Disposal
- Minimising Impact

E.26 The following Core Policies are included under these five headings:

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- Core Policy WCS1 – Waste Reduction
- Core Policy WCS2 – Recycling & Composting~~/Anaerobic Digestion (including Bulking and Transfer)~~
- Core Policy WCS3 – Inert Waste Recycling & Recovery
- Core Policy WCS3a – Anaerobic Digestion (AD)
- Core Policy WCS4 – Other Recovery (including Energy Recovery)
- Core Policy WCS5 – Waste Water
- Core Policy WCS6 – Hazardous Waste
- Core Policy WCS7 – Cumulative Impact
- Core Policy WCS8 – Safeguarding Sites for Waste Management
- Core Policy WCS9 – Flood Risk
- Core Policy WCS10 – Green Belt
- Core Policy WCS11 – Areas of Outstanding Natural Beauty
- Core Policy WCS12 – Nature Conservation (Biodiversity & Geodiversity)
- Core Policy WCS13 – Design
- Core Policy WCS13a – Bulking and Transfer
- Core Policy WCS14 – Sustainable Transport

E.27 **Section 5** then sets out our implementation framework. There is little point in having a strategy that sits on a shelf gathering dust and here we set out a schedule, detailing how each element of the WCS will be delivered by whom and when.

E.28 Finally **Section 6** outlines the measures that we will put in place to monitor progress. An effective approach to monitoring will help us to ensure that where WCS policies are failing to deliver their objectives or are having unintended consequences we can remedy the situation accordingly (e.g. revise or replace policies). The approach taken is based on the established 'objectives, policies, targets and indicators' approach to monitoring, which involves defining strategic objectives and developing these into policies before setting policy targets and indicators to determine if the policies are achieving their objectives or having unintended consequences.

1. Introduction

1.1 This is the Waste Core Strategy (WCS) for Gloucestershire. It explains how the County Council and its partners will address the issue of planning for waste management in Gloucestershire in the period 2012 to 2027.

1.2 The WCS forms part of the Gloucestershire 'Minerals and Waste Development Framework (MWDF). This is a set of documents that will collectively guide future development relating to quarrying and waste management in Gloucestershire.

1.3 For further information on the MWDF visit www.gloucestershire.gov.uk/mineralsandwaste

Why do we need the WCS?

1.4 The WCS will provide greater certainty for local people and businesses about what new waste facilities will be built, where and when. It will also help to ensure that the most important issues for Gloucestershire are addressed such as climate change and flood risk.

1.5 Importantly it provides a positive framework for change, helping to ensure that the right development takes place in the right place at the right time.

What status does the WCS have?

1.6 The WCS forms part of the 'development plan' for Gloucestershire. This means that when a proposal for waste management comes forward, it will be a key factor in determining the planning application. The WCS will also be a consideration for Gloucestershire's District Councils who determine planning applications for other development such as new housing and employment.

1.7 When adopted, the WCS will replace a number of the policies contained in the existing Waste Local Plan (2004). Appendix 1 sets out the policies that will be replaced. Those policies that remain in place relate to detailed 'development management' type issues and will in due course be replaced by a separate Development Plan Document (DPD) to be prepared once the WCS has been adopted.

How does the WCS relate to other plans and strategies?

1.8 It is important to remember that the WCS is not a standalone strategy. It has a key role to play in helping to deliver the aims and objectives of other strategies such as the National Waste Strategy, the Regional Waste Strategy, the Gloucestershire Sustainable Community Strategy (SCS) and the Joint Municipal Waste Management Strategy (JMWMS). Appendix 2 summarises these key links. Further commentary is also provided in Section 3.0.

How has the WCS been prepared?

1.9 The WCS has been subject to extensive and continuous engagement with stakeholders. This has helped to ensure that the policies and proposals are fully justified, effective and consistent with national policy. The strategy has also been subject to an ongoing process of Sustainability Appraisal (SA) including a final SA report on this document (available separately).

How will the WCS be delivered?

1.10 We are conscious of the fact that some plans and strategies tend to sit on shelves gathering dust and don't deliver anything of note. The WCS is different. It is intended to positively influence the shape of waste management in Gloucestershire up to 2027.

1.11 The implementation framework set out in Section 5 describes how and when the various elements of the WCS will be delivered and the monitoring framework in Section 6 sets out the various indicators that will be used to monitor progress.

1.12 The Council's Annual Monitoring Report (AMR) will use these indicators to determine whether the policies of the WCS are working or having any unintended consequences. Where policies need to be revised or replaced this will be achieved through future stakeholder consultation and subsequent revision to the WCS.

2. Gloucestershire – Where are we now?

2.1 In this section we provide a brief profile of Gloucestershire including current waste management arrangements. The section concludes by summarising the key local issues that the WCS must address.

General Characteristics

2.2 Gloucestershire lies in the South West region of England bordering the regions of the South East, the West Midlands and Wales. Surrounding counties include Worcestershire, Warwickshire, Oxfordshire and other unitary authorities such as South Gloucestershire, Swindon, Wiltshire, Monmouthshire and Herefordshire.

2.3 Geographically, Gloucestershire is split into three distinct areas – the Cotswolds, the Forest of Dean and the Central Severn Vale (see map below).

Figure 1 – Map of Gloucestershire

2.4 Administratively the county is divided into two 'tiers'. Gloucestershire County Council provides strategic services for the whole county including waste planning and disposal and the six District Councils (Cheltenham, Gloucester, Tewkesbury, Stroud, Forest of Dean and Cotswold) provide more local functions including waste collection.

2.5 Gloucestershire has a population of 582,000 making it the 27th largest county in England. Population forecasts suggest that this could increase to 674,000 by 2033[5]. The County has two main urban areas; Gloucester and Cheltenham located in the centre of the County within the Central Severn Vale. Both have populations of around 110,000 and provide a large proportion of Gloucestershire's housing and employment opportunities. Smaller urban areas include Tewkesbury, Stroud, Cirencester, Coleford, Cinderford, Lydney and Newent.

2.6 Much of the eastern part of the county (51% of the land area) falls within the Cotswolds Area of Outstanding Natural Beauty, the largest AONB in England and Wales. Parts of the Wye Valley AONB and Malvern Hills AONB are also within the county. A large part of the area between Gloucester and Cheltenham is designated as Green Belt (over 8,000 hectares) and there are a number of sites of international, national and local interest in relation to nature conservation, biodiversity and geology across the county.

2.7 The western part of Gloucestershire is dominated by the Royal Forest of Dean and the River Severn. The presence of the Severn and its tributaries has implications for flood risk. Climate change is therefore a key consideration, particularly for the relatively low-lying Central Severn Vale. The River Severn also means that east-west journeys across the county are focused on several 'bridging' points.

2.8 The county has a rich historic environment with 519 scheduled monuments, 14,974 listed buildings and over 31,000 other archaeological sites recorded in the Historic Environment Record. Gloucester Cathedral and Docks, the regency architecture of Cheltenham, the Cotswolds and the buildings linked to the wool industry of the Stroud Valleys are some of the county's best known built historic assets. Although perhaps best known for the archaeology of the prehistoric and Roman periods Gloucestershire contains archaeological evidence from all phases of the human past surviving as both visible monuments and below ground deposits, in both urban and rural areas.

[5] Gloucestershire Local Projection Report (June 2010) produced by the GCC Research and Intelligence Team.

2.9 Over the last 20 years the economy of Gloucestershire has developed into a strong performer. It is part of the high performing north-east of the south west region with above regional average Gross Value Added (GVA)[6] and earnings. Only Swindon and the City of Bristol have out-performed Gloucestershire on these measures. This high performance is based on the balanced industrial structure of the county which includes advanced engineering, construction, finance and business, food supply, leisure and tourism[7].

2.10 Transport links are generally good with easy access to the strategic road network (SRN) including the M5 and M4 motorways. The Gloucester-Sharpness Canal and River Severn allow for the movement of passengers and some trade by water and there are regular rail services to London, Wales, the South West and North. There is a regional airport at Staverton.

2.11 Housing and employment growth in Gloucestershire has historically been focused on Gloucester and Cheltenham as the two main urban areas with more modest development having taken place elsewhere.

2.12 Whilst the draft Regional Spatial Strategy for the South West (2006) seeks to continue this approach, the Government are committed to the abolition of the RSS and the amount and distribution of housing growth will now be determined locally. The focus is likely to remain on Cheltenham and Gloucester with a Joint Core Strategy (JCS) currently being prepared for these areas in conjunction with Tewkesbury.

Waste in Gloucestershire

2.13 The four main types of waste produced and managed in Gloucestershire are:

- Municipal Solid Waste (MSW)
- Commercial and Industrial (C&I)
- Construction and Demolition (C&D)
- Hazardous waste

2.14 Set out below is a summary of how much waste is produced, how and where the waste is managed. Further, more detailed information is set out in the Waste Data Paper (2010) available separately[8].

[6] GVA is effectively a measure of economic productivity.
[7] Gloucestershire Story (2009) Gloucestershire Research & Intelligence Team.
[8] See www.gloucestershire.gov.uk/wcs/evidence

2.15 **Municipal Solid Waste** (MSW) is the waste which is collected by or on behalf of local authorities. Around 90% comes from households (kerbside collections and household recycling centres) with the remainder derived from street cleaning, parks and gardens and a small number of shops and businesses that use their local authority instead of the private sector. Nationally, around 25 million tonnes of household waste is produced each year[9].

2.16 **Commercial and Industrial** (C&I) waste comes from shops, offices and factories. It consists mainly of metal and biodegradable items. The biodegradable element is very similar to MSW (food, paper, card etc.) and can be managed at the same facilities. Nationally there is more than twice as much C&I waste as household waste, about 68 million tonnes a year[10].

2.17 **Construction and Demolition** (C&D) waste is generated from the construction and demolition of buildings and infrastructure (new roads etc.) It includes items such as rubble, glass, wood, soils, plastic, brick and concrete. Most C&D waste is 'inert'[11]. Nationally, C&D waste is the largest waste stream at around 89.6 million tonnes in 2005[12].

2.18 **Hazardous Waste** is that which is, or contains materials or substances that make it harmful to health or the environment. It includes some obvious hazardous substances such as oil and asbestos as well as some less obvious items such as batteries, fluorescent lighting and TVs (some of which comes from the three waste streams listed above). Nationally, hazardous waste makes up about 2% of the total waste stream, approximately 5 million tonnes per year.

[9] DEFRA – Commercial and Industrial Waste in England: A Statement of Aims and Actions (2009).
[10] DEFRA – Commercial and Industrial Waste in England: A Statement of Aims and Actions 2009.
[11] Inert waste is waste that is non-reactive and doesn't undergo any significant chemical or biological change when landfilled.
[12] DCLG: Survey of Arisings and Use of Construction, Demolition and Excavation Waste as Aggregate in England in 2005.

2.19 Other types of waste relevant to Gloucestershire include **agricultural waste** (pesticide containers, old silage wrap, used tyres etc.) **radioactive waste** derived from nuclear processes, hospitals and industry, **clinical waste** from hospitals, health clinics and vets (e.g. syringes, swabs and drugs) and **waste water** (from baths, sinks, toilets, surface water run-off etc).

How much waste is there?

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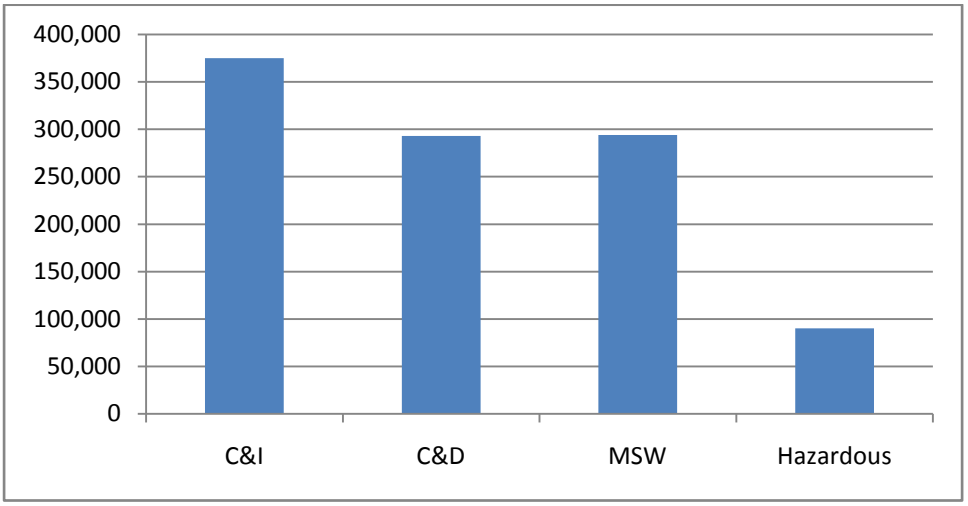
2.20 Table 1 and Figure 2 below illustrate how much waste is produced ~~and~~ or managed in Gloucestershire across the four main waste streams (note: Table 1 includes a separate figure for metal waste).

Table 1 – Waste in Gloucestershire[13]

Waste Stream	Base Year	Total (tonnes)
Municipal Solid Waste (MSW)	2009/10	294,000
Commercial & Industrial (C&I)	2008	375,000
Construction & Demolition (C&D)	2008	293,000
Hazardous Waste	2008	90,000
Metals (from all waste streams)	2008	131,000
Total		1,183,000

Figure 2 – Waste in Gloucestershire



[13] Figures are rounded to the nearest 1000. Metal (from all waste streams) is counted separately. Figures have factored in double counting. The MSW total is an arisings figure all other totals are licensed waste managed in Gloucestershire. For hazardous waste it should be noted that 90,000 tpa is the total managed figure for hazardous waste which includes both pre-treatment and disposal of this waste stream. This does mean this figure indicates the management capacity rather than a total arising as there would be an element of double counting. However the EA advise that this is the correct way to consider this waste stream due to the requirements of both pre-treatment and disposal.

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2.21 It can be seen that the largest waste stream in Gloucestershire is C&I, followed by MSW, C&D and hazardous. In December 2010, DEFRA published a Survey of Commercial and Industrial Waste Arisings (2010). For Gloucestershire the survey estimated the total amount of C&I waste arising in 2009 to be 526,188 tonnes, higher than the managed figure of 375,000 tonnes set out in Table 1 and Figure 2 above. However, because the DEFRA survey has a number of limitations, does not take account of exported waste and includes a proportion of metals (which the managed figure of 375,000 tonnes does not) the managed figure is considered to represent a robust basis on which to make future provision for C&I waste. Although MSW is not the largest waste stream it is perhaps the most important because of the financial penalties faced by local authorities that continue to landfill it. This is discussed later on.

2.22 The other types of waste relevant to Gloucestershire (agricultural, clinical waste etc.) are produced and managed in much lower quantities. Further information is set out in the Waste Data paper (2010)[14].

How has this changed over time?

2.23 The trend for **MSW** in recent years has generally been upward. In 2000/1 the total amount was 268,504 tonnes. This rose to a peak of 324,143 tonnes in 2006/7 followed by a dip to 293,815 tonnes in 2009/10.

2.24 The amount of **C&I** and **C&D** waste managed in Gloucestershire has been more variable over time with no obvious trend over the last 10 years.

2.25 The amount of **hazardous** waste managed in Gloucestershire has gradually increased. In 2002 the amount was 42,000 tonnes and by 2008 this had increased to 90,000 tonnes.

How is the waste managed?

2.26 There are essentially two elements to waste management; collection/handling and management (including disposal).

2.27 MSW is collected by or on behalf of the six District Councils which are each designated as a Waste Collection Authority (WCA). The County's Household Recycling Centres also receive household waste directly from residents. In their role as WCA, the District Councils also undertake a degree of handling and management of the waste (storage, transfer etc.)

2.28 Collection arrangements vary from District to District in terms of the type of waste collected and the frequency of collection, although the establishment of a shadow Joint Waste Board in 2009 is likely to lead to a more consistent approach in the future.

[14] See www.gloucestershire.gov.uk/wcs/evidence

2.29 C&I, C&D, hazardous, agricultural waste, waste water, radioactive wastes and clinical waste are generally collected by private waste management companies.[15]

2.30 Most waste is transported by road.

2.31 Once the waste has been collected, how and where it is managed depends on a number of factors including the type of waste, who collected it and where it was collected from.

2.32 In simple terms, responsibility for disposing of MSW rests with Gloucestershire County Council which is designated as the Waste Disposal Authority (WDA), whilst responsibility for disposing of other wastes lies with the private sector. Both have access to a range of waste management facilities across the county. Private companies will also use facilities outside Gloucestershire.

2.33 The main facilities in Gloucestershire are briefly outlined below. More detailed information is available in the Waste Data paper[16]. Knowing how many facilities there are at the moment allows us to work out how many more will be needed in the future.

Bulking and Transfer Facilities

2.34 Bulking and transfer facilities play an 'intermediate' role between the collection and disposal of waste, allowing for relatively small amounts of waste to be taken, sorted and stored until there is enough to transfer onwards to other waste facilities for further management or disposal.

2.35 Bulking and transfer operations help to reduce transport requirements and also allow for additional recyclates to be recovered. Some facilities deal with mixed-waste, others with single waste types such as asbestos.

[15] Waste water is not collected as such (other than from properties with septic tanks) rather it is piped from properties or runs from roads and pavements into the main sewer from where it passes to an appropriate treatment facility. A large proportion of agricultural waste is managed on-site.
[16] Available at www.gloucestershire.gov.uk/wcs/evidence

FC4

2.36 One of the main types of bulking and transfer facility is a Waste Transfer Station (WTS). There are currently 22 WTS in Gloucestershire dealing with MSW, C&I and C&D waste and two dealing specifically with the transfer of clinical waste[17]. Six ~~Seven~~ are used for MSW transfer and these have a total capacity of ~~107,000~~ 157,000 tonnes/year including 122,000 tonnes/year for general/ residual waste to landfill disposal and 35,000 tonnes/year for the transfer of recyclables. Details of these are set out in the Waste Data Paper 2010.

2.37 An element of waste transfer also takes place at other waste management facilities including Household Recycling Centres (see below).

Recycling Facilities

2.38 Recycling involves the collection and segregation of various types of waste (e.g. glass, paper, metals etc) in order for it to be transferred to reprocessing facilities to be made into new products or materials. It takes place at two scales; domestic and commercial. At the domestic scale, recycling facilities are provided in new developments in the form of individual or communal storage areas for recyclates. Recycling facilities are also provided in publicly accessible locations such as supermarkets and village hall car parks.

2.39 At the commercial scale, Household Recycling Centres (HRC) allow for members of the public and local businesses to take their waste to be sorted and transferred. Recyclates are sent for reprocessing (i.e. being turned into a new product) green garden waste is sent for composting and bulky or unrecyclable items are sent to landfill. There are six HRCs in Gloucestershire with a total capacity of 66,299 tonnes per year.

2.40 Commercial-scale segregation for recycling also takes place at Materials Recovery (or Recycling) Facilities (MRFs). These facilities, often located in industrial-style buildings, receive either mixed-waste or 'co-mingled' recyclates (bottles, cans etc.) then sort it, mechanically or manually and prepare the recyclates for marketing to end users. The leftover 'residual' waste that cannot be recycled is often landfilled.

2.41 In Gloucestershire there is one co-mingled MRF at Moreton Valence. Whilst planning permission has been granted for a similar facility at Wingmoor Farm East (47,500 tonnes/year) this is not yet operational.

[17] Transfer also takes place at other facilities including metal and end of life vehicles facilities.

2.42 Notably there are very few re-processing facilities for recyclates in Gloucestershire (i.e. the places where cans and bottles etc. are turned into new products) in some cases due to economies of scale. This means that the majority of recyclates once they have been sorted and bulked are transported out of the county.

Composting Facilities

2.43 Composting speeds up the natural process by which organic material breaks down or 'decomposes'. Composting, like recycling can take place at a domestic and commercial-scale.

2.44 Domestic composting involves people putting organic material (e.g. grass cuttings) into composting bins at home or in a community facility. The compost can then be used as a fertiliser and soil conditioner. This has the advantage that the organic material never actually becomes waste. Alternatively, green waste and food waste may be collected by the WCA and taken to a specialist, commercial-scale facility.

2.45 Commercial-scale composting falls into two categories; windrow (right) and in-vessel composting (IVC). The main difference between the two is that IVC is a more controlled process making it suitable for both green waste and food and animal wastes.

2.46 There are currently ~~four~~ five commercial-scale composting facilities in Gloucestershire. A sixth facility has planning permission but has not yet been built. Total permitted capacity is ~~113,000~~ 149,000 tonnes/year. This includes 113,000 tonnes/year IVC capacity and 36,000 tonnes/year windrow composting and transfer capacity. Of the total permitted composting capacity, 79,000 tonnes/year is for MSW and 70,000 tonnes/year for C&I waste.

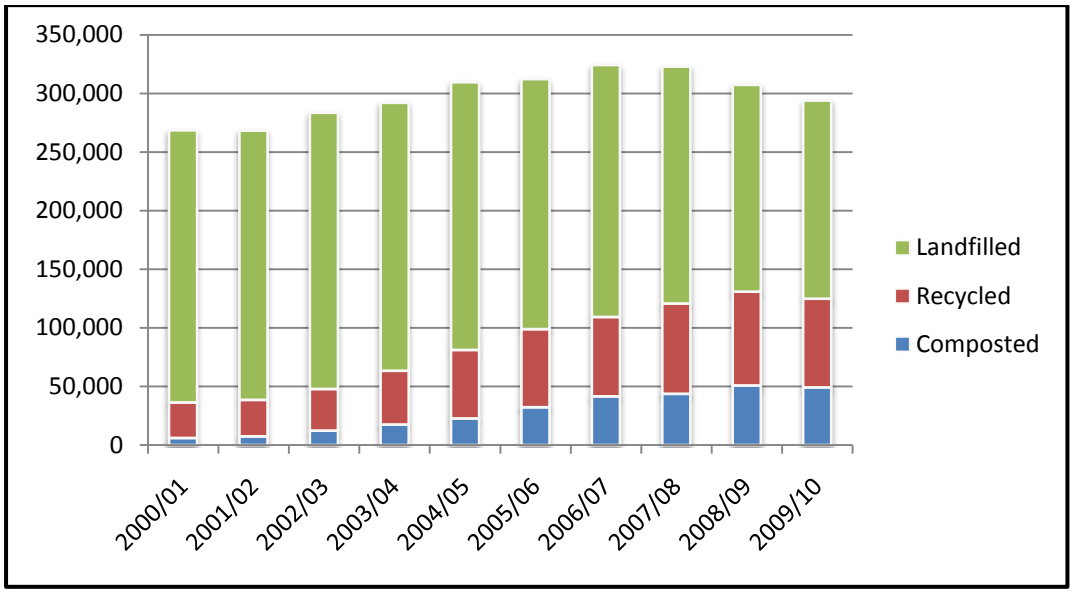
FC5

2.47 Recycling and composting facilities are important elements of an integrated waste management system, helping to recover waste and divert it from landfill. As outlined above Gloucestershire has a good network of available sites and existing capacity for recycling and composting.

2.48 Thanks in part to the availability of these facilities, Gloucestershire's household composting and recycling rate has steadily increased to 42% in 2009/10. The Council's target is to achieve at least 60% by 2020, 10% higher than the national target of 50% over the same period.

2.49 The chart below illustrates recent improvements in recycling and composting in Gloucestershire. There is still however much to do.

Figure 3 – Proportion of MSW Landfilled, Recycled and Composted



Anaerobic Digestion (AD) Facilities

2.50 Small AD facilities exist at Unilever's factory in Gloucester for dealing with on-site food waste, at Netheridge and Hayden sewage treatment works for dealing with sewage sludge and at Stanley's Quarry near Chipping Campden for agricultural waste. Additionally, planning permission has been granted for an AD facility at Rosehill Farm, near Dymock in the Forest of Dean but this is not currently operational. All of these facilities have the potential to generate electricity and/or heat. It should be noted that AD is generally only suitable for managing organic waste material and as such is not dissimilar to an IVC process.

Other Waste Recovery Facilities

2.51 Composting, recycling and AD are forms of waste recovery insofar as they allow waste that would otherwise be disposed of, to be 'recovered' and put to a beneficial use. However, not all waste is suitable to be composted or recycled or processed through an AD facility. Furthermore some people and businesses choose not to compost or recycle their waste.

2.52 There are a number of 'other recovery' options designed to deal with the remaining 'residual' waste that is not re-used, recycled or composted. This includes both pre-treatment technologies including MBT and autoclave as well as thermal technologies including incineration, pyrolysis and gasification which generate heat and power and are considered to be energy recovery.

2.53 Importantly there are no recovery facilities in Gloucestershire dealing with residual MSW and C&I waste. Whilst planning permission for a small-scale gasification plant at Moreton Valence has been granted it is not currently operational. It is due to this lack of facilities that most of Gloucestershire's waste is currently sent to landfill (see below). New recovery facilities for residual waste are therefore required within the plan period. This is explained in more detail in Section 3.0.

Landfill

2.54 Landfill is the oldest form of waste management and involves depositing the waste in the ground before covering it and restoring it to another use such as grazing or recreation. In basic terms there are three types of landfill; non-hazardous, hazardous and inert.

FC6

2.55 Whilst ~~generally speaking~~ landfill ~~is bad for the environment~~ can have particular environmental impacts, for the foreseeable future it is likely to continue to have a role to play in waste management. This is because some waste cannot be recycled, composted or 'treated' and the only current option is to bury it. The use of inert material mainly from C&D waste is also an effective way of restoring quarries once they have been worked out.

2.56 In Gloucestershire there are three non-hazardous landfill sites; Hempsted at Gloucester, Wingmoor Farm (West) and Wingmoor Farm (East) near Bishop's Cleeve to the north west of Cheltenham. There is also a hazardous landfill site at Wingmoor Farm (East). Total landfill voidspace (capacity) for non-hazardous waste in March 2009 was 6,029,500 m^3 and for hazardous waste 1,206,200 m^3. In terms of remaining landfill lifespan, this equates to at least 10 -13 years at current throughputs for non-hazardous landfill and around 22 years for hazardous landfill.[18] However this is a conservative estimate and the likelihood is that, due to future reductions to landfill as a result of mechanisms such as the Landfill Tax, landfill void could last for significantly longer.

2.57 There are also nineteen inert landfill/restoration sites (including quarries) receiving C&D waste. Further information is set out in the Waste Data Paper 2010.

2.58 Whilst landfill plays an important role we should not rely on it. Our current reliance on landfill as the primary means of waste disposal in Gloucestershire is illustrated in Table 2 below. This situation needs to change and more waste needs to be diverted from landfill. The requirements and policies for achieving this are outlined later in the strategy.

[18] Subject to the outcome of planning application - Reference Number: 09/0028/TWMAJW.

Table 2 – Amount and Proportion of Waste Sent to Landfill[19]

Waste Type	Total Amount Produced/Managed – tonnes/year	Amount sent to licensed landfill – tonnes/year	Proportion sent to licensed landfill
MSW (2009/10)	294,000	169,000	57%
C&I (2008)	375,000	314,000	83%
C&D (2008)	293,000	207,000	70%
Hazardous (2008)	90,000	85,000	94%

Other Waste Management Facilities

Metal Recycling and Transfer

2.59 There are numerous metal recycling facilities in Gloucestershire (scrap yards and car breakers etc). A very significant element of waste transfer also takes place at these facilities. According to the EA around 131,000 tonnes of metals were managed in Gloucestershire in 2008.

Water Treatment Facilities

2.60 There are currently 84 operational waste water treatment facilities in Gloucestershire.[20] The two major facilities are Netheridge west of Gloucester City Centre and Hayden, south west of Cheltenham.

Inert Waste Recovery and Recycling Facilities

2.61 Inert waste recovery and recycling facilities enable the re-use, recycling and transfer of inert waste mainly from the C&D waste stream. Where a new development involves demolition for example, it is often possible to salvage and re-use items such as bricks and slates, thereby preventing them from becoming 'waste'.

2.62 Alternatively material such as concrete or damaged bricks and blocks can be crushed and screened (sorted by size) and used as a recycled aggregate and/or soil substitute, which helps to reduce the need for primary raw materials. If the waste cannot be re-used or recycled and used directly it can be sent to landfill, used in quarry restorations, engineering operations or similar.

[19] All figures are rounded to the nearest 1,000 tonnes. In accordance with EA advice for C&I waste, only 25% of the transferred figure has been added to the total managed figure as it is calculated that 75% of C&I waste is double counted. For C&D waste only 50% of the transferred figure has been added to the total managed figure as it is calculated that for C&D waste, 50% of the transferred waste is double counted. See the relevant sections of Technical Paper WCS-A Waste Data (Update 2010).

[20] These are Waste Planning Authority records for facilities requiring planning consent and the number includes Sewage Treatment Works, Pumping Stations as well as very small facilities such as control kiosks, which may be associated with flood alleviation schemes.

2.63 Inert waste recovery facilities can be mobile i.e. used on the site where the waste is being created or permanent, static sites/facilities to which C&D waste from the local area is taken, including skip waste from households and businesses.

2.64 There are 29 permanent inert waste recycling and recovery facilities in Gloucestershire. This includes transfer, treatment, crushing, screening and storage with a total capacity of 504,000 tonnes/year. There is also significant other 'fill' capacity available for inert waste e.g. noise bunds, land improvement and other engineering operations. Further information is set out in the Waste Data Paper (2010).

Hazardous Waste Facilities

FC2

2.65 According to the EA, the amount of hazardous waste managed in Gloucestershire in 2008 was around 90,000 tonnes (including pre-treatment and disposal). Most of this (94.5%) was ~~disposed of~~ managed at the specialist hazardous ~~landfill~~ facility at Wingmoor Farm (East) near Bishop's Cleeve. Additionally a number of the county's waste transfer stations, household recycling centres and End of Life Vehicle (ELV) dismantlers handle relatively small tonnages of hazardous wastes such as oils, lubricants and asbestos.

Clinical Waste Facilities

2.66 Clinical waste is any waste which poses a threat of infection to humans. It includes drugs or other pharmaceutical products and is mainly produced by hospitals, health clinics, doctors' surgeries and veterinary practices, but also arises from residential homes, nursing homes and private households. Examples include human or animal tissue, blood or other bodily fluids, drugs, swabs, dressings and syringes and needles.

2.67 Gloucestershire currently has two clinical waste transfer facilities and one small clinical waste treatment facility. The amount of clinical waste managed in Gloucestershire in 2008 was just 1,800 tonnes.

Agricultural Waste Facilities

2.68 Agricultural waste is waste specifically generated by agricultural activities. Most of it is 'natural' consisting of manures and slurries. Provided this is disposed of to land for agricultural benefit it is not actually classified as waste. Of greater significance is the 'non-natural' waste generated by farming such as packaging, plastics, sheep dip, unused medicines, machinery, oil, tyres etc.

2.69 This 'non-natural' waste can have a much greater impact visually and environmentally and since 2006 has been defined as 'controlled' waste, meaning it must be managed and disposed of properly. Previously it was common practice for farmers to burn, bury or simply stockpile their waste on-site.

2.70 Farmers are now increasingly using private waste contractors to collect their waste for proper management and disposal off-site. Options include the re-processing of plastics, energy recovery and landfill. There are a small number of facilities able to reprocess agricultural waste plastics in the UK including one in Gloucestershire at Aston Down near Stroud. There is also an AD facility dealing with agricultural waste at Stanley's Quarry near Chipping Campden. The landfill facilities listed above also receive a proportion of agricultural waste.

Radioactive waste

2.71 Radioactive waste is waste that has become contaminated with radioactive material or has become radioactive through exposure to neutron radiation. This waste can arise from both nuclear and non-nuclear industries. Some clinical waste is radioactive (low-level). In Gloucestershire the main facility managing radioactive waste is Berkeley Power Station which is used for the long-term storage of the on-site radioactive waste associated with the de-commissioning of the facility.

Exempt Waste Management Facilities

2.72 Exempt waste management facilities are those which do not require a waste management permit from the Environment Agency (EA) due to the relatively small-scale and low-risk nature of the activity. Such facilities still however need to be registered with the EA. Exempt facilities generally deal with inert waste such as C&D.

2.73 In 2007 there were 2,139 exemptions in Gloucestershire (listed by the EA) with a total exempt disposal capacity of around 1.25million m^3. It should be noted that much of this is short term and related to either mineral restoration or construction activity. As such it cannot be reliably planned for as a standalone activity. Cumulatively, however, these facilities play an important role[21].

[21] See also Technical Evidence Paper MCS-F After Minerals – Restoration, Aftercare and After-use in Gloucestershire.

Key Issues

2.74 From the information outlined above we can identify a number of key issues that must be addressed through the WCS.

Key Issue 1

The population of Gloucestershire is forecast to increase to 674,000 by 2033. Coupled with continued economic growth this will influence the amount of waste produced in Gloucestershire across all waste streams. This will in turn dictate the need for new waste management facilities.

Key Issue 2

The two largest urban areas in the county are Gloucester and Cheltenham. This is where most of Gloucestershire's waste is currently produced and this is likely to be the case in the future should growth continue to be focused on these two main settlements.

Key Issue 3

FC7

Gloucestershire has a rich historic and natural environment including extensive areas of AONB and Green Belt and sites of international, national and local nature conservation importance. These are important considerations in terms of the location of new waste management facilities and supporting infrastructure.

Key Issue 4

The presence of the River Severn and its tributaries means that flood risk is a major issue in Gloucestershire. Climate change is likely to exacerbate flood risk, in particular within the relatively low-lying Central Severn Vale area.

Key Issue 5

Transport links in Gloucestershire are generally good. Most waste is however currently transported by road which has environmental impacts. Rail and water offer the potential for sustainable movement of waste subject to issues of viability.

Key Issue 6

Household recycling and composting rates have been steadily increasing in recent years. However there is still some way to go to achieve the Council's target of at least 60% by 2020.

Key Issue 7

With the exception of the last 3 years the amount of MSW has been steadily increasing. The amount of hazardous waste managed in Gloucestershire has also increased. Trends for C&I and C&D have been more variable. Future changes in the amount of waste will dictate the number of new facilities required.

Key Issue 8

Collection arrangements for MSW vary between districts in terms of the type of waste collected and the frequency of collection. Partnership working should lead to a more co-ordinated approach in the future.

Key Issue 9

There are a range of waste management facilities in Gloucestershire used by the County Council for municipal waste and by private waste management companies for other types of waste. However, there are currently no residual waste recovery facilities for MSW (for the waste that cannot be recycled or composted) and limited recovery capacity for C&I waste, leading to an over-reliance on landfill which needs to be reversed.

Key Issue 10

Landfill is always likely to have a role to play in respect of certain types of waste. Our waste data suggests that there is sufficient hazardous landfill capacity (an estimated 22 years remaining) within the plan period. In terms of non-hazardous landfill, there is capacity of at least 10-13 years at current throughputs.[22] However this is a conservative estimate and the likelihood is that, due to future reductions to landfill as a result of mechanisms such as the Landfill Tax, landfill void could last for significantly longer.

[22] Subject to the outcome of planning application - Reference Number: 09/0028/TWMAJW.

3. Gloucestershire in the Future – Where do we want to be?

3.1 Having outlined the current situation, we need to look to the future. What do we want waste management in Gloucestershire to be like by 2027? How much waste will be generated, where and how should it be managed?

3.2 Before we set out our vision and objectives we need to consider the main factors that will influence waste management in Gloucestershire over the next 15 years. These 'key drivers' are set out below and build on the locally important issues already identified in Section 2.0.

Key Driver 1 - Climate Change

3.3 There is significant evidence to suggest that the world's climate is changing. Increasing carbon emissions mean global temperatures are rising, which will bring changes in weather patterns, rising sea levels and increased frequency and intensity of extreme weather. All waste management operations result in the emission of greenhouse gases, some more than others.

3.4 National policy[23] emphasises that planning and waste management have key roles to play in tackling climate change including the diversion of waste from landfill to more sustainable alternatives.

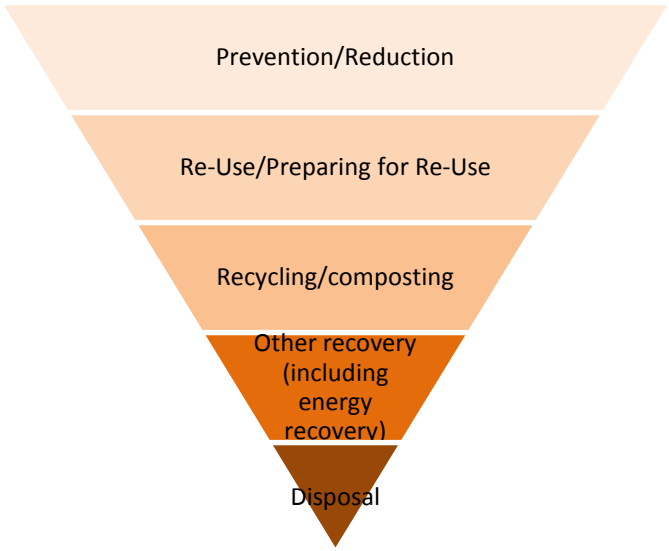
Key Driver 2 - Waste Policy

3.5 There is a raft of international, national and regional policy on waste and how it should be managed in the future. Appendix 2 sets these out in detail and explains how they are reflected in the WCS. Key elements are summarised below.

3.6 The **Waste Framework Directive 2008** sets an overall framework for waste management across the EU and includes a range of targets relating to recycling, re-use and recovery of waste. At the heart of the directive is the 'waste hierarchy'.

[23] Planning and Climate Change – Supplement to Planning Policy Statement 1.

Figure 4 – The Waste Hierarchy



3.7 There are a number of different variations of the waste hierarchy but the basic premise is the same. The most sustainable option is to prevent or at least reduce the amount of waste being produced in the first place.

3.8 Where waste cannot be avoided, it should be re-used wherever possible. Activities that prepare items for re-use should also be encouraged such as checking, cleaning and repair.

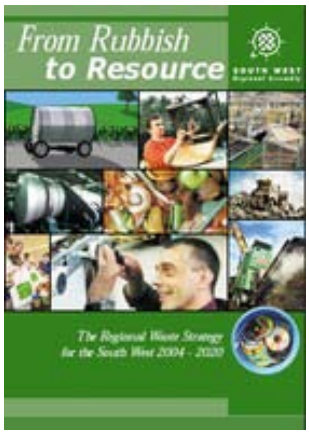
3.9 If waste cannot be re-used, it should be recycled or composted, allowing for resources to be recovered. If waste cannot be recycled or composted, priority should be given to other waste recovery operations such as MBT, autoclave and thermal treatment some of which allow for energy to be recovered in the form of heat and/or power.

3.10 Only if none of these can be achieved should waste be disposed of to landfill as a last resort.

3.11 In line with the waste hierarchy, the **EU Landfill Directive** (1999) aims to reduce the environmental impact of disposal to landfill. In England and Wales, the Directive is applied under the **Landfill Regulations** (2002) and the **Landfill Allowance Trading Scheme** (LATS) which set targets for reducing the amount of biodegradable municipal waste sent to landfill. Failure to achieve these targets will mean potential financial penalties for both central and local government.

3.12 The **National Waste Strategy for England** (2007) encourages efforts to reduce, re-use, recycle and recover energy from waste. It includes targets for recycling & composting household waste (50% by 2020) and the recovery of municipal waste (75% by 2020). The strategy is the subject of a current review of national waste policy being led by DEFRA.

3.13 At the regional level, the **Regional Waste Strategy** 'From Rubbish to Resource' (2004) aims to ensure that by the year 2020 over 45% of waste is recycled and reused and less than 20% of waste is sent to landfill. Notably the data from the regional waste strategy informed the draft Regional Spatial Strategy (RSS) for the South West. In accordance with transitional guidance, notwithstanding the potential abolition of the RSS, this data has been used in conjunction with our own waste data as a basis for preparing the WCS.



3.14 At the local level, the **Gloucestershire Joint Municipal Waste Management Strategy** (JMWMS) provides a 'route-map' for managing waste in the County between 2007 and 2020. It was prepared by the Gloucestershire Waste Partnership (GWP) which consists of the County Council and the six District Councils. Importantly it identifies the need to provide between 150,000 - 270,000 tonnes of residual waste recovery capacity for MSW by 2014/2015[24].

3.15 To deliver this additional capacity, the WDA is in the process of selecting a partner from private industry to deliver infrastructure to divert residual waste from landfill.

3.16 It is anticipated that the contract will be awarded in 2011 and the facility will be operational in 2015. The WCS has a key role to play in ensuring that appropriate sites are made available.

3.17 Another driver at the local level is the **Gloucestershire Sustainable Community Strategy (SCS).** The SCS (2007-2017) sets out a long-term vision for Gloucestershire as agreed by a number of partner organisations through the Gloucestershire Local Strategic Partnership (LSP). The strategy has five broad aims, one of which ('a place where the future matters') identifies the sustainable management of waste as a key objective.

3.18 The WCS has a key role to play in delivering the SCS. Further information is set out in Appendix 2.

[24] Residual waste is that which is leftover after re-use, recycling and composting.

Key Driver 3 - Rising Costs

3.19 Put simply, the way we deal with our waste is becoming more expensive. Under the **Landfill Allowance Trading Scheme** (LATS) each local authority is allocated an allowance by Government for the amount of biodegradable MSW it can send to landfill. The allocation reduces progressively year on year until 2020. For every tonne of waste landfilled above the allowance the local authority may be charged £150.

3.20 Furthermore, a 'landfill tax' is payable on all waste landfilled at licensed landfill sites since 1996. This is currently £48 per tonne and will increase by £8 each year to £80 per tonne by 2014/15. Unless our current reliance on landfill is reduced we will all have to pay more.

Key Driver 4 - Changing Technology

3.21 Waste management is a rapidly changing field. New technologies are becoming increasingly viable due in part to the rising costs of landfill described above. Anaerobic Digestion (AD) is a good example of a technology that started out at a small-scale on farms and sewage works and is now being used on a wider, commercial scale. As the WCS covers a 15-year period, it is important to build in appropriate flexibility.

Key Driver 5 – Waste Forecasts and Capacity Requirements

3.22 Predicting how much waste there will be in the future allows us to work out the capacity of new waste management facilities that are needed. Our final key driver is therefore future waste forecasts. These are summarised below. Further information on how the waste requirements of the WCS have been derived is set out in the Waste Data Paper 2010[25].

[25] See www.gloucestershire.gov.uk/wcs/evidence

MSW

FC8

3.23 Notwithstanding our aspiration for achieving zero-growth by 2020, forecasts ~~Forecasts~~ suggest that the amount of MSW will increase to 359,612 tonnes in 2027/8. On this basis and having regard to existing capacity, for municipal waste there is a need to provide the following:

- A small/limited number of additional recycling/composting/AD facilities to ensure that Gloucestershire's target of at least 60% recycling/composting by 2020 is met (around 9,000 tonnes/year for composting and 10,000 tonnes/year for recycling).
- A residual waste recovery facility (or facilities) able to process around 150,000[26] tonnes per year of residual municipal waste (waste that cannot be recycled or composted). This tonnage is likely to require either one large strategic site of about 5 hectares or 2-3 smaller sites of about 2 hectares each.
- Some level of appropriate supporting infrastructure for the above (e.g. bulking and transfer) but not necessarily new facilities. It may be that existing facilities could be expanded or that sufficient capacity would be available if their full capacity was utilised.
- Although no additional landfill capacity for municipal waste is required at this time, this situation will need to be regularly monitored and may require additional provision to be looked at around 2020 subject to a number of factors including recycling and composting rates.

C&I

FC9

3.24 Unlike MSW it is difficult to determine how much C&I waste will need to be managed in the future because there are no obvious past trends. For the purposes of the WCS it has been assumed that there will be a 0% growth rate for C&I waste. We can calculate how much additional C&I capacity is required using the targets set out in the South West Regional Spatial Strategy (RSS). The RSS recycling/re-use target for Gloucestershire is 300,000 – 320,000 tonnes/year by 2020 which leaves a capacity gap of between 96,000 – 116,000 tonnes/year when set against the current capacity of 204,000 tonnes/year. The recovery target for 2020 (including transfer) is between 260,000 – 290,000 tonnes/year which set against the current capacity of 213,000 tonnes/year leaves a capacity gap of between 47,000 – 77,000 tonnes/year.

[26] This is an approximate requirement based on the latest available waste flow forecast produced by the Waste Disposal Authority and is based on achieving a 60% recycling rate by 2020.

3.25 On this basis and having regard to existing capacity it is considered that there is a need to provide the following:

- Waste recovery facilities with sufficient capacity to divert between 143,000 – 193,000 tonnes/year of C&I waste from landfill. This relates to waste recovery in the broadest sense and could include various forms of residual recovery, composting and recycling. This level of provision could be met on 1 large Strategic site (8 ha of land in total), 2 Strategic sites or possibly 3 to 4 smaller Strategic sites (of minimum 2 ha each).

- Some level of appropriate supporting infrastructure for the above, but not necessarily new facilities. As with municipal waste facilities, it may be that existing facilities could be expanded or that sufficient capacity would be available if their full capacity was utilised.

3.26 The requirements for MSW and C&I are summarised in Table 3 below.

Table 3 – MSW and C&I Capacity Requirements to 2027

Waste Facilities for:	Tonnage per annum range	Hectares (ha) needed***	Single Site	Multi Site
MSW Residual Waste	136,000 to 148,000 (around 150,000** according to information from the WDA)	**5 - 6 ha** (based on the potential accommodation of 50,000 t on minimum 2 ha)	**1** large strategic site of about 5 ha	**2 - 3** smaller strategic sites of minimum 2 ha each
MSW Contingency / Supporting Infrastructure	As above	**5 - 6 ha** (based on the potential accommodation of 50,000 t on minimum 2 ha)	**1** large strategic site of about 5 ha as a specific MSW Residual Waste contingency site / Supporting Infrastructure	**2 - 3** smaller strategic sites of minimum 2 ha each as specific MSW Residual Waste contingency sites / Supporting Infrastructure
C&I Recovery*	143,000 to 193,000	**6 - 8 ha** (based on the potential accommodation of 50,000 t on minimum 2 ha)	**1** large strategic site of a minimum of about 5 ha and up to 8 ha	**2** large strategic sites of 4 to 5 ha each Or **3 - 4** smaller strategic sites of minimum 2 ha each

*A range of strategic facilities reducing waste to landfill such as strategic recycling facilities, MRFs, IVC, AD, MBT, Autoclave, Thermal Treatment.
** This is an approximate requirement based on the latest available waste flow forecast produced by the Waste Disposal Authority and is based on achieving a 60% recycling rate by 2020.
**Based on Key Planning Criteria Matrix – Regional Waste Management Strategy Appendix D.

C&D

3.27 For construction and demolition (C&D) waste, when assessed against regional targets, there is currently adequate capacity for the management of C&D waste in Gloucestershire. However, based on a National target to reduce C&D Waste to landfill by 50% by 2012, there is a need to divert an additional 85,000 tonnes (top range) per year from licensed landfill. This will be met through inert recycling and recovery processes.

Hazardous Waste

3.28 Economies of scale tend to mean that hazardous waste is handled at a small number of facilities across the UK. Given the existing hazardous landfill at Wingmoor Farm (East) and the remaining capacity available there, we do not envisage making additional provision for hazardous waste in the plan period. However, proposals that would enable the movement of hazardous waste management in Gloucestershire up the waste hierarchy will be supported in principle.

Other Waste

Agricultural Waste

3.29 Data on agricultural waste is limited both nationally and for Gloucestershire. It is estimated that agricultural waste represents less than 1% of all managed waste. As such it is considered that there is sufficient existing capacity available.

Radioactive and Clinical Waste

3.30 There are no specific targets or forecasts for the amount of radioactive and clinical waste however given the relatively small amounts being managed in Gloucestershire it is considered that there is sufficient existing capacity available to manage these waste streams.

Waste Water

3.31 Future waste water requirements are largely dependent on the quantum and location of future growth in particular new housing and employment development. These issues would normally be decided at the regional level however, due to the potential abolition of the draft South West Regional Spatial Strategy (SW-RSS) there is a current degree of uncertainty.

3.32 The volume and distribution of new development in Gloucestershire and the infrastructure required to support it (including waste water treatment) will now be determined at the local level. This is yet to be done and at this stage we cannot forecast

how much additional capacity will be required. For this reason, we propose to adopt a criteria-based approach (see Section 4.0).

The Spatial Vision

3.33 Having regard to the key issues and drivers outlined above we can define our 'spatial vision' for waste management in Gloucestershire over the next 15 years.

FC10

Our Vision for 2027

'By 2027 Gloucestershire is a clean, green, healthy and safe place in which to live, work and visit. Residents and businesses are fully aware of the economic and environmental importance of waste management, including its impact on climate change and proactively minimise their waste production to achieve 'zero-growth' across all waste streams by 2020.

Opportunities for re-using, recycling and composting waste are maximised across all waste streams. Effective joint working through the Gloucestershire Waste Partnership (GWP) has led to a more consistent and co-ordinated approach towards municipal waste collection across the county with everyone able to recycle and compost a broad range of materials easily and conveniently. At least 60% of household waste is recycled and composted by 2020.

The 'residual' municipal and commercial waste that cannot reasonably be re-used, recycled or composted is seen as a valuable resource and is managed through a number of 'strategic' waste recovery sites (>50,000 tonnes/year) located in the central area of the county, proximate to the main urban areas along the M5 corridor including Gloucester and Cheltenham.

Strategic sites will be located so as to maximise the potential use of heat and power and give priority to the re-use of previously developed land and buildings.

'Local' facilities (<50,000 tonnes/year) including supporting infrastructure such as waste transfer and bulking are dispersed more widely around the county including those more distant rural areas such as the Forest of Dean and the Cotswolds.

These strategic, local and existing waste facilities will form an integrated sustainable waste management system ensuring enough capacity is made available to meet ~~for~~ Gloucestershire's needs.

Gloucestershire's communities, key landscape/environmental assets and land liable to current and future potential flood risk, are safeguarded from the adverse impacts of waste management activities.

The continuing role of landfill is recognised but increasingly seen as a last resort'.

Strategic Objectives

3.34 Our spatial vision is underpinned by five strategic objectives:

Strategic Objective 1 – Waste Reduction

To raise awareness of waste issues amongst Gloucestershire residents and businesses in order to generate collective responsibility for waste, ensure it is seen as a potential resource and to reduce the amount of waste produced, with zero-growth achieved across all waste streams by 2020.

Strategic Objective 2 – Re-use, Recycling and Composting

To make the best use of Gloucestershire's waste by ensuring that residents and businesses re-use as much of their waste as possible and that if waste cannot be re-used, it can easily be recycled or composted to achieve the following:

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- At least 60% household waste recycled/composted by 2020 with an aspiration for 70% by 2030.
- Diversion of an additional 85,000 tonnes/year of C&D waste from licensed landfill through inert recycling and recovery.

Strategic Objective 3 – Other Recovery (including energy recovery)

To recover the maximum amount of value including energy from any waste that cannot be re-used, recycled or composted through the provision of the following:

- Around 150,000[27] tonnes/year residual waste recovery capacity for municipal waste by 2027.
- Recovery facilities with the capacity to divert a proportion of the 143,000 – 193,000 tonnes/year of C&I waste that needs to be diverted from landfill.

Strategic Objective 4 – Waste Disposal

To recognise the continuing role of landfill for the disposal of certain residual and hazardous wastes whilst reducing our reliance on landfill as the primary method of waste management in Gloucestershire.

[27] This is an approximate requirement based on the latest available waste flow forecast produced by the Waste Disposal Authority and is based on achieving a 60% recycling rate by 2020.

Strategic Objective 5 – Minimising Impact

To ensure the environmental and social impacts of waste management particularly climate change and risks to human health are minimised by; managing waste close to where it arises, promoting the use of sustainable transport, avoiding current and potential flood risk areas, safeguarding existing and proposed waste sites, promoting high quality sustainable design, protecting national and local areas of landscape and nature conservation importance, and prioritising the co-location of similar or related facilities on existing waste sites or previously developed sites in preference to greenfield locations where appropriate and where the cumulative impact is not unacceptable to the host location.

4. How are we going to get there? – The Spatial Strategy

How are we going to get there?

The Spatial Strategy

What, where and when?

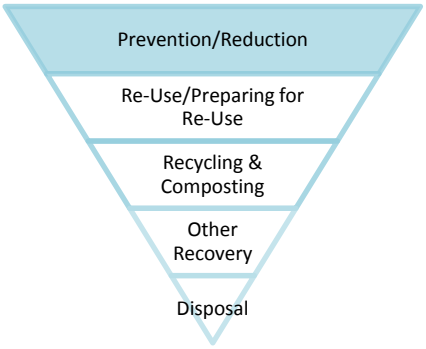
4.1 Having outlined where we want to be by 2027, we need to set out how we are going to get there. What policies and proposals will be put into place to deliver our vision and objectives? This is our 'spatial strategy' - in other words, what we are going to do, how, where and when.

4.2 Our spatial strategy is aligned with the five strategic objectives outlined earlier:

- Reduction
- Re-Use, Recycling and Composting
- Other Recovery (including energy recovery)
- Disposal
- Minimising Impact

4.3 Core Policies are laid out below under each of these headings. Appendix 3 identifies how each core policy relates to each strategic objective. The core policies should also be read in conjunction with the Waste Local Plan policies that will remain in force once the WCS has been adopted (see Appendix 1)[28].

Reduction



4.4 The less waste we produce, the less there will be to manage. Whilst we can't eliminate waste completely, we can reduce how much is created. So how do we do it? Well, there are a number of ways, some within the scope of the planning system, some outside.

4.5 Educating people and raising awareness is vital. The County Council supports the national campaign **Love Food, Hate Waste**[29] which aims to reduce food waste by encouraging people to think about portion sizes, use leftovers and carefully plan meals so as to buy only what is needed.

4.6 With specific regard to packaging waste, the **Courtauld Agreement** is a voluntary national agreement between WRAP (Waste & Resources Action Programme) and over 40 major retailers, brand owners, manufacturers and suppliers which aims to reduce household waste by designing out packaging waste. Sustainable product design can also help to reduce waste for example durable items such as long-life light bulbs or products that are designed to be easily disassembled.

[28] Adopted Local Plan policies not being replaced by the WCS will be updated through a separate development plan document to be prepared after the WCS has been adopted.
[29] See www.lovefoodhatewaste.com

4.7 At the local level, the County Council operates the **Gloucestershire Real Nappy Project** (GRNP) which encourages parents to use modern re-usable nappies instead of disposable ones, thereby helping to reduce the 85,000+ nappies landfilled each day. In addition Council Officers also visit local schools to talk about general waste issues and get key messages across at an early age.

4.8 With specific regard to planning, the main way in which the WCS can help is to ensure that the waste associated with new development is reduced as far as possible. This applies not only to the waste created during construction and demolition but also throughout the occupation of the development.

4.9 The importance of reducing waste from new development is recognised by Government and **Site Waste Management Plans** are now a legal requirement for all construction projects costing more than £300,000. These can help flag up potential waste savings such as whether materials with less, or returnable packaging can be purchased, if materials can be pre-ordered to specification and if sufficient storage space has been created to allow waste to be properly segregated.

4.10 The limitation of SWMP is that they only consider the waste created when a development is built, they do not consider the ongoing waste arising from occupation. They also only apply to high-value developments. Our own approach therefore is to require the submission of a **Waste Minimisation Statement** for all 'major' developments[30]. This is a report submitted alongside a planning application detailing how waste will be kept to a minimum both during the construction and occupation of the development.

4.11 The general principles of waste minimisation are as follows:

- To design proposals sustainably;
- To reduce the amount of waste generated from development;
- To conserve natural resources through re-using waste arising from construction;
- To re-use waste materials on-site to reduce transportation;
- To use recycled materials where possible; and
- To reduce waste generation during the operational lifetime of the development and facilitate recycling where waste does arise.

[30] We define 'major' development for residential schemes as 10 or more dwellings/site area of 0.5ha or more and for other forms of development as 1,000 m^2 or more/site area of 1ha or more.

4.12 Where demolition is involved for example, items such as doors, windows, roof slates and paving slabs can often be salvaged and re-used on-site or elsewhere. Alternatively, bricks, tiles and concretes can be turned into recycled aggregates by crushing and screening (sorting by size). This helps to divert waste from landfill and reduces the need for primary aggregates.

4.13 Waste water can also be re-used for example through 'grey water' recycling which involves re-using the water from baths, showers and hand basins for toilet flushing, using washing machines and outside taps.

4.14 Our proposed approach is set out in Core Policy WCS1 below. The policy is supported by the Council's Supplementary Planning Document: Waste Minimisation in Development Projects (2006).

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Core Policy WCS1 – Waste Reduction

The County Council will continue to work in partnership with local communities, the District Councils and other public and private sector organisations including local schools and colleges to raise awareness and positively influence attitudes and behaviour so as to reduce the amount of waste produced and ensure a greater proportion of waste is re-used.

All development[1] will be expected to incorporate the principles of waste minimisation and re-use. Planning applications for 'major' development[2] must be supported by a statement setting out how any waste arising during the demolition, construction and subsequent occupation of the development will be minimised and managed.

Specifically the statement will include measures to:

- **Minimise, re-use and recycle waste[3];**
- **Minimise the use of construction materials particularly primary materials;**
- **Minimise the pollution potential of unavoidable waste; and**
- **Dispose of waste that cannot be re-used or recycled in an environmentally acceptable manner.**

[1]Includes development that produces hazardous waste as a by-product of its processes.

[2]Major development is defined as follows:
- Residential - 10 or more dwellings/site area of 0.5ha or more.
- Other development – 1,000 m^2 or more/site area of 1ha or more.

[3]For residential development, the term 'recycling' also refers to home composting activities either communal or individual.

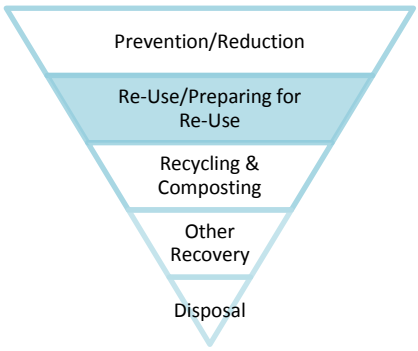
How will we know if the policy is working?

4.15 There are a number of measures including:

- Number of educational/promotional visits/exhibitions carried out per annum.
- Amount of municipal waste arising.
- Residual household waste per household.
- Percentage of household waste sent for re-use, recycling and composting.
- Number/percentage of major planning applications supported by a Waste Minimisation Statement.

4.16 Further information is set out in Section 6.0 – Measuring Progress.

Re-Use and Preparing for Re-Use



4.17 Clearly not all waste can be prevented and when waste is created, the priority should be to re-use it.

4.18 We have already explained how waste can be re-used in new development including the re-use of items such as bricks and slates, which helps to reduce the number of raw materials needed.

4.19 Waste can also be re-used on an everyday basis. This can be something as simple as using a plastic container as a plant pot or giving away clothing and furniture to charitable organisations. Various websites allow for items to be sold, exchanged or donated quickly and easily.

4.20 Certain activities can also help to prepare waste for re-use such as businesses and charities that repair old computers or refurbish furniture.

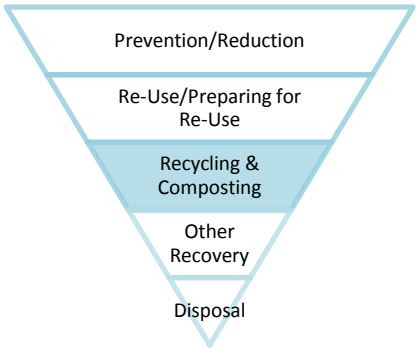
4.21 We have already laid out in Core Policy WCS1 the requirement to submit a Waste Minimisation Statement which will help to encourage the re-use of waste in new development.

4.22 The degree to which people re-use waste in their everyday lives instead of discarding it will however be largely down to personal behaviour and attitudes which in turn are outside the scope of the WCS and will be influenced more strongly through education and promotional campaigns such as the annual Gloucestershire 'Waste Reduction Challenge'.

4.23 Furthermore, granting planning permission for activities that help prepare waste for re-use such as computer repair will generally be the responsibility of the District Councils. As such there is little point in setting out a policy on this issue within the WCS over and above Core Policy WCS1 above. However, as a consultee on certain applications, the County Council will support in principle new activities that would help prepare waste for re-use.

FC13

Recycling and Composting ~~/ Anaerobic Digestion (AD)~~



4.24 Where waste cannot be eliminated or re-used, our priority should be to recycle or compost ~~or process~~ it ~~by means of AD facilities~~. This helps to recover resources from the waste rather than simply disposing of it.

4.25 Items that lend themselves to recycling include plastic and glass bottles, food and drink cans, paper and cardboard. Inert waste such as concrete and brick can also be crushed into recycled aggregate.

4.26 Windrow composting is generally suitable for green or garden waste, whereas in-vessel composting is more suitable for food wastes (plate scrapings etc). Food waste can also be processed through an anaerobic digester which has the added benefit of generating renewable energy (see below).

~~4.27 Anaerobic digestion is the natural process by which bacteria break down organic material in the absence of oxygen. An AD facility is a controlled version of this process taking place in a vessel or series of vessels.~~

~~4.28 Almost any organic material can be processed using AD including paper, cardboard, grass cuttings, food, industrial effluents, energy crops (grown specifically such as maize silage), sewage and animal waste. This makes AD suitable for dealing with organic MSW and C&I waste (which includes a lot of organic material) waste water and agricultural waste. It is not suitable for some waste such as inert C&D waste.~~

~~4.29 The AD process produces biogas and digestate. Biogas can be used to generate heat and electricity through combined heat and power (CHP) and can also be turned into 'biomethane' which can be used as a vehicle fuel or injected in the mains gas grid. Digestate is a solid and liquid residue made up of leftover, indigestible material and dead micro-organisms. It is used as a fertiliser and soil conditioner, but this has to meet certain quality standards.~~

~~4.30 There are limitations to AD including the fact that it requires a consistent, segregated supply of waste such as kitchen waste which is not always available, depending on the waste collection arrangements that may be in place. AD facilities in England have, to date tended to be geared towards agricultural and sewage waste. However, the Government is very keen to roll the technology out further to deal with MSW and C&I waste, but there will be a need for industry to come forward with arrangements that satisfy the pollution control agencies.~~

~~4.31 There are currently no operational AD facilities in Gloucestershire treating MSW or C&I waste.[31] For MSW in Gloucestershire it is likely that AD would generally be used for segregated waste (i.e. not residual waste) that currently goes to composting facilities but nevertheless could form a useful part of an integrated system.~~

~~[31] There is permission for an MSW AD facility at Rose Hill Farm in Dymock, but this is not yet operational. There is also permission for a small AD at Stanley's Quarry in the Cotswolds, but this is for agricultural waste. Additionally some AD processes are undertaken at Hayden and Netheridge Sewage Treatment Works and the Unilever factory in Gloucester.~~

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4.32 The Council's target is to recycle/compost at least 60% of its household waste by 2020 with an aspirational target of 70% by 2030. This exceeds the National Waste Strategy (2007) target of 50% over the same period. The rate achieved in Gloucestershire in 2009/10 was 42% so there is still some way to go. If we are to achieve or exceed our target we need to ensure that recycling and composting is made as simple as possible and that sufficient facilities are made available both at the domestic and commercial level.

4.33 Core Policy WCS1 has already dealt with the provision of 'domestic' scale recycling and composting facilities in new development (recycling bins, home and communal composting facilities etc) with the requirement to prepare a waste minimisation statement for all major development. We now need to address the issue of recycling and composting at the commercial scale.

4.34 First, we need to consider the provision of larger scale recycling and composting facilities such as bring sites (bottle banks etc.) household recycling centres, materials recycling facilities and composting facilities. ~~We also include within this bracket the provision of waste bulking and transfer facilities because materials passing through such facilities are generally destined for further processing operations.~~

FC13

4.35 Second, we need to consider the provision of re-processing facilities (where recycled materials are turned into new products). This includes inert waste recycling and recovery facilities for C&D waste and re-processing facilities for MSW and C&I (bottles, paper, cans etc).

4.36 Third, we need to think about what happens to our waste once it has been recycled or composted. A lot of recycled material for example ends up being exported overseas such as paper to China. This is not very sustainable so we need to try and encourage the development of more local markets for any recycled and composted material produced in Gloucestershire.

4.37 The waste forecasts outlined in Section 3.0 identify the need for a relatively small amount of additional composting/recycling capacity for MSW (around 19,000 tonnes) by 2027. Additional recycling and composting capacity will also assist with our requirement to divert between 143,000 and 193,000 tonnes per year of C&I waste from landfill.

~~4.38 Although our forecasts suggest that sufficient capacity exists for bulking and transfer facilities, there may be different spatial arrangements in the future for example those arising from the shadow Joint Waste Board (JWB). It is important therefore for the WCS to be sufficiently flexible.~~

FC13

4.39 Having regard to the relatively modest requirement for additional recycling and composting capacity for MSW~~, the need for flexibility in relation to bulking and transfer~~ and having regard to previous consultation responses, the most appropriate way forward is considered to be a 'criteria-based' approach.

4.40 This will provide flexibility to take account of future changes to current waste management arrangements in Gloucestershire and reflects the fact that there is no 'upper limit' as such for recycling and composting, with any facility helping to move waste up the waste hierarchy.

4.41 We do consider it appropriate however to stipulate that any 'strategic' scale facility (dealing with more than 50,000 tonnes of waste per year) should be located within the area we have defined as 'Zone C' – see Key Diagram (Appendix 4).

4.42 Our proposed approach is set out in Core Policy WCS2 below.

FC13

Core Policy WCS2 – Recycling & Composting ~~/Anaerobic Digestion (including Bulking and Transfer)~~

In order to achieve the Gloucestershire local authorities' household recycling and composting target of at least 60% by 2020, the Council will support in principle, proposals relating to the development of new and expanded recycling and composting ~~anaerobic digestion, bulking and transfer~~ facilities including businesses that process recyclates and re-use waste.

Planning permission will be granted subject to the following criteria being met:

1. **It can be demonstrated that the impact on the environment and neighbouring land uses is acceptable. Proposals for composting~~/AD~~ generally must be at least 250m from sensitive land uses such as housing unless it can be demonstrated that it can operate in closer proximity without adverse impact.**
2. **The highway access is suitable for the proposed vehicle movements.**
3. **The proposal contributes towards providing a sustainable waste management system for Gloucestershire.**
4. **If the proposal is of a 'strategic' scale (>50,000 tonnes/year) it is located in the area defined as 'Zone C' (see Key Diagram).**

Particular support will be given to proposals that:

- **Are located within[1] or close to an urban area; and/or**
- **Involve the re-use of previously developed land, vacant or underutilised employment land and/or redundant rural buildings including farm diversification opportunities; and/or**
- **Involve co-location with an existing operation of a similar or complimentary nature; and/or**
- **Incorporate alternatives to the transport of waste by road (rail, water etc.), and/or**
- **Are well located to allow employees to reach the site by foot, cycle or public transport.**

Proposals for the development of markets for recycled materials, in particular initiatives to assist small to medium-sized businesses to re-use/recycle their discarded waste materials will be supported and encouraged through partnership working including the Gloucestershire Waste Partnership.

[1] It is acknowledged that in the case of composting ~~or anaerobic digestion~~ it may prove difficult to locate within an urban area due to a 250m buffer generally being required for issues relating to bio-aerosols. ~~This should not however apply to recycling and bulking/transfer facilities.~~

How will we know if the policy is working?

4.43 There are a number of measures including:

FC13

- Percentage of household waste sent for re-use, recycling and composting.
- Percentage of municipal waste landfilled.
- Total available recycling/composting capacity.
- Number of planning applications refused on the basis of Policy WCS2.
- Number of new/expanded recycling and composting~~/AD~~ facilities permitted per year.
- Number of 'strategic' composting, ~~AD~~ and recycling facilities permitted inside and outside 'Zone C' per year.
- Number of recyclates 're-processing' facilities in Gloucestershire.

4.44 Further information is set out in Section 6.0 – Measuring Progress.

Inert Waste Recycling and Recovery

4.45 Inert waste is that which doesn't undergo any significant chemical or biological changes when landfilled. It often has very little, if any, organic content. Typically, inert waste comes from the C&D waste stream and includes material and items such as bricks, concrete and glass. Inert waste recovery and recycling facilities enable inert waste to be 'treated' instead of being taken direct to landfill. Indeed since October 2007 landfills are no longer able to accept untreated wastes (unless treatment is not technically possible).

4.46 Treatment of inert waste generally involves the waste being sorted, crushed and screened (sorted by size) into recycled aggregates. The quality of the recycled aggregate is dependent on the quality of the materials that are processed, the selection and separation processing used, and the degree of final processing that these materials undergo.

4.47 In line with Waste Strategy 2007, our own waste data[32] suggests that there is a need to divert around 85,000 tonnes of C&D waste per year from landfill which will be achieved through inert waste recycling and recovery.

4.48 Inert waste recovery and recycling facilities can either be centralised and permanent or temporary and mobile, located on the site where the waste is being created e.g. from demolition. Mobile facilities help to reduce transport requirements particularly where the recycled aggregates are re-used on the site. There are currently 28 permanent inert waste recycling and recovery facilities in Gloucestershire.

4.49 Inert waste recovery and recycling operations are often associated with quarrying operations as the 'treated' waste can be used to help restore mineral workings once they have been exhausted and materials can be recovered and used as low-grade aggregate, sometimes in combination with other quarry products. Inert wastes can also be used in other landscaping and engineering operations e.g. landscape and noise bunds in new development.

[32] See Waste Data Paper 2010.

4.50 As inert recycling and recovery often uses similar processes to quarry plant, it can lead to certain amenity issues such as noise and dust which require adequate mitigation. This often dictates how close such operations can be located to sensitive land uses such as housing.

4.51 Our proposed approach is set out in Core Policy WCS3 below.

Core Policy WCS3 – Inert Waste Recycling and Recovery

In order to help reduce the impact of landfill and achieve the requirements of the Waste Framework Directive (2008) the Council will aim to divert around 85,000 tonnes/year of inert waste from landfill through recycling and recovery operations.

Proposals for inert waste recycling and recovery facilities will be permitted where it can be demonstrated that:

1. **The impact on the environment and neighbouring land uses is acceptable including detailed assessment of the impact of noise and dust and attenuation measures.**
2. **Where viable, the proposal incorporates the use of alternatives to road transport such as rail and water and that where road transport is used the highway access is suitable for the proposed vehicle movements and is supported by a transport assessment and travel plan setting out measures to encourage employees to reach the site by foot, cycle or public transport.**
3. **The proposal contributes towards providing a sustainable waste management system for Gloucestershire.**
4. **If the proposal is permanent and of a 'strategic' scale (>50,000 tonnes/year) it is located in the area defined as 'Zone C' (see Key Diagram) except where located within an existing or disused mineral working.**

Developments may be acceptable on existing waste management sites and mineral workings where it can be demonstrated that the minimum amount of materials are being used for restoration/engineering purposes and that the use will not unduly prejudice the agreed restoration principles and timescale for the site. Temporary developments may be acceptable where the material is recycled and re-used on site.

FC14

How will we know if the policy is working?

4.52 There are a number of measures including:

- Production of secondary and recycled aggregates by Mineral Planning Authority (MPA).
- Percentage of C&D waste transferred for recycling, processing, for use in land reclamation and landscaping or sent for disposal to landfill.
- Number of proposals for permanent inert recycling and recovery facilities permitted per year.
- Number of proposals for temporary inert recycling and recovery facilities permitted per year.
- Number of 'strategic' scale permanent inert recycling and recovery facilities permitted outside 'Zone C' per year.

4.53 Further information is set out in Section 6.0 – Measuring Progress.

FC13

Anaerobic Digestion

4.53a Anaerobic Digestion is the natural process by which bacteria break down organic material in the absence of oxygen. An AD waste facility is a controlled version of this process taking place in a vessel or series of vessels. It is very similar to IVC and generally suited to source segregated organic waste such as food waste, waste water and agricultural waste. It is not suitable for inert C&D waste.

4.53b Because of the similarities with IVC and because AD is not generally used to manage mixed residual waste, we deal with it in this section of the WCS (although it can also be classed as 'other recovery' or 'energy recovery' which we address later in Section 4.0).

4.53c Almost any organic material can be processed using AD including paper, cardboard, grass cuttings, food, industrial effluents, energy crops (grown specifically such as maize silage), sewage and animal waste. AD can be carried out on a small-scale (e.g. a farm based system managing livestock manure) or on a larger, commercial-scale such as the management of food waste collected by local authorities. It can also be used to manage the sewage sludge created by the treatment of waste water (see Core Policy WCS5).

4.53d The AD process produces biogas and digestate. Biogas can be used to generate renewable energy in the form of heat and electricity through combined heat and power (CHP) and can also be turned into 'biomethane' which can be used as a vehicle fuel or injected in the mains gas grid. Digestate is a solid and liquid residue made up of leftover, indigestible material and dead micro-organisms. It is used as a fertiliser and soil conditioner, but this has to meet certain quality standards.

FC13

4.53e There are limitations to AD including the fact that it requires a consistent, segregated supply of waste such as food waste which is not always available, depending on the waste collection arrangements that may be in place. AD facilities in England have, to date tended to be geared towards agricultural and sewage waste. However, the Government is very keen to roll the technology out further to deal with MSW and C&I waste and in March 2010 published 'Accelerating the Uptake of Anaerobic Digestion in England: an Implementation Plan'.

4.53f The implementation plan highlights the potential use of AD in dealing with food waste, agricultural material such as manure and slurry and sewage sludge. There will however be a need for industry to come forward with arrangements that satisfy the pollution control agencies.

4.53g There are currently no operational AD facilities in Gloucestershire treating MSW or C&I waste.[33] In accordance with Government Policy, the Council will therefore support in principle, proposals for new AD facilities in appropriate locations and our policy on this matter is set out overleaf. For MSW in Gloucestershire it is likely that AD would generally be used for segregated waste (i.e. not residual waste) that currently goes to in-vessel composting facilities but nevertheless could form a useful part of an integrated system.

4.53h Our approach towards the management of residual waste is set out in Core Policy WCS4.

FC13

[33] There is permission for an MSW AD facility at Rose Hill Farm in Dymock, but this is not yet operational. There is also permission for a small AD at Stanley's Quarry in the Cotswolds, but this is for agricultural waste. Additionally some AD processes are undertaken at Hayden and Netheridge Sewage Treatment Works and the Unilever factory in Gloucester.

FC13

Core Policy WCS3a – Anaerobic Digestion (AD)

In the interest of maximising the recovery of value (energy) from organic waste the Council will support in principle, proposals relating to the development of new or expanded anaerobic digestion facilities in Gloucestershire.

Planning permission will be granted subject to the following criteria being met:

1. **It can be demonstrated that the impact on the environment and neighbouring land uses is acceptable.**
2. **The highway access is suitable for the proposed vehicle movements.**
3. **The proposal contributes towards providing a sustainable waste management system for Gloucestershire.**
4. **If the proposal is of a 'strategic' scale (>50,000 tonnes/year) it is located in the area defined as 'Zone C' (see Key Diagram).**

Particular support will be given to proposals that:

- **Incorporate Combined Heat and Power (CHP) where practicable; and/or**
- **Are located within or close to an urban area; and/or**
- **Involve the re-use of previously developed land, vacant or underutilised employment land and/ or redundant rural buildings including farm diversification opportunities; and/or**
- **Involve co-location with an existing operation of a similar or complimentary nature; and/or**
- **Incorporate alternatives to the transport of waste by road (rail, water etc.), and/or**
- **Are well located to allow employees to reach the site by foot, cycle or public transport.**

How will we know if the policy is working?

4.53i There are a number of measures including:

- Total available AD capacity for food waste.
- Total available AD capacity for agricultural waste.
- Total available AD capacity for sewage sludge.
- Number of planning applications refused on the basis of Policy WCS3a.
- Number of new/expanded AD facilities permitted per year.
- Number of 'strategic' AD facilities permitted inside and outside 'Zone C' per year.
- Renewable energy generation.

4.53j Further information is set out in Section 6.0 – Measuring Progress.

Other Recovery (including energy recovery)

4.54 So far we have considered how we might reduce, re-use, recycle and compost more of our waste. However, not all waste can be re-used, recycled or composted. Furthermore some people and businesses simply choose not to re-use, recycle or compost their waste.

4.55 This means there is a 'residual' element of waste that needs to be managed. At the moment most of this ends up in landfill and as we have already described through the key drivers, this cannot continue for environmental and financial reasons.

4.56 A more sustainable alternative to landfill is the development of residual waste recovery facilities. Some of these are referred to as 'energy recovery' facilities because they allow energy to be recovered in the form of heat and/or power as the waste is treated, thereby creating environmental benefits.

4.57 This is particularly applicable to MSW and C&I wastes which have a high organic content and therefore more 'energy' contained within them compared to C&D waste for example. It is also applicable to waste water treatment, the product of which (sludge) can be used to create energy (heat and power) through anaerobic digestion (AD). Energy can also be created by combusting the remaining sludge.

The Available Technologies

4.58 Below we set out some of the residual waste recovery processes suitable for MSW and C&I waste.

4.59 Importantly the Council is 'technology neutral' and therefore has no preference for one technology/process over another. The main consideration is that any site identified is suitable for the intended use. This is generally established at the planning application stage when the details of a proposal are known. However, it can be established in a broad sense where site allocations are made in a development plan such as this.

Mechanical Biological Treatment (MBT)

4.60 MBT is suitable for MSW and C&I waste and involves a combination of mechanical and biological processes.

4.61 Mixed waste arrives at the facility and is sorted to separate out any recyclable material (e.g. plastics, metal and glass) and items that aren't suitable for biological treatment (e.g. bulky waste). This mechanical stage can be similar to the process taking place in a Materials Recovery Facility (MRF).

4.62 The leftover waste, which is mainly organic, then goes through one of two processes depending on how the facility is set up; in-vessel composting or anaerobic digestion. Both of these turn the waste into a material similar to compost which can be used to help restore landfill sites or old quarries but cannot be used on farms because it is not clean enough.

4.63 In some instances, MBT involves the waste being shredded and dried out (bio-drying) to produce a Refuse Derived Fuel (RDF) or Solid Recovered Fuel (SRF) which can either be burnt at another waste facility or used as a substitute for coal in cement kilns and power stations. Available outlets for the RDF/SRF must obviously be available to make this a viable proposition. Depending on the specifics of the process this may be on, or more commonly off-site.

4.64 There are currently no MBT facilities in Gloucestershire.

Autoclaving

4.65 Autoclaving is a high temperature (170°C) steam process suitable for MSW and C&I waste. After arriving at the facility the waste is put into a rotating steel cylinder into which high temperature steam is pumped. This sterilises the waste which is then removed and sorted with recyclable materials taken out. The process also creates an organic product known as fibre or floc. This can be used as a bio-fuel, composted or can be used in construction products and cardboard. If no user can be found for the fibre it may be landfilled. Markets for floc e.g. for use as a compost are developing and not yet tested.

4.66 As a relatively new process there are very few autoclave facilities in the UK and none in Gloucestershire.

Modern Thermal Treatment (Incineration)

4.67 Incineration involves waste being burnt at temperatures over 850°C. On arrival at the facility the waste (generally MSW and C&I but can also include hazardous and clinical waste) is mixed and sometimes shredded to make sure it will burn properly. It is then moved to a combustion chamber where oxygen is added. Burning the waste turns most of it into carbon dioxide, other gases and water. The process releases energy which, through use of a boiler system, can be harnessed and turned it into electricity and heat energy.

4.68 Any material that won't burn (glass, metal, stones) collects at the bottom of the chamber and is known as bottom ash which can be used as a recycled aggregate for construction purposes. Incinerators also create gases which are generally acidic and contain particles. Prior to being released into the atmosphere the gases are cleaned carefully to neutralize the acidity and remove the particles. The particles collected along with the excess cleaning chemicals are known as fly-ash (Air Pollution Control Residues (APC Residues)), which are classed as hazardous waste and must be treated and/or landfilled.

FC15

FC16

4.69 Modern incinerators generate ~~and capture heat and~~ power and in some instances capture heat which may be used on or off-site thereby contributing to renewable energy targets[34]. In some instances, incineration may be used in conjunction with other waste management processes as part of an integrated facility for example metal being collected from the waste before it is burnt or burning the RDF created through some MBT processes.

4.70 Incineration is a well-established technology and there are a number of incinerators in the UK. There are however none in Gloucestershire.

Advanced Thermal Treatment (Pyrolysis)

4.71 Pyrolysis is a thermal process and involves breaking down the waste at 300-850°C without oxygen. It almost 'melts' the waste, breaking most of it down into gases and the remainder produces a solid char. Solid char can be used like coal and the synthetic gas (called syngas, which is a mixture of gases) has the potential to be used as a liquid fuel or to produce electricity. Advanced thermal treatment processes include air pollution control systems that generate APC residues. There are relatively few pyrolysis facilities in the UK and none in Gloucestershire.

Advanced Thermal Treatment (Gasification)

4.72 Gasification is a similar process to pyrolysis, but with some oxygen (although not as much as incineration). This means the waste is partially combusted at temperatures above 650°C. The main product from the process is syngas, but ash is also produced. Advanced thermal treatment processes include air pollution control systems that generate APC residues. There are relatively few gasification facilities in the UK. There are currently none operational in Gloucestershire although planning permission has been granted for a small-scale facility at Moreton Valence.

Combined Heat and Power (CHP)

4.73 Combined Heat and Power (CHP) also known as 'co-generation' involves the use of a heat engine or power station to simultaneously generate both electricity and heat. It is a highly efficient form of power generation which prevents the usual escape of heat as a by-product. With CHP, both heat and power are able to be captured and used on-site or locally off-site.

4.74 CHP is a complementary technology that can work in conjunction with waste recovery facilities. A separate evidence paper on CHP has been prepared in support of the WCS[35].

[34] The degree to which 'renewable energy' is generated will depend to a large extent on the nature of the waste being incinerated.

[35] See www.gloucestershire.gov.uk/wcs

Making Provision

4.75 In preparing the WCS we have sought views on the best way to make provision for residual waste recovery facilities in Gloucestershire. Should we identify specific sites or adopt a criteria-based approach? If we do allocate sites, what size of site should we be looking to identify and where should they be located?

Site Allocations vs. Criteria-Based Approach

4.76 In order to secure delivery and reduce our reliance on landfill we believe the best way is to identify specific sites rather than adopt a criteria-based approach, although the latter may be appropriate for smaller-scale facilities (see below).

4.77 This will not only provide greater certainty for residents and businesses about what may come forward and where, but will also increase confidence within the waste industry as to the availability of suitable sites in Gloucestershire, which in turn will help to improve the prospects of delivery. A criteria-based approach whilst perhaps offering greater flexibility would inevitably be coupled with less certainty, particularly for larger schemes.

Site Size

4.78 We define 'strategic' facilities as those that are able to handle at least 50,000 tonnes of waste per year and require at least 2 hectares of land. We have based these thresholds on other planned and existing municipal waste facilities in the UK. They also reflect the definition of 'strategic' in the adopted Waste Local Plan and a number of studies on potential facilities requirements for different types of waste technologies[36].

Capacity Required

4.79 Our waste data forecasts suggest that we need to provide residual waste recovery capacity of around 150,000[37] tonnes per year for MSW. It also suggests that there is a need for recovery facilities, including 'other' recovery facilities, with the capacity to divert between 143,000 – 193,000 tonnes/year of C&I waste from landfill.

4.80 As outlined previously in Table 3, the capacity requirement for MSW could be met either on one large strategic site of about 5 hectares or on 2-3 smaller sites of about 2 hectares each. For C&I, the capacity requirement could be met on 1 large Strategic site (8 ha of land in total), 2 Strategic sites or possibly 3 to 4 smaller Strategic sites (of minimum 2 ha each).

[36] ODPM – Planning for Waste Management Facilities (2004); the EA technologies database and DEFRA studies on the treatment of MSW (2007).

[37] This is an approximate requirement based on the latest available waste flow forecast produced by the Waste Disposal Authority and is based on achieving a 60% recycling rate by 2020.

FC17

4.81 ~~This will essentially be a matter for the waste industry to decide and in relation to~~ Solutions for MSW will be a matter for evaluation by the WDA through the residual waste contract process which is currently ongoing. For C&I waste, it will be a matter for the waste industry to bring forward proposals within the context of the WCS.

4.82 It is therefore important for the WCS to be sufficiently flexible, identifying a range of suitable sites within the context of an overall, preferred locational strategy (see below).

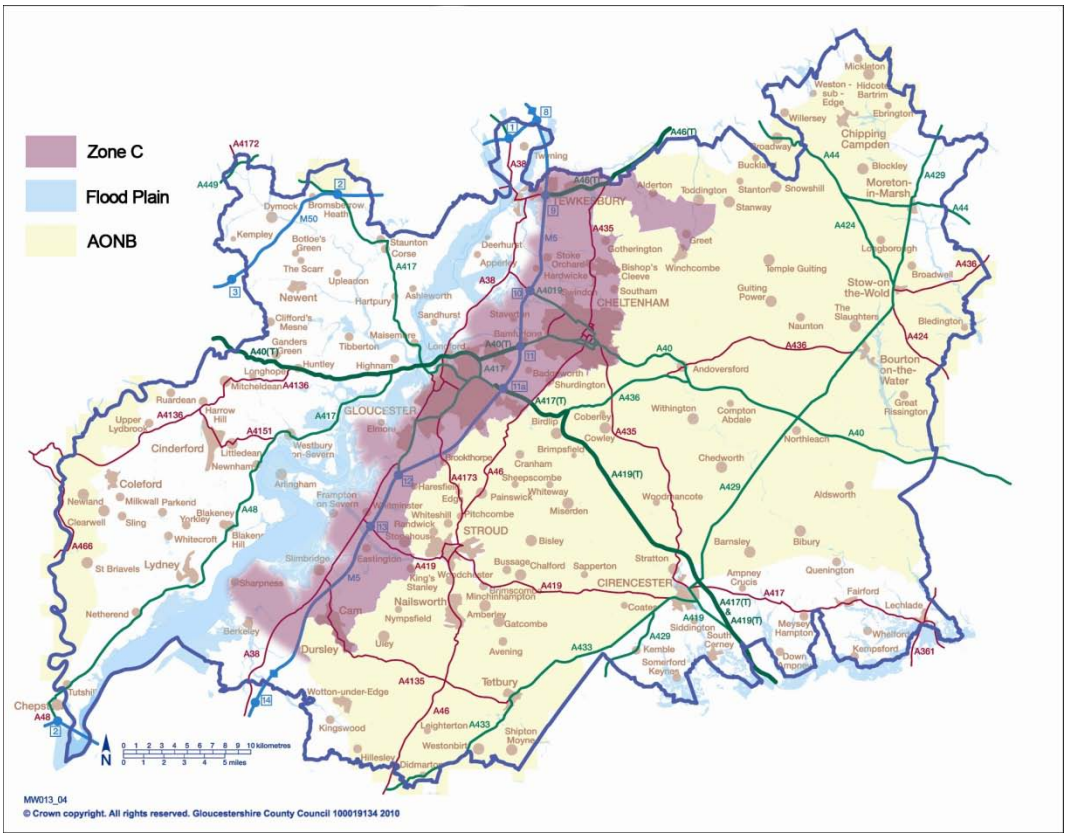
Locational Strategy

4.83 Our proposed approach is to focus all permanent 'strategic' waste management facilities (>50,000 tonnes/year) including residual waste recovery facilities, within the central area of Gloucestershire, close to the main urban areas along the M5 corridor in particular Gloucester and Cheltenham.

4.84 This central area we have defined as 'Zone C' and is shown on the plan overleaf shaded in purple. It is also shown on the Key Diagram attached at Appendix 4. Proposals for any supporting infrastructure such as bulking and transfer facilities will be considered under Core Policy ~~WCS2~~ WCS13a.

FC13

Figure 5 – Preferred Location of 'Strategic' Waste Management Facilities



4.85 There are a number of reasons why we consider this locational strategy to be the most appropriate and sustainable for Gloucestershire:

- Most of Gloucestershire's waste arises in or near to this central corridor in particular at Gloucester and Cheltenham and to a lesser extent Tewkesbury and Stroud.
- It is consistent with government policy (PPS10) which states that local authorities should prepare planning strategies that 'enable waste to be disposed of in one of the nearest appropriate installations'.
- It is consistent with the Regional Waste Strategy 'From Rubbish to Resource' which states that 'waste should be disposed of as close as possible to where it is produced'.
- Zone C includes the county's main transport linkages (road, rail, water and air) and offers the greatest potential for more sustainable movement of waste in order to reduce the current reliance on the road network.
- Zone C avoids those parts of the county where flood risk is most prevalent and also avoids the Cotswold Area of Outstanding Natural Beauty (AONB). It is thus ~~relatively unconstrained~~ less constrained in land use planning terms.

FC18

4.86 The focus on Zone C is also consistent with the sequential approach set out in the draft Regional Spatial Strategy for the South West (SW-RSS).

4.87 Using this sequential approach, draft Policy W2 of the SW-RSS Proposed Changes (2008) requires strategic facilities to be located within strategically significant settlements such as Gloucester and Cheltenham, if not within them adjoining them, or failing that, within close proximity. Whilst it is the intention to abolish the RSS, at the present time it remains a material consideration.

4.88 It is also the case that Zone C received a good level of support during previous consultation on the WCS. Those that did not support Zone C were generally in favour of a more 'dispersed' approach with provision being made on small-scale facilities (<50,000 tonnes per annum) located across the whole county. There was however little support from the waste industry for such an approach which brings into question how deliverable this approach would be in practice.

4.89 Notably, our proposed approach (see Core Policy WCS4 below) whilst focusing strategic facilities into Zone C would still allow for smaller-scale facilities to come forward outside Zone C, subject to criteria, if there were to be sufficient demand from the waste industry, developers, the local community and other stakeholders.

FC19

The Sites

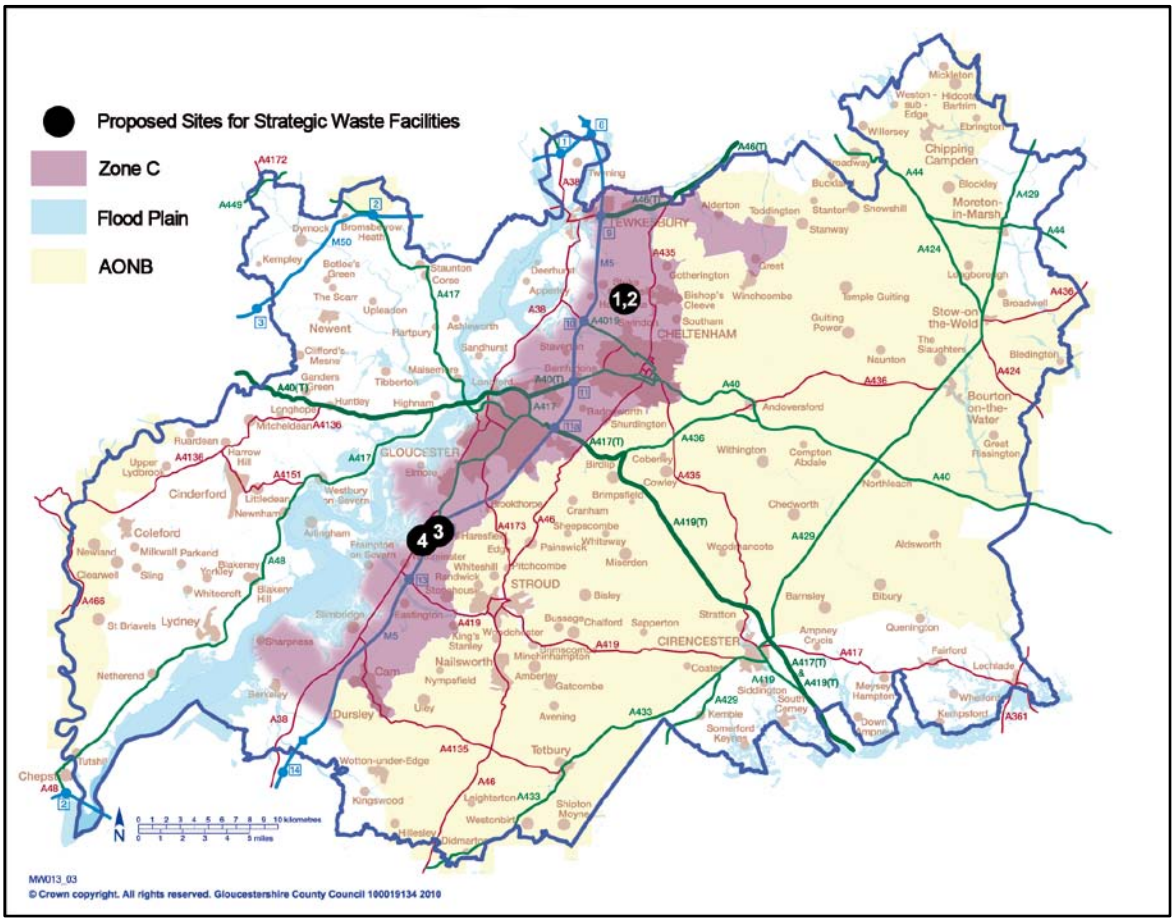
4.90 Within Zone C we have allocated four strategic sites in order to make provision for the capacity gap requirements for MSW and C&I identified in paragraph 4.79 above. Whilst ultimately provision will only be met if planning permission is successfully achieved on these sites, they have been allocated due to the strong prospect of delivery of waste facilities on them. The sites are:

1. Wingmoor Farm East
2. Wingmoor Farm West (Sites A & B)
3. Javelin Park
4. Land at Moreton Valence

4.91 The sites are shown on the plan below and on the Key Diagram attached at Appendix 4. Each site is considered suitable for accommodating the type of waste recovery operations described earlier. In line with national policy, we do not consider it appropriate or possible to prescribe exactly what will be built on each site.

FC20

Figure 6 – Strategic Site Allocations



4.92 A brief description of each site is set out below. More detailed information including some general and site-specific development criteria is contained in the Strategic Site Schedules attached at Appendix 5.

Wingmoor Farm East (2.8 hectares)

4.93 This 2.8 hectare site is located to the west of Bishop's Cleeve, five miles north of Cheltenham on the Stoke Road leading from the A435 to Stoke Orchard. It forms part of the Wingmoor Farm (East) landfill, recycling and quarry complex. The site is not currently in active use and its availability for a strategic waste recovery facility has been confirmed by the site operator Grundon Waste Management.

4.94 It is anticipated that any strategic residual waste recovery facility developed at this site would primarily be for C&I waste, potentially with some scope for a proportion of MSW.

Wingmoor Farm West – Site A (6.8 hectares)

4.95 This 6.8 hectare site, often referred to as 'The Park' is located two miles west of Bishop's Cleeve and five miles north of Cheltenham, off Stoke Road, south of Stoke Orchard. It adjoins Wingmoor Farm West which is also allocated (see above). The site comprises a number of former aeroplane hangars converted to industrial units including waste management processes and other, as yet unimplemented waste management planning permissions. The site is owned by Wellington Park Properties Ltd. It is anticipated that any strategic residual waste recovery facility developed at this site would primarily be for MSW, with some scope for a proportion of C&I waste.

Wingmoor Farm West – Site B (4.0 hectares)

4.96 This 4.0 hectare site is located two miles west of Bishops Cleeve and five miles north of Cheltenham, off Stoke Road, south of Stoke Orchard. It adjoins 'The Park' (see above). The site includes an area of concrete hard-standing currently used as a Household Recycling Centre (HRC) and other land within the curtilage of the landfill planning permission. The site is owned by Cory Environmental Ltd. It is anticipated that any strategic residual waste recovery facility developed at this site would primarily be for MSW with some scope for a proportion of C&I waste. Due to the size and configuration of the site it is likely to form part of a 'multi-site' solution.

Javelin Park (11.2 hectares)

4.97 This 11.2 hectare site comprises part of the former Moreton Valence Airfield and is located immediately to the south of Junction 12 of the M5 between the M5 and the B4008. The site is vacant apart from large piles of crushed recycled aggregate. Gloucestershire County Council owns just under 5 hectares and the owner of the remaining 6 hectares has confirmed it is available for waste use thus there is potential for the whole site to be used. It is anticipated that any strategic residual waste recovery facility developed at this sites would primarily be for MSW, with some scope for a proportion of C&I waste.

Land at Moreton Valence (5.6 hectares)

4.98 This 5.6 hectare site is located between the M5 and A38 to the north-east of Moreton Valence. The site is partly used for light industrial and waste management. The operators of the site, Smiths (Gloucester) Ltd. have confirmed that the site is available for strategic waste management use. It is anticipated that any strategic residual waste recovery facility developed at this site would primarily be for C&I waste potentially with some scope for a proportion of MSW.

4.99 Core Policy WCS4 is set out overleaf.

Core Policy WCS4 – Other Recovery (including energy recovery)

In order to divert waste from landfill, in particular biodegradable waste, in the period to 2027, the WPA will make provision for the following residual waste recovery capacity:

- MSW 150,000 tonnes/year[1]
- C&I 143,000 – 193,000 tonnes/year[2]

All 'strategic' residual waste recovery facilities (>50,000 tonnes/year) will be located in the central area of Gloucestershire, close to the main urban areas along the M5 corridor including Gloucester and Cheltenham. This area is designated 'Zone C' and is shown on the Key Diagram.

Within 'Zone C' the following sites are allocated for residual waste recovery:

1. Wingmoor Farm East (primarily C&I, but with MSW potential)
2. Wingmoor Farm West – Sites A & B (primarily MSW, but with C&I potential)
3. Javelin Park (primarily MSW, but with C&I potential)
4. Land at Moreton Valence (primarily C&I, but with MSW potential)

These strategic sites are illustrated on the Key Diagram. Detailed site boundaries and key development criteria are set out in the Strategic Site Schedules at Appendix 5. Planning permission for 'strategic' residual waste facilities will only be granted outside the allocated sites where it can be demonstrated that the strategic sites are unavailable and that there is a clear justification that proposals will meet the identified recovery capacity and not compromise any other policies contained in this strategy.

Planning permission will not be granted for strategic scale residual waste recovery facilities (>50,000 tonnes/year) outside Zone C.

'Non-strategic' residual waste recovery facilities (<50,000 tonnes/year) will be permitted both within and outside Zone C where the facility forms part of a sustainable waste management system and would be subject to the following criteria:

- **The proposal is located on an industrial estate or permitted/allocated employment land ~~permitted or allocated for B2 general industrial use~~; and/or**
- **The proposal is located on previously developed land; and/or**
- **The proposal involves the development of an existing waste management facility or mineral site; and**
- **The facility would meet the relevant policies and criteria of the development plan.**

FC21

[1] This is an approximate requirement based on the latest available waste flow forecast produced by the Waste Disposal Authority and is based on achieving a 60% recycling rate by 2020.
[2] A proportion of this capacity requirement may also be met from other forms of waste recovery including recycling and composting.

How will we know if the policy is working?

4.100 There are a number of measures including:

- Contribution to energy generation.
- Percentage of municipal waste landfilled.
- Amount of residual waste recovery capacity for MSW and C&I waste.
- Number of 'strategic' scale residual waste recovery facilities permitted outside Zone C per year.
- Number of 'non-strategic' residual waste recovery facilities permitted outside Zone C per year.

4.101 Further information is set out in Section 6.0 – Measuring Progress.

Waste Water Treatment

4.102 Waste water is generally a mixture of domestic waste water from baths, sinks, washing machines and toilets, waste water from industry and rainwater run-off from roads and other surfaced areas. We have already considered how waste water might be re-used at the domestic scale through processes such as grey water recycling (see Core Policy WCS1).

FC22

4.103 We now need to consider the provision of waste water treatment facilities at a larger, commercial scale. This must be considered in the context of the Water Framework Directive (WFD) which aims to protect and enhance water quality. We address this issue in this section of the WCS because waste water treatment when linked to anaerobic digestion (AD) creates the potential for generating energy. At present there are 84 operational waste water treatment facilities in Gloucestershire.

4.104 The two main sewage treatment works are Netheridge at Gloucester and Hayden to the south west of Cheltenham. These facilities will be safeguarded in accordance with Core Policy WCS8 and, subject to compliance with relevant development plan policies proposals to broaden their scope e.g. energy generation, will be supported in principle.

4.105 In terms of future requirements however, the degree to which these existing facilities will be able to cope with future growth will depend on how much growth there is, what type and where and when it takes place, in particular new housing and employment development.

4.106 The draft Regional Spatial Strategy (RSS) 2008 proposes 56,400 new homes and 41,700 new jobs for Gloucestershire in the period 2006-2026. Most of these are focused on Gloucester and Cheltenham as the county's two 'strategically significant' settlements suggesting that Netheridge and Hayden would continue to play a strategic role.

4.107 However, the Government is committed to the abolition of the RSS and the volume and distribution of new housing, employment and other development will be decided at the local level through the preparation of Local Development Frameworks. Importantly a Joint Core Strategy (JCS) is being prepared for Gloucester, Cheltenham and Tewkesbury.

4.108 As part of the preparation of the JCS and other Gloucestershire Core Strategies, the County Council is leading on a Strategic Infrastructure Delivery Plan (SIDP) which will consider the new and enhanced infrastructure necessary to support the agreed level of growth.

4.109 This work is ongoing and as such we do not know at this stage what additional sewage treatment capacity will be required. For this reason our preferred approach is to adopt a general policy stance rather than allocate specific sites and identify the exact capacity required over the plan period. This is set out in Core Policy WCS5 below.

4.110 As further details and requirements emerge through the SIDP process this will be built into any future update to the WCS and where necessary, revision to Core Policy WCS5.

4.111 A further issue associated with waste water treatment is the disposal of the sewage 'sludge' that is created through the waste water treatment process. This is often spread to land for agricultural purposes – a process which in some cases requires planning permission.

FC23

4.112 Policy 22 of the Waste Local Plan sets out the Council's current policy stance on this issue. This policy will continue to remain in force until replaced through the preparation of a separate development management DPD.

Core Policy WCS5 – Waste Water

The development or expansion of waste water treatment facilities will be permitted, either where needed to serve existing or proposed development in accordance with the provisions of the development plan, or in the interests of Gloucestershire's waste water management, provided that the need for such facilities outweighs any adverse land use or environmental impact, ~~and~~ that any such adverse impacts can be satisfactorily mitigated and that the proposal would be consistent with the objectives of the Water Framework Directive (WFD).

FC24

Particular support will be given to any appropriate proposals that involve the development and utilisation of Anaerobic Digestion (AD) in order to provide heat and/or power that may be used locally or exported to the national grid.

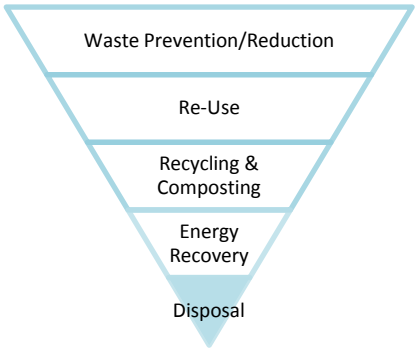
How will we know if the policy is working?

4.113 There are a number of measures including:

- Renewable energy generation.
- Total number of waste water treatment facilities in Gloucestershire.
- Number of new or expanded waste water treatment facilities permitted per year.
- Installed capacity of new renewable energy systems.
- Percentage of renewable energy sourced from the by-products of waste management.

4.114 Further information is set out in Section 6.0 – Measuring Progress.

Disposal



4.115 The disposal of waste lies at the bottom of the 'waste hierarchy' and should generally be seen as a last resort. Only if waste cannot be re-used, recycled/composted or recovered should it be disposed of.

Landfill/Landraise

4.116 The main method of waste disposal is 'landfill'. There are three main types of landfill; non-hazardous, hazardous and inert.

4.117 Non-hazardous landfills generally accept a mixture of MSW, C&I and C&D waste, hazardous landfills receive hazardous waste and inert landfills receive C&D waste which is largely inert.

4.118 The general principle is the same with each landfill type. The waste arrives at the site, is often compacted (to reduce its volume) and is then buried in the ground. As a large void space is required, landfills are often associated with quarrying operations providing that the geology is suitable, can be engineered and would not lead to pollution of any watercourses. Many landfills are integrated with other waste management operations such as storage, consolidation and transfer of waste and in some cases recycling and waste recovery.

4.119 'Landraise' is where the final landform of a site once the waste has been tipped, exceeds the original level. It is common practice for inert waste e.g. C&D to be purposefully deposited in heaps or mounds, often for engineering operations such as the creation of landscaping bunds in new development.

4.120 Once in the ground the waste is covered or 'capped'. Modern landfills are engineered to very high specifications to ensure that all waste deposited is safely contained particularly those dealing with hazardous wastes. Over time the site will be restored to blend in with its surroundings for uses such as farming, golf, forestry or public open space.

4.121 Importantly, biodegradable waste in landfill produces methane as it breaks down – one of the main greenhouse gases, thereby contributing to climate change. Whilst some of this gas may be captured and used as a source of energy it is not a genuinely sustainable option. Landfill also creates leachate - rainwater contaminated by waste - which can sometimes percolate from the site and into surrounding water courses, particularly from more historic landfills. This must be carefully controlled.

4.122 As we have already described, most of the waste in Gloucestershire is currently sent to landfill. This mirrors the situation nationally. Whilst we need to move away from landfill as our primary means of waste disposal, particularly for biodegradable waste, it will always have a role to play for certain wastes and we need to ensure that sufficient provision is made available over the plan period.

4.123 There are currently three (non-hazardous) landfill sites in Gloucestershire; Hempsted at Gloucester, Wingmoor Farm (West) and Wingmoor Farm (East) near Bishop's Cleeve to the north of Cheltenham. There is also a hazardous landfill at Wingmoor Farm (East) and a large amount of disposal capacity for inert material, particularly at quarry sites (often for restoration) in Cotswold District and the Forest of Dean.

4.124 Our Waste Data paper (2010) identifies the following landfill capacity as of March 2009:

Non-hazardous landfill	6,029,500 m^3
Hazardous landfill	1,206,200 m^3
Inert landfill/disposal	1,446,000 tonnes/year

4.125 For non-hazardous landfill, having regard to the current voidspace available and rates of tipping, it is estimated that there is at least 10-13 years remaining capacity.[38] However this is a conservative estimate and the likelihood is that, due to future reductions to landfill as a result of mechanisms such as the Landfill Tax, landfill void could last for significantly longer potentially to the end of the plan period (2027) or beyond depending on future diversion rates from landfill across all waste streams.

FC25

4.126 The situation will be monitored regularly through the Council's Annual Monitoring Report (AMR). Assuming additional capacity was to be required by 2020, work on a landfill development plan document to identify suitable locations could potentially commence in 2017/18.

4.127 For hazardous waste, it is estimated that there is around 22 years of hazardous landfill life remaining.[39]

4.128 There is also significant capacity for inert fill both at landfill operations and through other permissions including mineral restoration and engineering. Although no specific provision is required, more capacity can be anticipated to come forward alongside new applications for mineral workings in the future as part of restoration proposals.

[38] Subject to the outcome of planning application - Reference Number: 09/0028/TWMAJW.
[39] Subject to the outcome of planning application - Reference Number: 09/0028/TWMAJW.

4.129 Given the capacity available, we do not propose to make provision for additional landfill at this stage and have therefore not included a core policy on this issue. However, this position will be monitored and is likely to require further consideration through a review of the WCS or preparation of a separate development plan document starting in 2017/18 or potentially earlier, depending on the outcome of the current planning application at Wingmoor Farm (East).

FC26

Hazardous Waste

4.130 As we explained earlier, hazardous waste is that which is, or contains materials or substances that make it, harmful to health or the environment, either immediately or over an extended period of time. There are twenty different categories of hazardous waste identified in the European Waste Catalogue. Each has potentially different handling and management requirements.

4.131 Hazardous waste includes not only obvious hazardous materials such as asbestos and oil but also everyday items such as computer monitors, TVs, fridges, batteries and energy-saving light bulbs. It therefore comes from a wide range of sources, including households, businesses of all types, and public services, such as the health service, schools and universities[40].

4.132 Nationally, hazardous waste makes up about 2% of the total waste stream, approximately 5 million tonnes per year.

4.133 Options for dealing with hazardous waste include; deep underground storage, high-temperature incineration, other treatment (e.g. biological) and recycling. Whilst the recent trend has been for an increasing amount of hazardous waste to be treated and recycled, most hazardous waste including that which remains after treatment is sent to landfill, particularly certain hazardous wastes such as contaminated soils.

4.134 In March 2010 the Government published 'A Strategy for Hazardous Waste Management in England. The strategy underpins the practical application of the Waste Framework Directive (2008). The strategy is based on the waste hierarchy and seeks to reduce the current reliance placed on landfill as the main method for disposing of hazardous waste in England.

[40] DEFRA: A Strategy for Hazardous Waste Management in England (March 2010).

4.135 In other words, we should be aiming to reduce the quantity of hazardous waste produced, introduce measures to reduce the content of harmful substances in items that may become waste and reduce the adverse impact of hazardous waste on the environment and human health. Where the production of hazardous waste cannot be prevented, opportunities for recycling and recovery should be fully investigated with disposal being the last option for consideration.

4.136 In Gloucestershire, most hazardous waste is dealt with at the specialist hazardous waste landfill at Wingmoor Farm (East) near Bishop's Cleeve to the north of Cheltenham. Of the 90,000 tonnes of hazardous waste managed in Gloucestershire in 2008, around 85,085 tonnes (94.5%) was sent to Wingmoor. The Council is currently considering a planning application to extend the life of the landfill. This is likely to be determined in spring 2011. If planning permission is granted there will continue to be significant capacity available for hazardous waste in Gloucestershire (around 22 years).

4.137 In accordance with the Government's strategy for hazardous waste management we will support in principle proposals that would help move the management of hazardous waste up the waste hierarchy. Our proposed approach is set out in Core Policy WCS6 below.

Core Policy WCS6 – Hazardous Waste

In the interest of moving the management of hazardous waste up the waste hierarchy, proposals for the recycling and recovery of hazardous waste will be supported in principle, where it can be demonstrated that the proposal is 'environmentally acceptable' and complies with other relevant development plan policies.

In this context, 'environmentally acceptable' means that there would be no significant adverse impact on the environment – on land, air or water, that is not capable of being rigorously and satisfactorily mitigated.

Factors to be included in any assessment of environmental acceptability will include:

1. **The quality of life, amenity and health of local residents and other land users;**
2. **Impacts on neighbouring land-uses (including the local road network) and the potential for the achievement of appropriate 'stand-off distances' between the facility and residential properties;**
3. **The need for the facility, where applicable, its relationship with existing activities and the potential wider environmental implications of not managing the waste stream~~; and~~**
4. **Where applicable, the potential for successful land restoration; and**
5. **That the hazardous waste is managed as high up the waste hierarchy and as close to source as possible.**

FC27

How will we know if the policy is working?

4.138 There are a number of measures including:

- Total amount of hazardous waste arising in Gloucestershire.
- Total amount of hazardous waste managed in Gloucestershire.
- Percentage of hazardous waste managed in Gloucestershire sent to landfill versus that which is recovered including recycling.

4.139 Further information is set out in Section 6.0 – Measuring Progress.

Radioactive Waste (including Clinical Waste)

4.140 Radioactivity is the process by which energy is released when unstable atoms become stable. This releases energy in the form of either particles (alpha and beta) or electromagnetic energy (gamma rays). The energy is known as 'ionising radiation'.

4.141 Radioactivity is used in a number of different applications including nuclear power (where radioactive materials are used to produce electricity in nuclear power stations through the process of fission) medicine (e.g. x-rays and chemotherapy) and industry (e.g. testing structures for flaws and weaknesses).

4.142 Radioactive waste is effectively the by-product of activities that involve the use of radioactivity. It includes any material that has become contaminated by or incorporates radioactivity above a certain threshold.

4.143 Radioactive waste falls into four categories:

- High Level Waste (HLW),
- Intermediate Level Waste (ILW),
- Low Level Waste (LLW), and
- Very Low Level Waste (VLLW)

4.144 High level waste (HLW) is waste that contains sufficiently high levels of radioactivity that heat is generated. Such waste is likely to remain hazardous for more than 100,000 years and the Government believes the best way to deal with it is through geological disposal i.e. burying the waste deep underground in a specialist facility. There are no such facilities available in the UK at present although three expressions of interest have been submitted by potential 'host communities'.

4.145 Intermediate level waste (ILV) contains higher concentrations of radioactivity than low level waste, but without the heat generation that occurs in high level waste. Like HLW, the Government believes the best way to deal with ILV is through deep geological disposal.

4.146 Low level waste is that which is within a specified concentration of radioactivity i.e. lower than intermediate level waste but higher than the levels set for Very Low Level Waste (VLLW). These wastes may arise from the non-nuclear and nuclear industries and typically consist of everyday items that have become contaminated during use by contact with radioactive materials.

4.147 Certain low level wastes can be disposed of to landfill. LLW that is unsuitable for landfill can be dealt with at specialised 'near-surface' disposal facilities such as the UK's Low Level Waste Repository (LLWR) near Drigg in West Cumbria.

4.148 Very low-level waste (VLLW) is a sub-category of low-level waste and mainly arises from non-nuclear industries such as hospitals, universities and industrial premises. VLLW has such low concentrations of radioactivity that it can be managed alongside other waste including municipal waste.

4.149 The main facility dealing with radioactive waste in Gloucestershire is the former nuclear power station at Berkeley. The station operated from 1962 until 1989 when it ceased electricity generation. The site acts as a storage facility for LLW and ILW generated on-site. It is anticipated that final site clearance will take place between 2074 and 2083 with all radioactive waste having been removed to specialist facilities including a new deep underground facility for the ILW.

4.150 Other facilities in Gloucestershire dealing with an element of radioactive waste include two clinical waste transfer facilities and one clinical waste treatment facility. Some LLW and VLLW waste is also received at Gloucestershire's existing landfill sites.

4.151 Given the ongoing nature of the decommissioning and storage operation at Berkeley and the relatively modest amount of clinical waste being managed in Gloucestershire, there is no need to include a specific policy within the WCS dealing with radioactive waste. Our approach in relation to landfill has already been set out above.

Agricultural Waste

4.152 As we have already described, agricultural waste is waste that is specifically generated by agricultural activities. It falls into two broad categories; natural and non-natural waste.

4.153 'Natural' agricultural waste consists of manures and slurries[41]. These offer a valuable source of plant nutrients, including nitrogen, phosphorus and potassium and are generally spread to land for agricultural benefit.

4.154 Provided they are spread to land for agricultural benefit, manures and slurries are not actually classified as waste and are therefore not a consideration for the WCS.

[41] Slurry is a form of manure made up largely of liquid.

4.155 'Non-natural' agricultural wastes consist of items such as packaging, plastics, sheep dip, unused medicines, machinery, oil and tyres. Nationally, the total amount of non-natural agricultural waste is relatively modest at around 0.5 million tonnes per year compared to around 80 million tonnes of manures and slurries[42].

4.156 Importantly however, since 2006 non-natural agricultural waste has been classified as 'controlled' waste meaning farmers are no longer simply able to burn, bury or stockpile it, instead they must make arrangements to manage and dispose of such waste properly. This means it must be considered through the WCS.

4.157 Options for dealing with non-natural agricultural waste include;

- Reduction (i.e. reducing the amount of waste produced in the first place);
- Re-use (e.g. oil for machine maintenance, building waste for farm tracks);
- Take-back of certain wastes by suppliers (e.g. veterinary and machine wastes);
- On-farm recycling (exemption from the Environment Agency required);
- On-farm disposal (permit from the Environment Agency required); and
- Off-farm disposal (using a private waste contractor to take the waste off site for management and disposal).

4.158 Particular care is needed with certain wastes as they may be hazardous including for example metal and glass that has come into contact with sheep dip and medicines.

4.159 Some of the main options for off-farm disposal include:

- Landfill (non-hazardous, hazardous and inert);
- Thermal treatment (incineration) with or without energy recovery;
- Other waste recovery (e.g. anaerobic digestion);
- Recycling and re-processing (e.g. metals and plastics); and
- Inert recycling and recovery (for construction type wastes).

4.160 Current facilities available to deal with agricultural waste in Gloucestershire include; anaerobic digestion (AD) at Stanley's Quarry near Chipping Campden in the Cotswolds, an agricultural waste plastic re-processing facility at Aston Down near Stroud, various inert waste recovery and recycling facilities and the existing landfill sites at Hempsted, and Wingmoor Farm.

4.161 Given the relatively modest amount of 'non-natural' agricultural waste managed in Gloucestershire (less than 1% of existing managed tonnages) it is considered that there is sufficient existing capacity available to deal with this waste stream. For this reason we have not included a specific policy within the WCS. In line with the waste hierarchy however, the Council will support in principle development proposals that would help move the management of non-natural agricultural waste up the waste hierarchy, subject to compliance with relevant policies of the development plan.

[42] Towards Sustainable Agricultural Waste Management – Environment Agency (2001).

Minimising Impact

4.162 Having set out our approach towards waste reduction, recycling/composting, recovery and disposal, our final strategic objective relates to how we can reduce the impact of waste management operations on the people and environment of Gloucestershire.

4.163 Some of the issues already discussed will help to reduce the impact, for example reducing the amount of waste produced in the first place or re-using more of it, both of which will mean there is less waste to manage.

4.164 However, like any form of development, new or expanded waste management facilities clearly have the potential to impact on the area in which they are located. A key role of the WCS is to reduce the level of that impact to an acceptable degree. The remainder of the spatial strategy below sets out how this will be achieved.

Climate Change

4.165 As we described earlier there is a significant body of evidence to suggest that the world's climate is changing with increasing temperatures, changes in weather patterns, rising sea levels and increased frequency and intensity of extreme weather.

4.166 The main cause of climate change is the increasing amount of greenhouse gases in the atmosphere such as carbon dioxide, water vapour, methane and nitrous oxide. These 'trap' heat energy that would otherwise be radiated into space thereby affecting the earth's climate.

4.167 Some of the main sources of greenhouse gases include the burning of fossil fuels (coal, oil and gas) which releases carbon dioxide and deforestation which means there are fewer trees to absorb the carbon dioxide. Other sources include transport e.g. driving and air travel, agriculture and industry.

4.168 According to the South West Climate Change Impacts Partnership, by the 2080s the South West, including Gloucestershire, is likely to experience:

- Warmer, wetter winters - milder by up to 3.5°C and wetter by up to 30%;
- Hotter, drier summers - warmer by up to 5.5°C and drier by up to 55%;
- More frequent and extreme weather events; and
- Sea and estuary level rise by up to 1m (on top of higher tides).

4.169 Like other forms of industry, waste management has a direct impact on climate change. Sending biodegradable waste to landfill for example produces methane one of the main greenhouse gases only some of which will be captured and used to generate energy.

4.170 The WCS has a key role to play in ensuring that future waste management in Gloucestershire minimises its impact on climate change (mitigation) and is able to respond to the effects of climate change that are already in motion (adaptation).

4.171 We have already described how we will reduce the amount of waste associated with new development through the use of 'Waste Minimisation Statements'. We have also explained how we will encourage a greater proportion of waste to be re-used and support activities that help prepare waste for re-use including checking, cleaning and repair.

4.172 Reducing and re-using waste has a number of positive impacts in relation to climate change. It means for example less waste to transport thereby reducing carbon emissions from waste transportation. It also means less energy needs to be used in creating new products.

4.173 We have also outlined how we will encourage more recycling and composting to achieve our target of at least 60% of household waste being recycled and composted by 2020. More recycling and composting not only means less waste being sent to landfill (and therefore less methane) but also reduces the need for virgin raw materials.

4.174 Our approach to other waste recovery will ensure that more of our 'residual' waste is diverted from landfill in some instances having the further added benefit of generating renewable energy such as heat and power.

4.175 Other areas relating to climate change in which the WCS has a role to play include; flood risk, transport, design and the protection of the natural and historic environment. These and other issues relating to the 'impact' of waste management are addressed in the remainder of Section 4.0 below.

Amenity and Cumulative Impact

4.176 Modern, well-designed waste management facilities can happily co-exist in or near built up areas. Care is needed however to ensure that there are no adverse impacts on the amenity of nearby residents, businesses and other occupants. The consideration of 'amenity' issues applies to both speculative development and to allocated waste management sites.

4.177 The potential impacts that a waste management facility can have will largely depend on the scale and type of facility. Some of the potential impacts associated with waste uses might include traffic, visual impact, environmental, dust, odour, vermin and birds, noise and vibration.

4.178 Particular regard must be had to potential ‘cumulative’ impacts. In other words the incremental impacts that may accrue over time as a result of an existing waste management facility changing the scale and/or nature of its activities (e.g. dealing with different types of waste or more vehicle movements per day).

4.179 The Government has made it clear that local authorities must consider these potential cumulative impacts including in particular any significant adverse impacts on environmental quality, social cohesion and inclusion or economic potential.

4.180 Government guidance however also encourages the co-location of complimentary waste facilities together for example through developments such as 'resource recovery parks'.

4.181 A balance needs to be struck therefore between the advantages of locating different waste facilities together and reaching the 'tipping point' at which waste management operations when taken as whole, have an unacceptable impact on the local environment and community.

4.182 The strategic site allocations identified in Core Policy WCS4 have all been subject to careful consideration with regard to their potential environmental and community impact and the general and key development criteria contained in the Strategic Site Schedules attached at Appendix 5 will help to ensure that any impact is reduced to an acceptable level.

4.183 Should development proposals come forward on any of these sites, a further assessment will be needed at the planning application stage to determine the potential impact once the details of any proposal are known. Planning conditions can then be used to control certain aspects of the development as appropriate e.g. hours of operation and the impacts of noise, dust and odour. The same principles apply to speculative waste related development proposals on unallocated sites.

4.184 Our current approach towards the protection of amenity is set out in Core Policy 37 of the Waste Local Plan (2004) – Proximity to Other Land Uses. The policy is particularly relevant to waste management proposals that raise potential issues such as noise, dust and traffic movements.

4.185 It is our intention that this policy will continue to be used until it is updated through the preparation of a separate development management waste DPD to be prepared following adoption of the WCS.

4.186 Through the preparation of the WCS it is considered appropriate to provide a specific policy framework on the issue of cumulative impact in order to deal with proposals for new or expanded waste operations. In particular this will be a significant issue where proposals are made at existing waste management sites. The same principles will apply to proposals to change the nature of an existing operation e.g. different operating hours, or different types of waste being managed etc.

4.187 Our proposed approach is set out in Core Policy WCS7 below.

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Core Policy WCS7 – Cumulative Impact

In determining proposals for waste related development for new or enhanced waste management facilities the Council will have regard to the cumulative effects of previous and existing waste management facilities on local communities alongside the potential benefits of co-locating complimentary facilities together. Planning permission will be granted where the proposal would not have an unacceptable cumulative impact.

In considering the issue of cumulative impact, particular regard will be given to the following:

1. Environmental quality;
2. Social cohesion and inclusion; and
3. Economic potential.

Within these broad categories this will, subject to the scale and nature of the proposal, include an assessment of the following issues: noise, odour, traffic (including accessibility and sustainable transport considerations), dust, health and visual impacts.

Traffic impacts will be given particular attention as they are diffuse by their nature and thus not contained on sites.

How will we know if the policy is working?

4.188 There are a number of measures including:

- Number and % of waste related proposals permitted on existing waste management sites.
- Number and % of proposals where cumulative impact was cited as a reason for refusal.

4.189 Further information is set out in Section 6.0 – Measuring Progress.

Safeguarding Waste Facilities

4.190 We have already identified the level of additional capacity (new waste facilities) required over the plan period taking into account existing provision and predicted waste forecasts.

4.191 If the existing level of provision were to be reduced (for example through a current waste management permission or allocated waste site being lost to another use) this will increase the number of new or expanded facilities that need to be found.

4.192 To reduce the potential impact of new or expanded waste management facilities on the population and environment of Gloucestershire we consider it appropriate for the WCS to safeguard existing and proposed waste sites from encroachment or sterilisation by incompatible land uses.

4.193 Our proposed approach is set out in Core Policy WCS8 below.

Core Policy WCS8 – Safeguarding Sites for Waste Management

Existing and allocated sites for waste management use[1] will be safeguarded by local planning authorities who must consult the Waste Planning Authority where there is likely to be incompatibility between land uses. Proposals that would adversely affect, or be adversely affected by, waste management uses will not be permitted unless it can be satisfactorily demonstrated by the applicant that there would be no conflict.

The Waste Planning Authority (WPA) will oppose proposals for development that would prejudice the use of the site for waste management.

[1] includes sewage treatment works and temporary waste management operations

FC29

How will we know if the policy is working?

4.194 There are a number of measures including:

- Capacity of new waste management facilities by waste planning authority
- Number and % of non-waste developments permitted on existing waste management sites.
- Number and % of non-waste developments permitted on proposed (allocated) waste sites.
- Number and % of proposals where impact on an existing or proposed waste management facility was cited as a reason for refusal.

4.195 Further information is set out in Section 6.0 – Measuring Progress.

Flood Risk

4.196 Flood risk is critically important issue for Gloucestershire. Although the River Severn is one of the County's most important and attractive assets it is also a major threat to the physical, social and economic well-being of local residents and businesses due to the flood risk it presents. Other watercourses within the County also present a risk.

4.197 The last major flood event in Gloucestershire took place in July 2007 when, following one of the wettest months of June on record, a significant amount of rain fell for most of the day on 20th July with some areas recording a month's rainfall in just one day. The resulting floods caused months of social and economic chaos with most of the population of Gloucester, Cheltenham and Tewkesbury being without drinking water for several weeks.

4.198 Whilst the events of July 2007 were extreme, clearly the potential exists for something similar to happen again particularly when the likely impacts of climate change are considered. As such it is essential for the planning system to ensure that new development, including waste-related development, is not at risk of flooding and does not exacerbate the risk of flooding elsewhere.

4.199 Local authorities should prepare planning strategies that appraise, manage and reduce flood risk and should aim to develop effective partnerships with the Environment Agency and other relevant organisations. Appraising flood risk essentially involves identifying which land is at risk of flooding.

4.200 Managing flood risk is about ensuring that new development is located in areas at low risk of flooding taking into account the future possible impacts of climate change. In short, development should only be permitted in areas of flood risk where there are no reasonable alternatives in lower risk areas. This is known as the 'sequential approach'.

4.201 Reducing flood risk is about safeguarding any land that may be required for flood management, reducing flood risk to and from new development through location, layout and design and using new development as an opportunity to reduce the causes and impacts of flooding e.g. using green infrastructure (open spaces etc.) for flood storage.

4.202 The main issues for the WCS to address are the location and design of new development.

Location

4.203 In 2007 the County Council in partnership with the District Councils commissioned consultants to prepare a countywide Strategic Flood Risk Assessment (SFRA) looking at all potential sources of flooding within the County including rivers (fluvial flooding) groundwater and surface water run-off (pluvial flooding). The report was published in 2008 and helped to refine the standard flood risk maps provided by the Environment Agency (EA) factoring in the potential increases in flood risk associated with climate change.

4.204 In 2009 a more detailed flood risk assessment was commissioned by the County Council to consider the potential flood risk associated with a number of specific sites. The results of both flood risk assessments were used to inform the potential waste sites published for consultation in 2009 with all of the sites identified being located within Flood Zone 1 (low-risk). Sites associated with a greater flood risk were excluded from further consideration.

4.205 The strategic site allocations identified in Core Policy WCS4 are all located in Flood Zone 1 and are therefore at low risk of flooding. Clearly the potential exists for speculative development proposals to come forward and it is important for the WCS to provide an appropriate policy framework against which to consider the merits of such proposals including the issue of flood risk.

Design

4.206 Whilst we can steer new development to the areas of lowest flood risk it can rarely be guaranteed that an area is completely free from potential flooding. In 2007 parts of Gloucestershire that had never previously flooded were under water because of the extreme nature of the event. As such it is important to consider the wider implications of development outside areas of known flood-risk.

4.207 It is vital therefore that any new development including waste-related development is designed with potential flood risk in mind. If for example a development were to be permitted within flood risk area, a design response would be to locate car parking or garages at ground floor level with any residential or office accommodation at first floor and above. A more drastic response might be to raise land levels to a point which is effectively above the likely maximum height of flood water. Further solutions might include water 'resistant' buildings which are designed to make it very difficult for low-level flood water to enter a property and water 'resilient' buildings which are designed in such a way as to reduce the time and cost required to reinstate the property should it be flooded e.g. electrical and heating systems distributed at high-level. [43]

4.208 One of the most common design solutions is the use of sustainable drainage systems or SUDS as they are commonly known. SUDS are effectively designed to reduce the rate of surface water run-off which often increases as a result of built development when porous open ground is replaced with relatively impervious areas of hard-standing such as car parking. SUDS can also help to protect or enhance water quality and provide a habitat for wildlife.

4.209 Whilst national planning policy exists on flood risk we consider it such an important issue locally that it warrants the inclusion of a specific policy within the WCS. Core Policy WCS9 below sets out our proposed approach.

[43] See RIBA Climate Change Toolkit 07: Designing for Flood Risk.

FC30

Core Policy WCS9 – Flood Risk

In order to reduce the likelihood and impact of flooding both on and off-site there will be a general presumption that all waste-related development will be located in areas of low flood risk, (Flood Zone 1) unless it can be demonstrated that there are no suitable, alternative sites available.

Only if no suitable sites are available in Flood Zone 1 will consideration be given to sites within Flood Zone 2 and only if no suitable sites are available in Zone 2 will consideration be given to sites within Flood Zone 3a. Proposals ~~relating to sewage treatment works~~ which are classified as 'less vulnerable' may come forward in Flood Zones 1, 2 and 3a although the sequential approach will still apply.

Proposals for 'more vulnerable' waste development including landfill/landraise and hazardous waste treatment and disposal will only be permitted in Flood Zone 3a where it can be demonstrated through application of the 'exception test' that:

- The development provides wider sustainability benefits to the community that outweigh flood risk having regard to the Gloucestershire Strategic Flood Risk Assessment (SFRA); and
- The site is previously developed or if not, that there are no reasonable and available alternative sites on previously developed land; and
- The development will be safe without increasing flood risk elsewhere and where possible, will reduce flood risk overall.

Proposals for waste-related development within Flood Zone 3b (the functional floodplain) will not be permitted other than 'water compatible' proposals such as sewage transmission infrastructure and pumping stations and, subject to the exception test, development which is classified as 'essential infrastructure'.

A Flood Risk Assessment (FRA) will be required for all development of 1 hectare or more and for any proposal located within Flood Zone 2 and 3a. The FRA should consider all sources of potential flood risk.

The design of all new development will be required to take account of current and potential future flood risk from all sources both on and off-site including in particular the use of Sustainable Drainage Systems (SUDS).

How will we know if the policy is working?

4.210 There are a number of measures including:

- Number of planning permissions granted contrary to Environment Agency (EA) advice on flooding and water quality grounds.
- Number and % of waste permissions located upon designated floodplain land per annum.
- Number and % of waste refusals where the floodplain and safeguarding water supplies acted as part of the reason for refusal per annum.
- Number and % of waste management proposals incorporating sustainable drainage measures per annum.

4.211 Further information is set out in Section 6.0 – Measuring Progress.

Green Belt

4.212 A large proportion of the land between and around Gloucester and Cheltenham and north of Cheltenham (>8,000 hectares) is designated as Green Belt. There are 14 Green Belts in England covering nearly 13% of the country. National planning policy on Green Belts is set out in Planning Policy Guidance Note 2: Green Belts (amended March 2001) which states that the purpose of Green Belts is to:

- check the unrestricted sprawl of large built-up areas.
- prevent neighbouring towns from merging into one another.
- assist in safeguarding the countryside from encroachment.
- preserve the setting and special character of historic towns.
- assist in urban regeneration by encouraging the recycling of derelict and other urban land.

4.213 Notably some of Gloucestershire's principal waste management facilities are located within the Gloucester/Cheltenham Green Belt having been allowed to develop incrementally over time in some cases in relation to quarrying activity which is temporary and has to take place where minerals are present. It is also the case that our preferred locational strategy which focuses on Zone C (see Core Policy WCS4) includes a large area of Green Belt.

4.214 Development within the Green Belt is clearly therefore an important issue for the WCS to address. Specific policy on waste development within Green Belts is set out in Planning Policy Statement 10: Planning for Sustainable Waste Management (2005) which states that whilst local planning authorities should seek to protect the Green Belt they should also recognise the locational needs of some types of waste management facilities as well as the wider environmental and economic benefits of sustainable waste management.

4.215 Further advice is set out in the companion guide to PPS10 which states that in certain circumstances, where an area contains significant Green Belt and not enough suitable sites outside of the Green Belt, local authorities may wish to consider a limited alteration to the Green Belt boundary to meet a specific, identified need for a waste management facility. Where land is removed from the Green Belt in this way, it should be specifically allocated as a waste management facility site only.

4.216 Whilst it is important for the WCS to address the Green Belt issue, because Gloucestershire is a two-tier authority area, responsibility for redefining the existing Green Belt boundary rests with the District Councils rather than the County Council.

4.217 As described in Section 2.0 a Joint Core Strategy (JCS) is currently being prepared for Gloucester, Cheltenham and Tewkesbury. This will need to consider potential revisions to the existing Green Belt boundary to accommodate future potential growth around Gloucester and Cheltenham.

4.218 The County Council as Waste Planning Authority (WPA) will work in partnership with Gloucester City, Cheltenham Borough and Tewkesbury Borough Councils in relation to any Green Belt revisions that may be considered appropriate having regard to the strategic site allocations identified in Core Policy WCS4.

4.219 In relation to speculative development proposals (i.e. unallocated sites) the companion guide to PPS10 makes it clear that local authorities rather than adopting a blanket-ban on such development within the Green Belt, may use criteria-based policy so that planning permission may be granted in 'very special circumstances' that outweigh any potential harm to the Green Belt.

4.220 Our proposed approach is set out in Core Policy WCS10 overleaf.

Core Policy WCS10 – Green Belt

Proposals for waste related development within the Gloucester – Cheltenham Green Belt that do not involve the re-use of an existing building will be permitted where it can be demonstrated that there are 'very special circumstances' including:

- **The site is allocated in the WCS; or**
- **The proposal would contribute towards a sustainable waste management system for Gloucestershire; and**
- **There is a particular, identified need for the facility to be located where it is proposed (e.g. proximity to main waste arisings, relationship to an existing waste management facility); and**
- **The proposal would not conflict with the five main purposes of the Green Belt designation; and**
- **The proposal would be consistent with other relevant development plan policies.**

Where the proposal involves the re-use of an existing building:

- **It must not have a materially greater impact than the existing building on the openness of the Green Belt and the purpose of including land within it; and**
- **The building must be of permanent and substantial construction and be capable of conversion without major or complete reconstruction; and**
- **The form, bulk and design of the buildings is in keeping with its surroundings; and**
- **The proposal would be consistent with other relevant development plan policies.**

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~~**In accordance with Core Policy WCS13 poor design will be rejected.**~~

The WPA will work in partnership with the local authorities of Gloucester, Cheltenham and Tewkesbury in relation to potential Green Belt revisions arising through the Joint Core Strategy or other relevant Development Plan Documents (DPD) to ensure that any such revision takes full account of existing and proposed waste management facilities including where appropriate the designation of 'inset' sites within the Green Belt.

How will we know if the policy is working?

4.221 There are a number of measures including:

- Total extent of the Gloucester/Cheltenham Green Belt (hectares).
- Number of waste related planning permissions granted in the Green Belt per annum.
- Number of waste related planning applications refused per annum where Green Belt issues were cited as part of the reasons for refusal.

4.222 Further information is set out in Section 6.0 – Measuring Progress.

Areas of Outstanding Natural Beauty (AONB)

FC32

4.223 Whilst the potential impact of development is a general consideration for all landscapes, as ~~As~~ a national designation, AONBs have been confirmed by the Government as having the highest status of protection in relation to landscape and scenic beauty. The conservation of the natural beauty of the landscape and countryside should therefore be given great weight in planning policies and planning decisions in these areas. Planning policies should also support suitably located and designed development that may be necessary to facilitate the economic and social well-being of the AONB and its communities[44].

4.224 Major development in AONB should only be permitted in exceptional circumstances after having been subjected to the most rigorous examination and where it can be demonstrated to be in the public interest.

4.225 The same approach applies to development within other nationally important areas such as National Parks.

4.226 In Gloucestershire there are three Areas of Outstanding Natural Beauty (AONB). Much of the eastern part of the county (51% of the land area) falls within the Cotswolds Area of Outstanding Natural Beauty, the largest AONB in England and Wales, whilst parts of the Wye Valley AONB and Malvern Hills AONB also fall within Gloucestershire.

[44] See PPS7: Sustainable Development in Rural Areas (2004).

4.227 The Cotswold Conservation Board is a statutory body created to oversee the management of the Cotswold AONB. The Wye Valley and Malvern Hills AONB are run by Joint Advisory Committees and the County Council works closely with these organisations. Each AONB has a management plan setting out the vision aims and objectives of the management board. Due regard has been given to these plans in drawing up the WCS.

4.228 Although the issue of planning and development within AONB is covered to a large extent by national planning policy, given the extensive coverage of AONB in Gloucestershire it is considered appropriate to include a specific local policy within the WCS reflecting the higher-level policy set out in Planning Policy Statement 7: Sustainable Development in Rural Areas (2004) and other relevant national policy.

4.229 The proposed locational strategy set out in Core Policy WCS4 ensures that all of the strategic site allocations identified in the WCS are located outside of the AONB. There is however of course the possibility of speculative unplanned development proposals coming forward and as such we need to ensure an appropriate policy framework is in place to determine these.

4.230 Our proposed approach is set out in Core Policy WCS11 below.

Core Policy WCS11 – Areas of Outstanding Natural Beauty (AONB)

Proposals for waste development within or affecting the setting of the Cotswolds, Wye Valley and Malvern Hills Areas of Outstanding Natural Beauty (AONB) will only be permitted where it can be demonstrated that:

- **There is a lack of alternative sites not affecting the AONB to serve the market need; and**
- **The impact on the special qualities of the AONB as defined by the relevant management plan (including the landscape setting and recreational opportunities) can be satisfactorily mitigated; and**
- **The proposal complies with other relevant development plan policies.**

In the case of major development within the AONB, a proven public interest must be demonstrated. Planning permission will only be granted in exceptional circumstances following the most rigorous examination and subject to the criteria above.

The County Council will continue to work in partnership with the respective AONB Conservation Boards and/or Joint Advisory Committees to help deliver the vision and objectives of the AONB Management Plans and Waste Core Strategy (WCS).

How will we know if the policy is working?

4.231 There are a number of measures including:

- Number of waste-related planning permissions granted in an AONB per annum.
- Number of waste related planning applications refused per annum where AONB issues were cited as part of the reasons for refusal.

4.232 Further information is set out in Section 6.0 – Measuring Progress.

Nature Conservation (Biodiversity & Geodiversity)

4.233 AONB designations (see above) are largely concerned with conserving valued landscapes and natural beauty. Natural beauty includes biodiversity and geodiversity but protection for nature conservation features of particular importance is addressed throughout the county via policy and statutory provisions operating across international, national and local levels. Importantly, the Natural Environment and Rural Communities (NERC) Act 2006 introduced a duty on all public bodies to consider biodiversity in exercising their functions.

FC33

International Designations

4.234 International biodiversity designations include Special Protection Areas (SPAs) Special Areas of Conservation (SACs) and RAMSAR sites (wetland areas of international importance).

4.235 The following is a list of International/European sites in Gloucestershire:

- Rodborough Common SAC
- Dixton Wood SAC
- Wye Valley and Forest of Dean Bat Sites SAC
- River Wye SAC
- Wye Valley Woodlands SAC
- Cotswold Beechwoods SAC
- Walmore Common SPA, Ramsar
- Severn Estuary SPA, SAC, Ramsar

4.236 There are also some sites near to the county boundary such as North Meadow and Clattinger Farm SAC near Cricklade in Wiltshire and Bredon Hill SAC in Worcestershire. Because these internationally important sites enjoy statutory protection, we do not need to include a specific policy within the WCS. It is important to note however that the Habitat Regulations Assessment (HRA) carried out in support of the WCS considers these internationally important sites and has been taken into account in identifying the strategic site allocations listed in Core Policy WCS4 and the key development criteria attached at Appendix 5.

National Designations

4.237 Nationally important designations include Sites of Special Scientific Interest (SSSI) and National Nature Reserves (NNR). There are over 4,000 SSSIs in England, covering around 7% of the country including 122 sites in Gloucestershire.

4.238 There are 224 National Nature Reserves in England including four in Gloucestershire:

- Cotswold Commons & Beechwoods
- Highbury Wood
- Lady Park Wood
- The Hudnalls

Local Designations

4.239 Local designations include Regionally Important Geological Sites (RIGS - increasingly referred to as Local Geological Sites) and Local Nature Reserves (LNR). Currently there are 164 RIGS and 11 LNRs confirmed in Gloucestershire. There are also currently 755 locally designated sites of wildlife importance (Local Wildlife Sites) which in Gloucestershire are sometimes known as Key Wildlife Sites (KWS).

4.240 One of the key local considerations for biodiversity is the Gloucestershire Biodiversity Action (or Delivery) Plan (BAP) prepared by the Local Biodiversity Partnership for Gloucestershire. The original BAP was published in 2000 as a strategic document that identifies the most urgent priorities for wildlife conservation in the County. A new BAP is being developed which comprises a set of strategic objectives alongside a spatial vision for the delivery of biodiversity recovery and conservation. It is no longer focused on the detailed preparation of individual Habitat Action Plans (HAPs) and Species Action Plans (SAPs).

4.241 Whilst some progress has been made, the BAP has been unable to halt the loss of biodiversity within the County. As such, a more joined-up, landscape-scale approach is being pursued by the Gloucestershire Biodiversity Partnership to reverse this loss.

4.242 A number of Strategic Nature Areas (SNA) have been defined and these when combined, make up the 'Gloucestershire Nature Map'. SNAs provide a targeted approach to conserving biodiversity at a landscape-scale and identify where the greatest opportunities for habitat restoration and creation lie. Whilst SNAs are not a statutory designation they identify where there are substantial opportunities to make positive changes for biodiversity and are therefore an important consideration with regard to planning, development and its impact on the natural environment[45].

4.243 The WCS has a key role to play. It can for example ensure through location and design that new waste-related development does not have a harmful impact on designated and undesignated sites of nature conservation importance. Waste development can also make a direct and positive contribution for example through the restoration of landfill sites for nature conservation purposes.

[45] Fore more information see www.gloucestershirebap.org.uk

4.244 Whilst the protection of the various international, national and local sites outlined above is already covered to a certain extent through national planning policy, given the predominantly rural nature of the county and the number of sites present, it is considered appropriate for the WCS to provide a policy steer for features of national and local importance.

4.245 Our proposed approach is set out in Core Policy WCS12.

FC34

Core Policy WCS12 – Nature Conservation (Biodiversity & Geodiversity)

Sites of Special Scientific Interest (SSSI) and National Nature Reserves (NNR) will be safeguarded from inappropriate waste management development.

Planning permission for waste management development within or outside a Site of Special Scientific Interest (SSSI) or National Nature Reserve (NNR) will only be granted where it can be demonstrated that:

- **The development would not conflict with the conservation, management and enhancement of the site unless the harmful aspects can be satisfactorily mitigated; ~~or~~ and**
- **The benefit of the development clearly outweighs the impacts that the proposal would have on the key features of the site; and**
- **The proposal complies with other relevant policies of the development plan; and**
- **In the case of a SSSI, there would be no broader impact on the national network of SSSIs.**

Local nature conservation designations will also be safeguarded from inappropriate development and planning permission will only be granted for development affecting such designations where it can be demonstrated that the impact of the development can be satisfactorily mitigated ~~or~~ and that the benefit of the development clearly outweighs any impact.

Development proposals will be required to assess their impact on the natural environment and make a contribution to local nature conservation targets to ensure gain for net biodiversity.

Proposals that incorporate beneficial biodiversity or geological features into their design and layout will be favourably considered particularly where the proposal would result in a positive contribution to a Strategic Nature Area (SNA) as identified on the Nature Map for Gloucestershire.

~~**Where proposals for major developments are within or close to Strategic Nature Areas (SNAs) they will be required to assess and make an appropriate contribution to nature conservation targets in those areas.**~~

How will we know if the policy is working?

4.246 There are a number of measures including:

- Change in areas of biodiversity importance (e.g. priority habitats).
- Proportion of local sites where positive conservation management has been or is being implemented.
- Number of waste related planning applications refused per annum where nature conservation issues were cited as part of the reasons for refusal.
- Number of waste related planning permissions granted in an area with features of national or local nature conservation importance.

4.247 Further information is set out in Section 6.0 – Measuring Progress.

Historic Environment

4.248 Gloucestershire is fortunate to have a rich historic environment that includes listed buildings, scheduled monuments, other archaeological sites and conservation areas. Detailed information on these 'heritage assets' is set out in the archaeology evidence paper available separately[46].

4.249 Like any form of built development, due consideration must be given to the potential impact of new and expanded waste management facilities on the historic environment.

4.250 National policy on planning and the historic environment is set out in Planning Policy Statement 5: Planning for the Historic Environment (March 2010)[47].

4.251 Like all planning policy statements the provisions set out in PPS5 are a material consideration which must be taken into account in determining applications for planning permission. PPS5 emphasises that core strategies and other development plan documents should not repeat the policies set out in PPS5 or reformulate them unless there are specific factors which would justify a variation to the policies.

[46] www.gloucestershire.gov.uk/wcs/evidence
[47] www.communities.gov.uk

4.252 Taking this into account it is not considered necessary or appropriate to include a specific policy on the historic environment within the WCS. Any planning decision made by the Council as Waste Planning Authority (WPA) where the proposal has the potential to impact on Gloucestershire's historic environment and assets, will be determined having due regard to the policies and objectives laid out in PPS5 – Planning for the Historic Environment. In addition there are detailed polices related to archaeology and the historic environment that remain in force in the WLP. It is our intention that these policies will continue to be used along side PPS5 as appropriate until they are updated through the preparation of a separate development management waste DPD to be prepared following adoption of the WCS.

4.253 There will be a general presumption against development which would cause damage or involve significant alteration to Gloucestershire's heritage assets and their settings.

Design

4.254 Like any form of built development, waste management facilities, particularly large-scale proposals have the potential to create a significant visual and environmental impact.

4.255 One way of reducing the impact is to ensure that all new development is built to a very high standard of design. High quality, innovative design can not only help to reduce the visual impact of a new development but in some cases can add value with development able to enhance its surroundings rather than detracting from them.

4.256 National planning policy relating to design includes PPS1: Delivering Sustainable Development (2005) which emphasises that planning policies should promote high quality inclusive design in terms of function and impact not just for the short term but over the lifetime of the development. It states that design which is inappropriate in its context or which fails to take the opportunities available for improving the character and quality of an area and the way it functions should not be accepted.

4.257 To achieve these objectives, local authorities are encouraged to prepare robust planning policies on design and access, ensuring that new developments are sustainable, durable and adaptable, make the best use of the site, respond to their local surroundings and are visually attractive as a result of good architecture and appropriate landscaping.

4.258 Since August 2006 it has been a legal requirement to prepare a 'Design and Access Statement' (DAS) for all planning and listed building consent applications. They provide an opportunity for a landowner or developer to demonstrate their commitment to achieving good design and access. Issues typically addressed include the proposed use of the site, the footprint (size) of development, layout and scale of buildings and spaces, landscaping and visual appearance.

4.259 With specific regard to waste management, DEFRA in partnership with the Commission for Architecture and the Built Environment (CABE) have produced guidance on the design of waste facilities[48]. The guide outlines the key design principles for waste facilities and highlights key design considerations. It emphasises that good design is not generic rather it needs to be tailored to the needs of each site, its setting, the demands of the project and the local environment.

4.260 Planning Policy Statement 10: Planning for Sustainable Waste Management (2005) also emphasises the need for good design stating that 'waste management facilities should be well-designed, so that they contribute positively to the character and quality of the area in which they are located. Poor design is in itself undesirable, undermines community acceptance of waste facilities and should be rejected'. The photos below demonstrate the degree of design innovation that can be used in relation to waste management proposals.

4.261 Importantly national and regional policy on waste requires it to be managed close to where it is generated. Often this means within or close to existing urban areas. Good design therefore has a key role to play in integrating waste facilities into the existing built fabric. Our proposed approach is set out in Core Policy WCS13 below.

[48] DEFRA/CABE - Designing Waste Facilities, a key guide to modern design in waste

Core Policy WCS13 - Design

Subject to compliance with other relevant development plan policies, planning permission will be granted for waste related development that achieves a high standard of design that is clearly robust and articulated through a Design and Access Statement.

Particular issues to address will include:

- **How the proposal reflects, responds and is appropriate to its local environment and surroundings within Gloucestershire;**
- **The durability, adaptability and sustainability of the proposal including the use of sustainable drainage to reduce the impact of surface water run-off;**
- **How the proposal makes the most efficient use of the site; and**
- **The use of high quality architecture and landscaping.**

Poor quality design which fails to reflect or contribute positively to the character and quality of the area in which the proposal is located will be rejected.

How will we know if the policy is working?

4.262 There are a number of measures including:

- Number and percentage of waste related developments refused planning permission where design was cited as a reason for refusal.
- Number of applications submitted with a design and access statement.

4.263 Further information is set out in Section 6.0 – Measuring Progress.

FC13

~~Sustainable~~ Transport

4.264 Most of Gloucestershire's waste is transported by road. Whilst Gloucestershire has an extensive road network including good links to the M4 and M5 motorways and other strategic routes, clearly in the interests of sustainability and reducing the impact of road transport on the environment, we need to consider first how to minimise the impact of transporting waste by road e.g. through bulking and transfer and second, whether more of our waste can be transported by alternative sustainable modes of transport in particular water (river and canal) and rail. This could potentially help to reduce the overall impact of waste management operations within the county.

FC13

Bulking and Transfer

4.264a One of the main ways in which we can reduce the impact of waste being transported by road is through the effective use of 'bulking and transfer' facilities. These are temporary waste storage facilities where waste is taken to be sorted and stored before being transported onwards for further management or disposal. Some facilities deal with mixed-waste, others with single waste types such as asbestos. Some include an element of waste recycling and recovery.

4.264b Importantly, the bulking of waste for onward transport to other waste facilities allows for greater efficiency, helps reduce journey length and in turn can help reduce traffic impacts.

4.264c If for example we provide bulking and transfer facilities in the right locations across Gloucestershire, some bin lorries will be able to drop their load close to where it was collected from allowing for the waste to be 'bulked up' and put onto larger vehicles for onward transfer to an appropriate facility as currently happens at Lydney and Cirencester. This is particularly applicable to more remote areas which are some way distant from the main waste management facilities.

4.264d As we described earlier, there are a number of existing waste bulking and transfer facilities in Gloucestershire dealing with different waste types including MSW, C&I, C&D and clinical waste. An element of waste transfer also takes place at other facilities including Household Recycling Centres (HRC).

4.264e Whilst our Waste Data Paper suggests that we already have adequate transfer capacity, there are a number of reasons why new or expanded facilities or a different spatial arrangement might be required in the future. These include changes in local authority contracts, different collection arrangements (for example arising from the implementation of the Joint Municipal Waste Management Strategy (JMWMS)) and commercial changes.

4.264f This may result in the need for new or expanded bulking and transfer facilities either to replace existing ones or to serve other parts of the County not currently covered.

4.264g Policy WCS13a overleaf therefore provides a criteria-based approach for bringing forward new bulking and transfer facilities in appropriate locations across the County. It should be noted that any waste transfer proposal which includes an element of recycling will also be considered having regard to Core Policy WCS2 as well as any other relevant core policies.

FC13

Core Policy WCS13a – Bulking and Transfer

In order to promote greater efficiency and to reduce the potential impact of transporting waste by road, particularly on the Strategic Road Network (SRN) the Council will support in principle, proposals relating to the development of new and expanded bulking and transfer facilities.

Planning permission will be granted subject to the following criteria being met:

1. **It can be demonstrated that the impact on the environment and neighbouring land uses is acceptable.**
2. **The highway access is suitable for the proposed vehicle movements.**
3. **The proposal contributes towards providing a sustainable waste management system for Gloucestershire.**

Particular support will be given to proposals that:

- **Are located within or close to an urban area; and/or**
- **Involve the re-use of previously developed land, vacant or underutilised employment land and/or redundant rural buildings including farm diversification opportunities; and/or**
- **Involve co-location with an existing operation of a similar or complimentary nature; and/or**
- **Incorporate alternatives to the transport of waste by road (rail, water etc.), and/or**
- **Are well located to allow employees to reach the site by foot, cycle or public transport.**

How will we know if the policy is working?

4.264h There are a number of measures including:

- Total available bulking and transfer capacity.
- Number of planning applications refused on the basis of Policy WCS13a.
- Number of new/expanded bulking and transfer facilities permitted per year.

Sustainable Transport

FC13

4.265 As we have outlined above, most waste in Gloucestershire is transported by road. Whilst the impact of this can be mitigated to a certain extent through effective bulking and transfer, in the interest of sustainable development we need to consider whether more of our waste can be transported by alternative modes of transport e.g. rail and water. The main issue militating against this is generally 'economies of scale' where the movement of waste or any bulk goods by rail or water only generally works with large tonnages over long distances. For example, significant quantities of waste are moved by rail from Bristol to Buckinghamshire.

4.266 With regard to rail transport, Gloucestershire is served by three main railway lines:

- Birmingham - Bristol main line.
- Gloucester (Standish Junction) - Swindon - London.
- South Wales – Gloucester, Cheltenham & the midlands.

4.267 There are nine stations on this network in Gloucestershire. However, importantly there are currently no dedicated rail freight terminals in Gloucestershire and all rail freight is transiting through the county. The Council's draft Local Transport Plan 3 (2011-2026) supports the aspiration to identify a railfreight terminal in Gloucestershire.

4.268 It should be noted that railway lines run close to some existing waste management facilities in the county including a number of the strategic site allocations identified in Core Policy WCS4. This provides the potential for the movement of waste by rail should it prove to be viable and appropriate and would contribute to a sustainable waste management network for Gloucestershire.

4.269 With regard to transport by water, Gloucestershire has a strong shipping heritage, evidenced by the Gloucester Docks complex and the Gloucester and Sharpness Canal which links the Docks to the Severn Estuary.

4.270 Today, Gloucester Docks are primarily used for leisure purposes and commercial shipping is limited to small scale operations at Sharpness Docks, (right) which deals with bulk trade (including scrap metal) with routes to France, Spain and Portugal. Entrance to the port is restricted by tide and there is currently only road access to the port although there is a disused rail link. Whilst there is a harbour at Lydney, it does not operate commercially.

4.271 The Council's draft Local Transport Plan 3 (2011-2026) supports the potential to restore the rail link to the port of Sharpness, should a viable business case and private finance be forthcoming. Any proposals for waste management facilities will be expected to comply with the transport strategy set out in the LTP.

4.272 The WCS has a role to play in promoting the use of sustainable modes of transport such as water and rail for moving waste in order to reduce the current reliance and impact on the road network.

4.273 There are several ways this can be achieved. First we can ensure that strategic waste allocations (see Core Policy WCS4) are, subject to other locational requirements, situated so as to maximise the opportunities for sustainable modes of transport such as rail and water. As described above, several of the sites allocated in Core Policy WCS4 are located in close proximity to the rail network providing some possibility of creating a rail link for the sustainable movement of waste.

4.274 Secondly, we can ensure that where appropriate, waste-related development is supported by a Transport Assessment (TA) and where appropriate, a Travel Plan.

Transport Assessment

4.275 National planning policy[49] states that where a new development is likely to have significant transport implications, a Transport Assessment (TA) should be prepared and submitted with a planning application for the development. It will then be used to determine whether the impact of the development on transport is acceptable.

4.276 A TA identifies what measures will be taken to deal with the anticipated transport impacts of the scheme and to improve accessibility and safety for all modes of travel, particularly for alternatives to the car such as walking, cycling and public transport. For the proposed waste sites, HGV movements and the scope for potential alternatives to road such as rail and water will be an important consideration.

4.277 Where the anticipated impacts are relatively modest a less detailed version of a TA known as a Transport Statement (TS) may be required.

[49] PPG13: Transport.

4.278 'Guidance on Transport Assessment' (Department for Transport 2007) sets out indicative 'thresholds' that will be used to determine whether a TA is required in support of proposed development. In short, any major waste development generating more than 100 two-way movements a day or more than 30 movements within one hour is likely to require a Transport Assessment. Proposals under this threshold may also require a TA where there could be an impact on the Strategic Road Network (SRN). It is recommended that early discussion be held with the Local Highway Authority and where relevant, the Highways Agency, to determine whether a TA is required and, if so, to agree the scope of the TA.

FC35

Travel Plans

4.279 Travel Plans can help to reduce the impact of new development on the highway network and the environment. Issues typically addressed include the marketing and promotion of walking, cycling, car sharing, public and community transport services for visitors, residents and employees.

4.280 The Council's approach as set out in its draft Local Transport Plan 3 (2011-2026) is that Travel Plans will be required for new development in accordance with the thresholds set out in the Department for Transport's 'Guidance on Transport Assessment'. As with the TA, early discussion with the Local Authority and where relevant, the Highways Agency is recommended to agree the need for, ~~and~~ scope and suitability of a Travel Plan.

FC36

4.281 Where a development is deemed to require a travel plan, a S106 or unilateral legal agreement will be the mechanism used to secure the development of the travel plan and any contributions required to support its implementation. A contribution towards costs of monitoring the travel plan will also be required.

4.282 Contributions towards infrastructure, bus services and other related measures to make the development accessible and acceptable will be secured separately in addition to the Travel Plan.

4.283 Our proposed approach is set out in Core Policy WCS14 below. The policy recognises that road transport is the current primary means of transporting waste in Gloucestershire and that this is likely to remain the case for the foreseeable future.

4.284 As such whilst it encourages the development of alternative, more sustainable modes of transport it also addresses the need to minimise the impact of waste related development on the highway network including the Strategic Road Network (SRN).

Core Policy WCS14 – Sustainable Transport

In the interests of sustainable development and minimising the impact of waste management on Gloucestershire's roads and the wider natural and historic environment, proposals for waste-related development that utilise alternative modes of transport such as rail and water will be positively supported. This is subject to compliance with other relevant development plan policies and the contribution to a sustainable waste management system for Gloucestershire.

Any development exceeding the thresholds set out in the Department for Transport publication 'Guidance on Transport Assessment' must be supported by a Transport Assessment (TA) and Travel Plan. Consideration will also be had to the location of the proposed development in determining whether a TA is required.

FC37

Development that would have an adverse impact on the highway network which cannot be mitigated will not be permitted.

Where a Travel Plan is required the developer will be expected to enter into a Section 106 or unilateral legal agreement to secure the development of the travel plan and any contributions required to support its implementation. A contribution towards costs of monitoring the travel plan will also be required.

How will we know if the policy is working?

4.285 There are a number of measures including:

- Congestion - average journey time mile during the morning peak.
- Per capita reductions in CO_2 emissions in the LA area.
- Number and % of waste related developments utilising non-road means of transport (rail, water).
- Number and % of waste related planning applications supported by a Transport Assessment (TA).
- Number and % of waste related planning applications supported by a Travel Plan.
- Number of Section 106 agreements relating to transport entered into per annum.
- The number and % of all waste refusals per annum, where highways was cited as part of the reason for refusal.

4.286 Further information is set out in Section 6.0 – Measuring Progress.

5. Implementing the Strategy

Actions

Lead Agencies

Other Partners

5.1 Having outlined our spatial strategy for waste management in Gloucestershire in the period up to 2027 we need to explain how it will be delivered when and by whom.

5.2 There is little point in having a strategy in place that simply sits on a shelf, gathering dust. It needs to make a real difference and if it is failing to do so, it needs to be revised or replaced.

5.3 As we have already outlined in Section 2.0 waste management is a complex subject with a range of different organisations involved. Table 3 below identifies the main organisations in Gloucestershire, their roles and responsibilities.

Table 3 – Waste Roles and Responsibilities

Name	Does what?
Gloucestershire Waste Partnership (GWP)	Partnership of the County Council and the six District Councils to further the process of joint working and implement the Joint Municipal Waste Management Strategy (JMWMS).
Gloucestershire County Council	Acts as Waste Disposal Authority (WDA) responsible for disposing of the waste collected by the District Councils and Waste Planning Authority (WPA) dealing with planning matters relating to waste management.
District Councils (Gloucester, Cheltenham, Tewkesbury, Stroud, Forest of Dean, Cotswold)	Act as waste collection authority (WCA) for municipal waste and as planning authority for 'district' type development (housing, retail, employment etc).
Private waste management companies	Collect and dispose of a variety of different types of waste.
Environment Agency (EA)	Issue environmental permits, monitor pollution control, provide advice on environmental issues including pollution and flood risk and collect data returns from waste operators.

5.4 Other organisations with an indirect link to waste management in Gloucestershire include the Local Biodiversity Partnership for Gloucestershire, AONB management boards, utility providers (electricity, gas, water) the Highways Agency, rail providers, and of course individuals, shops and businesses which dictate the amount of waste produced. The implementation framework set out overleaf explains how each of the Core Policies set out in Section 4.0 will be delivered, by whom and when. It also highlights any potential constraints to delivery and the measures that will be put into place to overcome these.

Implementation Framework

Policy	Delivery mechanism/s (i.e. how will the policy be delivered?)	Delivery Agencies		Delivery Funding	Delivery Timescale	Potential constraints to delivery	Mitigation to overcome potential constraints
		Lead	Other				
WCS1 – Waste Reduction	- Gloucestershire planning authorities requiring the submission of a waste minimisation statement in support of all 'major' development. - Partnership working e.g. Gloucestershire Waste Partnership (GWP). - Presentations and talks in schools, colleges etc.	GCC GWP	District Councils Developers Schools & colleges General public, shops and businesses	- Costs incurred include officer time processing planning applications and presenting talks in schools, colleges etc. - Developer to fund cost of preparing statement and subsequent implementation (i.e. the practical measures that will be introduced to help reduce, re-use and recycle more waste).	Similar policy already in place through Waste Local Plan and Supplementary Planning Document 'Waste Minimisation in Development Projects' therefore general approach already ongoing. Core Policy WCS1 to be implemented with immediate effect upon adoption of the Waste Core Strategy and to be applied thereafter until updated or replaced.	- District Councils not implementing the requirements of the policy i.e. not requiring the submission of a waste minimisation statement in support of all major development. - Developers opting not to submit a waste minimisation statement in support of major development. - Businesses and people not actively reducing the amount of waste they produce. - Loss of resources for raising awareness.	- Engagement with District Councils to ensure implementation. - Any major planning application not supported by a waste minimisation statement not accepted and processed. - Education and promotional campaigns such as the Gloucestershire waste reduction challenge. - Potential developer funding.

Policy	Delivery mechanism/s (i.e. how will the policy be delivered?)	Delivery Agencies		Delivery Funding	Delivery Timescale	Potential constraints to delivery	Mitigation to overcome potential constraints
		Lead	Other				
FC13 WCS2 – Recycling & Composting ~~/ Anaerobic Digestion (including bulking & transfer)~~	- Through the granting of planning permission. The delivery of sites for recycling and composting~~, AD, bulking and transfer~~ will be largely down to the waste industry to come forward with where there is market demand. The criteria set out in the policy provide a framework against which to consider the merits of any proposal that comes forward. - Partnership working e.g. Gloucestershire Waste Partnership (GWP) and any future procurement.	Waste Industry	GCC acting as WPA GWP (including WDA and WCA) Environment Agency	- The funding of new facilities for recycling, composting, ~~bulking and transfer~~ will be the responsibility of the private waste industry. - Officer time spent processing any planning application or being involved in discussions concerning the development of markets for recycled materials through partnership working. - The WDA and WCA may be involved in proposing schemes due to policy and renewal of contracts for recycling and composting of MSW.	- Core Policy WCS2 to be implemented with immediate effect upon adoption of Waste Core Strategy and to be applied thereafter until updated or replaced. - The timing of new facilities coming forward will be largely down to the private waste industry. The policy provides the criteria to determine any proposal when it comes forward. - The Council's aim is to achieve 60% recycling and composting by 2020.	- Local opposition to development proposals. - Failure to achieve planning permission. - Recycling rates do not increase as much as expected. - Low market demand for recycled materials.	- Developer to undertake pre-application consultation. - Planning appeal or re-submission of revised planning application. - Education and effective campaigning plus improved collection of recyclates and green waste. - Partnership working e.g. GWP and Gloucestershire First.

Policy	Delivery mechanism/s (i.e. how will the policy be delivered?)	Delivery Agencies		Delivery Funding	Delivery Timescale	Potential constraints to delivery	Mitigation to overcome potential constraints
		Lead	Other				
WCS3 – Inert Waste Recycling and Recovery	- Through the granting of planning permission. The delivery of sites for inert waste recycling and recovery will be largely down to the waste industry to come forward with. The criteria set out in the policy provide a framework against which to consider the merits of any proposal that comes forward.	Waste Industry	GCC acting as WPA Environment Agency	- The funding of new inert waste recovery and recycling facilities will be the responsibility of the private waste industry. - The only other cost incurred will be the officer time spent processing any planning application.	Core Policy WCS3 to be implemented with immediate effect upon adoption of Waste Core Strategy and to be applied thereafter until updated or replaced.	- Local opposition to development proposals. - Failure to achieve planning permission. - Low demand for recycled aggregate e.g. due to downturn in the construction industry.	- Developer to undertake pre-application consultation. - Planning appeal or re-submission of revised planning application. - Market demand is outside the scope of the WCS.
FC13	WCS3a – Anaerobic Digestion (AD)	- Through the granting of planning permission. The delivery of sites for AD will be largely down to the waste industry to come	Waste Industry	GCC acting as WPA Environment Agency	- The funding of new AD facilities will be the responsibility of the private waste industry. - Officer time spent processing any	- Core Policy WCS3a to be implemented with immediate effect upon adoption of Waste Core Strategy and to be applied thereafter	- Local opposition to development proposals. - Failure to achieve planning permission. - Lack of suitable source, segregated waste	- Developer to undertake pre-application consultation. - Planning appeal or re-submission of revised planning

FC13

	forward with where there is market demand. The criteria set out in the policy provide a framework against which to consider the merits of any proposal that comes forward.			planning application. - The WDA and WCA may be involved in proposing schemes due to policy and renewal of contracts.	until updated or replaced. - The timing of new facilities coming forward will be largely down to the private waste industry. The policy provides the criteria to determine any proposal when it comes forward.	feedstock	application. - Introduction of more source-segregated collections e.g. kitchen waste
WCS4 – Other Recovery (including Energy Recovery)	- Through the Council's 'Residual Waste Project' and the awarding of a contract to a private waste management company in respect of residual municipal waste. - Through the granting of planning permission. Planning permission will be granted on the strategic site allocations subject to	GCC acting as WDA and WPA	Waste Industry DEFRA Environment Agency	- Funding to meet the cost of the 'Residual waste Project' will be met by the WDA. - Funding the delivery of any other residual waste recovery proposals either on one of the strategic site allocations or on an unallocated site will be the responsibility of the waste industry. - Significant cost in terms of officer time	- Core Policy WCS4 to be implemented with immediate effect upon adoption of Waste Core Strategy and to be applied thereafter until updated or replaced. - It is envisaged that the residual municipal waste contract will be awarded in Summer 2011 with a facility available in 2015. - Speculative	- Local opposition to development proposals. - Failure to achieve planning permission. - Timing/delivery of government fiscal measures.	- Developer to undertake pre-application consultation - Planning appeal or re-submission of revised planning application.

	compliance with the general and key development criteria and other relevant development policies and considerations. - Strategic scale proposals outside Zone C refused planning permission. - For unallocated, non-strategic sites, the criteria set out in the policy provide a framework against which to consider the merits of any proposal that comes forward.			spent processing any planning application.	proposals either on one of the strategic site allocations or another unallocated site could come forward at any time.		

Policy	Delivery mechanism/s (i.e. how will the policy be delivered?)	Delivery Agencies		Delivery Funding	Delivery Timescale	Potential constraints to delivery	Mitigation to overcome potential constraints
		Lead	Other				
WCS5 – Waste Water	- Through the granting/refusal of planning permission. The delivery of sites for waste water treatment will be largely down to the water utility companies to come forward with. More will be known about likely additional capacity requirements once the quantum and distribution of growth in Gloucestershire has been determined locally. The criteria provide a framework against which to consider the merits of any proposal that comes forward.	Water Utility Companies	GCC acting as WPA District Councils Environment Agency	- The funding of new waste water treatment facilities will be the responsibility of the private sector. - The only other cost incurred will be the officer time spent processing any planning application. - District Officer time spent preparing Local Development Frameworks and establishing likely demand for additional waste water capacity within the county.	- Core Policy WCS5 to be implemented with immediate effect upon adoption of Waste Core Strategy and to be applied thereafter until updated or replaced. - More will be known about waste water requirements in central Gloucestershire upon adoption of the JCS for Gloucester, Cheltenham and Tewkesbury – scheduled for 2011 and for wider Gloucestershire upon adoption of the Core Strategies for Forest of Dean, Cotswold and Stroud District.	- Local opposition to development proposals. - Failure to achieve planning permission. - Lack of suitable, deliverable sites available.	- Developer to undertake pre-application consultation. - Planning appeal or re-submission of revised planning application. - Potential future update to WCS to include allocation of site/s for waste water treatment where central to delivery of the strategy and subject to there being a demonstrable need for additional waste water capacity.

Policy	Delivery mechanism/s (i.e. how will the policy be delivered?)	Delivery Agencies		Delivery Funding	Delivery Timescale	Potential constraints to delivery	Mitigation to overcome potential constraints
		Lead	Other				
WCS6 – Hazardous Waste	- Through the granting of planning permission in relation to proposals for hazardous waste development.	Waste Industry	GCC acting as WPA Environment Agency	- The funding of any new or expanded hazardous waste facility including any proposal that would help move the management of hazardous waste up the waste hierarchy would be the responsibility of the private sector. - The only other cost incurred will be the officer time spent processing any planning application.	- Core Policy WCS6 to be implemented with immediate effect upon adoption of Waste Core Strategy and to be applied thereafter until updated or replaced. - Speculative development proposals relating to hazardous waste may come forward at any time.	- Local opposition to development proposals. - Failure to achieve planning permission.	- Developer to undertake pre-application consultation. - Planning appeal or re-submission of revised planning application.

Policy	Delivery mechanism/s (i.e. how will the policy be delivered?)	Delivery Agencies		Delivery Funding	Delivery Timescale	Potential constraints to delivery	Mitigation to overcome potential constraints
		Lead	Other				
WCS7 – Cumulative Impact	- Through the granting /refusal of planning permission in relation to any development that by virtue of cumulative impact, would have an unacceptable impact on the local community and environment.	GCC acting as WPA	Waste Industry	- There may be some cost associated with mitigating the impact of development e.g. highway improvements, the cost of which would be met by the developer. - Some cost in terms of processing any planning application.	- Core Policy WCS7 to be implemented with immediate effect upon adoption of Waste Core Strategy and to be applied thereafter until updated or replaced.	- The issue of cumulative impact is to a certain extent subjective and requires a judgement to be made about what may or may not be acceptable.	- Planning applications to be supported by detailed information concerning the potential impact of development including where appropriate an environmental impact assessment (EIA).
WCS8 – Safeguarding Sites for Waste Management	- Through the granting/refusal of planning permission in relation to any development that might impinge on the operation or delivery of an existing or proposed waste management site. - Through pre-app discussion/consultati	GCC acting as WPA District Councils as LPA	Waste Industry Other developers e.g. house builders	- The cost of any necessary mitigation e.g. acoustic barriers, landscaping bunds etc. would be borne by the developer. - The only other cost incurred will be the officer time spent processing any planning application.	- Core Policy WCS8 to be implemented with immediate effect upon adoption of Waste Core Strategy and to be applied thereafter until updated or replaced.	- District Councils not notifying County Council in relation to development proposals affecting an existing or proposed waste management site. - District Councils choosing to disregard the view of the County Council as a consultee and allowing conflicting	- Engagement with District Councils to ensure that the views of the County Council are sought on any relevant development proposal. - There is no course of action should the District Councils

	on.					development or allocations near to existing waste management sites.	choose to do this.
WCS9 – Flood Risk	- Through the granting/refusal of planning permission for waste-related development that could have a direct or indirect impact on a flood risk area. - Application of the 'sequential test' both in relation to site allocations and speculative development. - The requirement to submit a Flood Risk Assessment (FRA) in relation to all development of more than 1 hectare. - Effective engagement with the Environment Agency.	GCC acting as WPA	Environment Agency Waste Industry	- The cost of any mitigation measures necessary to make the development acceptable with regard to potential flood risk, including the preparation of a Flood Risk Assessment (FRA) would be borne by the developer. - The only other cost incurred will be the officer time spent processing any planning application. - Any proposal is also likely to involve EA officers providing technical advice.	- Core Policy WCS9 to be implemented with immediate effect upon adoption of Waste Core Strategy and to be applied thereafter until updated or replaced. - Speculative development proposals affecting areas of flood risk could come forward at any time.	- Failure to apply the sequential test both in relation to site allocations and the consideration of planning applications for speculative development. - Insufficient technical knowledge of detailed flood risk matters. - Lack of suitable, deliverable sites available within Flood Zone 1.	- GCC to ensure the sequential approach is applied in relation to site allocations made through the development plan and in relation to speculative development proposals where these would have a flood risk. - The technical advice of the Environment Agency to be sought where necessary. - Application of the sequential test to identify suitable, deliverable alternatives within Flood Zone 2 and failing that within Flood Zone 3a.

WCS10 – Green Belt	- Through the granting or refusal of planning permission for waste related development located within the Gloucester – Cheltenham Green Belt. - Through proper application of Core Policy WCS13 – Design. - Partnership working with District Councils in relation to potential revisions to Green Belt boundaries including where appropriate the designation of 'inset sites' within the Green Belt.	GCC acting as WPA District Councils as LPA	Waste Industry Environment Agency	- Funding for any market-led waste related development would be the responsibility of the private sector. - The only other cost incurred will be the officer time spent processing any planning application. - There will also be officer time spent working in partnership with the District Councils in relation to potential revisions to the Green Belt boundary once the quantum and distribution of growth has been determined through the JCS.	- Core Policy WCS10 to be implemented with immediate effect upon adoption of Waste Core Strategy and to be applied thereafter until updated or replaced. - Speculative development proposals within the Gloucester – Cheltenham Green Belt could come forward at any time. - Potential revisions to the Green Belt boundary will be taken forward through the Joint Core Strategy scheduled for adoption in 2011.	- The only potential constraint to delivery would be potential delays to the Joint Core Strategy (JCS) and the associated process of reviewing the existing boundaries of the Gloucester – Cheltenham Green Belt.	- The progress of the JCS and supporting evidence base are outside the scope of the WCS. GCC will however continue to engage with the District Councils in relation to the preparation of the strategy and supporting evidence base.
WCS11 – Areas of Outstanding Natural Beauty (AONB)	- Through the granting/refusal of planning permission for waste-related	GCC acting as WPA	AONB Boards Natural	- Funding for any market-led waste related development within or affecting an	- Core Policy WCS11 to be implemented with immediate effect upon adoption	None.	N/a

	development within or affecting an Area of Outstanding Natural Beauty (AONB). - Partnership working with AONB management boards.		England Environment Agency	AONB would be the responsibility of the private sector. - The cost of any mitigation to make the proposed development acceptable would also be the responsibility of the private sector. - The only other cost incurred would be officer time spent processing any planning application or partnership working with the AONB management boards.	of Waste Core Strategy and to be applied thereafter until updated or replaced. - Speculative development proposals within or affecting one of Gloucestershire's three AONBs could come forward at any time. - GCC partnership working with AONB boards is ongoing.		
WCS12 – Nature Conservation (Biodiversity & Geodiversity)	- Through the granting/refusal of waste-related development within or affecting a site of national or local nature conservation importance.	GCC acting as WPA	Waste Industry Environment Agency Natural England	- Funding for any market-led waste related development within or affecting a site of national or local biodiversity and geodiversity interest would be the	- Core Policy WCS12 to be implemented with immediate effect upon adoption of Waste Core Strategy and to be applied thereafter until updated or	None.	N/a

	- Consideration of the potential relationship of the proposal to a Strategic Nature Area (SNA) as defined on the Nature Map for Gloucestershire. - Liaison between GCC and relevant bodies including Natural England and the Gloucestershire Biodiversity Partnership.		Local Biodiversity Partnership Gloucester-shire GeoConser-vation	responsibility of the private sector. - The cost of any mitigation to make the proposed development acceptable or to incorporate nature conservation features into the design of the proposal would also be the responsibility of the private sector.	replaced. - Speculative development proposals within or affecting a site or national or local interest could come forward at any time. - GCC partnership working with Biodiversity Partnership and Geo Conservation is ongoing.		
WCS13 – Design	- Through the granting/refusal of planning permission for waste-related development having regard to issues of design and layout. - Requirement to submit a Design and Access Statement .	GCC acting as WPA	Waste Industry	- Funding for any market-led waste related development proposal would be the responsibility of the private sector including the requirement to prepare a Design and Access Statement. - There may be a cost associated with improvements to	- Core Policy WCS13 to be implemented with immediate effect upon adoption of Waste Core Strategy and to be applied thereafter until updated or replaced. - Speculative development proposals could come forward at any	None.	N/a

				design and layout to make proposals acceptable in design terms. This would be the responsibility of the developer. - The only other cost incurred would be officer time spent processing any planning application.	time.		
FC13	WCS 13a – Bulking and Transfer	- Through the granting of planning permission. The need for the delivery of new or expanded bulking and transfer sites will be a matter for the WDA, the WCA and the private waste industry. The criteria set out in the policy provide a framework against which to consider the merits of any proposal that comes forward.	GWP (including WDA and WCA) Waste Industry	GCC acting as WPA	- The funding of new or expanded bulking and transfer facilities will potentially be met by the public sector, the private sector or a combination of the two depending on contractual arrangements that may be put into place. - Officer time spent processing any planning application	- Core Policy WCS13a to be implemented with immediate effect upon adoption of the Waste Core Strategy and to be applied thereafter until updated or replaced. - The timing of new facilities coming forward will be largely down to a combination of the WDA and WCA through the GWP and the private	- Local opposition to development proposals. - Failure to achieve planning permission.	- Developer to undertake pre-application consultation. - Planning appeal or re-submission of revised planning application.

	- Partnership working e.g. Gloucestershire Waste Partnership (GWP) and any future procurement.				waste industry. The policy provides the criteria to determine any proposal when it comes forward.		
WCS 14 – Sustainable Transport	- Through the granting/refusal of planning permission for waste-related development including where such development would have a transport impact and offers the potential to utilise sustainable modes of transport such as water and rail. - Requirement to submit a Transport Assessment (TA) and Travel Plan where appropriate. - Use of legal agreement to secure necessary transport measures where appropriate including	GCC acting as WPA and Highways Authority	Waste Industry Highways Agency British Waterways Rail providers	- Funding for any market-led waste related development proposal would be the responsibility of the private sector. - The cost of preparing a Transport Assessment (TA) and Travel Plan would be the responsibility of the private sector including monitoring. - Any measures necessary to promote the use of sustainable transport and/or make the development acceptable in transport terms would also fall to the	- Core Policy WCS14 to be implemented with immediate effect upon adoption of Waste Core Strategy and to be applied thereafter until updated or replaced. - Speculative development proposals could come forward at any time.	- The main constraint to delivery of Core Policy WCS14 is the potential difficulties associated with securing effective sustainable transport linkages, having regard to issues of land ownership, viability and economies of scale.	- Potential options to be fully explored through the pre-planning and planning stages. - Strategic site allocations located so as to facilitate the provision of sustainable transport links when development proposals come forward e.g. proximity to rail and water linkages.

	monitoring, lorry routing etc.			private sector. - Section 106 aggreements.			

6. Measuring Progress

Monitor Progress Indicators Report

6.1 Having set out our strategy and the means by which it will be implemented we need to set out how we will measure the progress that is being made.

6.2 Monitoring is an essential part of any good strategy. In particular, it allows us to establish whether policies are achieving their objectives i.e. delivering what they are intended to deliver.

6.3 It also allows us to establish if policies are having any unintended, wider consequences (positive or negative) for example on the environment, society or the economy.

6.4 Where monitoring demonstrates that policies are not achieving their objectives or are having unintended consequences, particularly negative ones, appropriate measures can be put into place to rectify the situation.

6.5 This could be for example, a revision to a policy or even its replacement with an alternative. In some instances, more wholesale changes to the whole strategy may even be needed.

6.6 Effective monitoring also allows for:

- Plans to be adapted if circumstances change;
- Progress against national and regional targets to be measured;
- Progress against any local targets to be measured including the Sustainable Community Strategy (SCS);
- Progress against sustainability objectives to be measured; and
- Any meaningful trends to be established over time e.g. waste reduction.

6.7 Our proposed monitoring framework is set out below. It is based on the established 'objectives, policies, targets and indicators' approach to monitoring, which involves defining strategic objectives and developing these into policies before setting policy targets and indicators to determine if the policies are achieving their objectives or having unintended consequences.

6.8 We have already defined our strategic objectives (Section 3.0) and developed these into core policies (Section 4.0) including targets where applicable. In the monitoring framework below we set out the indicators that will be used to measure progress.

6.9 The framework considers each core policy in turn, highlights its aims and objectives and where applicable any specific targets. It then considers how the policy relates to the SA objectives set out in our Sustainability Appraisal (SA) Scoping Report[50] as well as any other relevant national, regional and local objectives e.g. from the Regional Waste Strategy (2004).

6.10 It then sets out the indicators that will be used to measure the impact that policies are having. Four different types of indicator are included:

- Contextual Indicators (provide general background information on all key changes taking place in the area).
- Core Output Indicators (a nationally agreed set of indicators intended to measure the direct effect of each policy). Currently taken from Core Output Indicators – Update 2/2008 (CLG).
- Local Output Indicators (a locally agreed set of indicators intended to measure the direct effect of each policy).
- Significant Effect Indicators (show the effects that policies are having on the goals/objectives set out in the Sustainability Appraisal).

6.11 The framework also identifies the various sources of data and the organisation/s responsible for monitoring.

6.12 The framework will form the basis of future monitoring arrangements and the results will be published no later than December each year through the Council's Annual Monitoring Report (AMR)[51].

6.13 This will provide a transparent assessment of the degree to which the WCS and its core policies are achieving their objectives or having unintended consequences.

6.14 Where monitoring suggests that policies need to be revised or replaced this will be carried out through future stakeholder consultation and subsequent revisions to the WCS.

[50] See www.gloucestershire.gov.uk/sustainabilityappraisal
[51] See www.gloucestershire.gov.uk/amr

Monitoring Framework

Reduction		
Policy		**WCS1 – Waste Reduction**
Policy Aims, Objectives and Targets		The policy seeks to ensure that the waste associated with the construction and ongoing occupation of new development is minimised as far as possible. All 'major' development must be supported by a Waste Minimisation Statement (WMS). The target is therefore to ensure that 100% of major developments are supported by a WMS. The policy also aims to ensure that awareness of waste reduction is raised to achieve a positive change in attitude and behaviour with regard to waste reduction. The WCS vision includes as an aim zero-growth in waste production by 2020.
Relevant SA objectives		Broad SA Objectives 4. To promote education and economic development in Gloucestershire giving opportunities to people from all social and ethnic backgrounds. Derived from this objective is a site focused objective which seeks: To educate the public about waste issues and to maximise community participation and access to waste services and facilities in Gloucestershire. 14. To reduce waste to landfill and in dealing with all waste streams to actively promote the waste hierarchy to achieve the sustainable management of waste. 15. To reduce contributions to and to adapt to climate change. Derived from this objective is a site focused objective which seeks: To reduce the global use of primary materials and minimise net energy balance requirements.
Other Relevant Aims, Objectives and Targets	International & National	National Waste Strategy - To reduce the amount of household waste not re-used, recycled or composted from over 22.2 million tonnes in 2000 by 29% to 15.8 million tonnes in 2010 with an aspiration to reduce it to 12.2 million tonnes in 2020 – a reduction of 45%. This is equivalent to a fall of 50% per person (from 450 kg per person in 2000 to 225 kg in 2020).
	Regional[52]	Regional Waste Strategy - by 2020 all business will have a waste minimisation and recycling action plan. The South West Region will become a minimum waste producer by 2030, with business and households maximising opportunities for reuse and recycling.
	Local[53]	Reduce the amount of waste sent to landfill, incineration, energy recovery and maximising the waste reused, recycled and composted – (currently within Local Area Agreement (LAA)). Sustainable Community Strategy (SCS) - to manage waste in a sustainable way. Gloucestershire Joint Municipal Waste Management Strategy (JMWMS) - to reduce Gloucestershire's municipal waste by addressing waste generation at the household level and further up the supply chain. From 2007 to visit a minimum of 50 schools per year. To reduce the growth of Gloucestershire's municipal waste arisings to zero by 2020.

[52] The Regional Spatial Strategy (RSS) is proposed to be abolished but the Regional Waste Strategy (RWS) remains a valid material consideration.

[53] Includes Local Area Agreement (currently running 2008-2011 and any replacement that may be reported locally to the Gloucestershire Strategic Partnership), Sustainable Community Strategy (SCS) and Joint Municipal Waste Management Strategy.

Baseline Position[54]		The total amount of waste managed in Gloucestershire for the base years 2008 and 2009/10 was 1,183,000 tonnes.
Indicators	National[55]	Core Output Indicator W2: Amount of municipal waste arising, and managed by management type by waste planning authority. Residual household waste per household. (currently National Indicator (NI) 191) Percentage of household waste sent for reuse, recycling and composting (currently NI 192).
	Local	Number of 'major development' applications that include a Waste Minimisation Statement. Number of educational/promotional visits/exhibitions carried out per annum. Total amount of waste arising in Gloucestershire.
	Significant Effect	Per capita reduction in CO_2 emissions in the LA area (largely reported through District Councils AMRs) (currently NI 186).
Data Sources		GCC District Councils Annual Monitoring Report (AMR)
Monitoring Body		GCC District Councils
Recycling and Composting		
Policy		**WCS2 – Recycling & Composting~~/Anaerobic Digestion (including Bulking and Transfer)~~**
Policy Aims, Objectives and Targets		The aim of the policy is to provide a framework that will allow proposals relating to the development of new and expanded recycling~~,~~ and composting~~, anaerobic digestion, bulking and transfer~~ facilities including businesses that process recyclates and re-use waste, to be determined. The provision of additional facilities will help the Council to achieve its target of at least 60% household recycling and composting by 2020 and help to facilitate the delivery of other objectives including the diversion of MSW and C&I waste from landfill. The policy also supports proposals relating to the development of markets for recycled materials. The policy will also help to deliver the Council's Landfill Allowance Trading Scheme (LATS) requirements to 2020.
Relevant SA objectives		Broad SA Objectives 5. To safeguard the amenity of local communities from the potential adverse impacts of minerals and waste development. 12. To reduce the adverse impacts of lorry traffic on communities through means such as: a) reducing the need to travel b) promoting more sustainable means of transport e.g. by rail or water c) sensitive lorry routing d) the use of sustainable alternative fuels e) promoting the management of waste in one of the nearest appropriate installations. 14. To reduce waste to landfill and in dealing with all waste streams to actively promote the waste hierarchy to achieve the

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[54] Includes relevant Contextual Indicators.
[55] Includes Core Output Indicators and National Indicators (198).

		sustainable management of waste. 15. To reduce contributions to and to adapt to climate change. Derived from this objective is a site focused objective which seeks: To reduce the global use of primary materials and minimise net energy balance requirements.
Other Relevant Aims, Objectives and Targets	International & National	EU Landfill Directive: By 2010 the biodegradable waste landfilled must be reduced to 75% of that produced in 1995. By 2013 the biodegradable waste landfilled must be reduced to 50% of that produced in 1995. By 2020 the biodegradable waste landfilled must be reduced to 35% of that produced in 1995. National Waste Strategy (2007): Household waste recycling and composting: at least 40% by 2010, 45% by 2015 and 50% by 2020.
	Regional	Regional Waste Strategy - by the year 2020 over 45% of waste is recycled and re-used and less than 20% of waste produced in the region will be landfilled.
	Local	Reduce the amount of waste sent to landfill, incineration, energy recovery and maximising the waste reused, recycled and composted – (currently within Local Area Agreement (LAA)). SCS - to manage waste in a sustainable way. JMWMS – minimum household recycling & composting rate of 40% by 2009/10, 50% by 2014/15 and 60% by 2019/20. Achieve an average participation rate of 80% in recycling & composting collection schemes.
Baseline Position[56]		In 2009/10, the county average household recycling and composting rate was 42%. There are currently ~~four~~ five commercial-scale composting facilities in Gloucestershire with a total capacity of ~~113,000~~ 149,000 tonnes per year. There are six household recycling centres (HRCs) with a total capacity of 66,299 tonnes per year. There is also additional recycling capacity at other bulking, transfer and C&I facilities within the county.
Indicators	National	Core Output Indicator W1: capacity of new waste management facilities by waste planning authority. Percentage of household waste sent for reuse, recycling and composting (currently NI 192). Percentage of municipal waste landfilled (currently NI 193).
	Local	Total available recycling/composting capacity. Number of new/expanded recycling and composting~~/AD~~ facilities permitted per year. Number of planning applications refused on the basis of Policy WCS2. Number of 'strategic' composting and recycling facilities permitted inside and outside 'Zone C' per year. Number of recyclates 're-processing' facilities in Gloucestershire.
	Significant Effect	Per capita reduction in CO_2 emissions in the LA area (largely reported through District Councils AMRs) (currently NI 186). Overall/general satisfaction with local area (currently NI 005). Number of people employed in waste-related activities.

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[56] Includes relevant Contextual Indicators

Data Sources		GCC Annual Monitoring Report (AMR)
Monitoring Body		GCC
Policy		**WCS3 – Inert Waste Recycling and Recovery**
Policy Aims, Objectives and Targets		The policy provides a framework against which to consider proposals relating to the development of inert waste recycling and recovery facilities. The aim is to divert around 85,000 tonnes per year of inert waste (largely construction and demolition waste) from landfill.
Relevant SA objectives		<u>Broad SA Objectives</u> 5. To safeguard the amenity of local communities from the potential adverse impacts of minerals and waste development. 12. To reduce the adverse impacts of lorry traffic on communities through means such as: a) reducing the need to travel. b) promoting more sustainable means of transport e.g. by rail or water. c) sensitive lorry routing. d) the use of sustainable alternative fuels. e) promoting the management of waste in one of the nearest appropriate installations. 13. To restore mineral sites to a high standard in order to achieve the maximum after use benefits including the conservation and enhancement of biodiversity. 14. To reduce waste to landfill and in dealing with all waste streams to actively promote the waste hierarchy to achieve the sustainable management of waste.
Other Relevant Aims, Objectives and Targets	International & National	National Waste Strategy - to halve the amount of construction, demolition and excavation wastes going to landfill by 2012. National and Regional Guidelines for Aggregates Provision (2005-2020) published June 2009 includes a target of 65 million tonnes per annum of secondary/recycled materials in the south west by 2015.
	Regional	Regional Waste Strategy – to make better use of inert waste materials, particularly construction and demolition waste, to substitute for primary aggregates. Waste development plans will make provision for facilities to maximise the reuse recycling and composting of C&D waste. The reuse, and recycling of C&D waste will be encouraged to reduce the need for primary aggregates.
	Local	SCS - to manage waste in a sustainable way. Reduce the amount of waste sent to landfill, incineration, energy recovery and maximising the waste reused, recycled and composted – (currently within Local Area Agreement (LAA)).
Baseline Position[57]		In 2008 a total of 293,000 tonnes of construction and demolition waste was managed in Gloucestershire. Of this, about

[57] Includes relevant Contextual Indicators

		211,000 tonnes was either went to landfill, or was used for landraise or was treated (e.g. concrete being crushed and screened and then used in construction for low grade aggregate). There are 28 permanent inert waste facilities for recycling and recovery. This includes transfer, treatment, crushing, screening and storage with a total capacity of 504,000 tonnes per year.
Indicators	National	Core Output Indicator M2: production of secondary and recycled aggregates by mineral planning authority. W1: Capacity of new waste management facilities by waste planning authority.
	Local	Percentage of C&D waste transferred for recycling, reprocessing, for use in land reclamation and landscaping or sent for disposal to landfill. Number of proposals for permanent inert recycling and recovery facilities permitted per year. Number of proposals for temporary inert recycling and recovery facilities permitted per year. Number of 'strategic' scale permanent inert recycling and recovery facilities permitted outside 'Zone C' per year.
	Significant Effect	Overall/general satisfaction with local area. (currently NI 005). Number of people employed in waste-related activities.
Data Sources		GCC Annual Monitoring Report (AMR)
Monitoring Body		GCC
Policy		**WCS3a –Anaerobic Digestion**
Policy Aims, Objectives and Targets		The aim of the policy is to provide a framework against which proposals for new and expanded anaerobic digestion facilities can be determined. The provision of additional AD facilities will compliment the provision of new and expanded recycling and composting facilities in the county and will help to divert organic waste such as kitchen waste from landfill. This in turn will help the Council to achieve its Landfill Allowance Trading Scheme (LATS) requirements to 2020. The provision of new or expanded AD facilities also offers the potential to generate renewable energy in the form of biogas which can be used to generate heat and electricity through combined heat and power (CHP) or turned into 'biomethane' and used as a vehicle fuel or injected into the mains gas grid.
Relevant SA objectives		Broad SA Objectives 5. To safeguard the amenity of local communities from the potential adverse impacts of minerals and waste development. e) promoting the management of waste in one of the nearest appropriate installations. 14. To reduce waste to landfill and in dealing with all waste streams to actively promote the waste hierarchy to achieve the sustainable management of waste. 15. To reduce contributions to and to adapt to climate change. Derived from this objective is a site focused objective which seeks: To reduce the global use of primary materials and minimise net energy balance requirements.

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Other Relevant Aims, Objectives and Targets	International & National	EU Landfill Directive: By 2010 the biodegradable waste landfilled must be reduced to 75% of that produced in 1995. By 2013 the biodegradable waste landfilled must be reduced to 50% of that produced in 1995. By 2020 the biodegradable waste landfilled must be reduced to 35% of that produced in 1995. Climate Change Act: To reduce UK CO2 emissions by at least 26% by 2020 and all UK greenhouse gas emission by at least 80% by 2050. EU Renewable Energy Directive: Requires the UK to source 15% of its energy from renewable sources by 2020. Anaerobic Digestion – Shared Goals (DEFRA 2009): By 2020 anaerobic digestion will be an established technology in this country, making a significant and measurable contribution to our climate change and wider environmental objectives. Climate Change Task Force Greenhouse Gas Action Plan: Significant increase in the take-up of on-farm anaerobic digestion, with the aim of 20% of manures being used in such plants.
	Regional	Regional Waste Strategy - by the year 2020 over 45% of waste is recycled and re-used and less than 20% of waste produced in the region will be landfilled. Regional Spatial Strategy although proposed to be abolished, requires that by 2020, at least 310,000 tonnes of waste per year is 'source separated' (including separated organic materials sent direct to composting and anaerobic digestion systems).
	Local	Reduce the amount of waste sent to landfill, incineration, energy recovery and maximising the waste reused, recycled and composted – (currently within Local Area Agreement (LAA)). SCS - to manage waste in a sustainable way. JMWMS – minimum household recycling & composting rate of 40% by 2009/10, 50% by 2014/15 and 60% by 2019/20. Achieve an average participation rate of 80% in recycling & composting collection schemes.

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Baseline Position[58]		There are currently no operational AD facilities in Gloucestershire treating MSW or C&I waste. There is permission for an MSW AD facility at Rose Hill Farm in Dymock, but this is not yet operational. There is also permission for a small AD facility at Stanley's Quarry in the Cotswolds, but this is for agricultural waste. Additionally some AD processes are undertaken at Hayden and Netheridge Sewage Treatment Works and the Unilever factory in Gloucester.
Indicators	National	Core Output Indicator W1: capacity of new waste management facilities by waste planning authority. Percentage of household waste sent for reuse, recycling and composting (currently NI 192). Percentage of municipal waste landfilled (currently NI 193).
	Local	Total available AD capacity. Total available AD capacity for agricultural waste. Total available AD capacity for sewage sludge. Number of new/expanded AD facilities permitted per year. Number of planning applications refused on the basis of Policy WCS3a. Number of 'strategic' AD facilities permitted inside and outside 'Zone C' per year. Renewable energy generation.
	Significant Effect	Per capita reduction in CO_2 emissions in the LA area (largely reported through District Councils AMRs) (currently NI 186). Overall/general satisfaction with local area (currently NI 005). Number of people employed in waste-related activities.
Data Sources		GCC Annual Monitoring Report (AMR)
Monitoring Body		GCC

[58] Includes relevant Contextual Indicators

Other Recovery (including Energy Recovery)		
Policy		**WCS4 – Other Recovery (including Energy Recovery)**
Policy Aims, Objectives and Targets		The policy aims to ensure the provision of sufficient residual waste recovery capacity to deal with around 150,000 tonnes per year of residual waste. Provision of other waste recovery capacity will also contribute towards the diversion of between 143,000 and 193,000 tonnes of commercial and industrial waste from landfill per year. The policy includes four 'strategic' site allocations to help ensure sufficient other recovery capacity is made available. The policy allows for non-strategic proposals to come forward where relevant criteria can be met.
Relevant SA objectives		<u>Broad SA Objectives</u> 3. To protect and improve the health and well-being of people living and working in Gloucestershire as well as visitors to the County. 5. To safeguard the amenity of local communities from the potential adverse impacts of minerals and waste development. 8. To protect, conserve and enhance Gloucestershire's wildlife and natural environment – its landscape and biodiversity. Derived from this objective is an objective which seeks: To protect, conserve and enhance the landscape in Gloucestershire. 11. To prevent the pollution of land, air and water in Gloucestershire and to apply the precautionary principle. Derived from this objective are 4 site focused objectives as follows: To prevent pollution and to apply the precautionary principle in consultation with waste regulation authorities. To protect and enhance soil / land quality in Gloucestershire. To protect and enhance air quality in Gloucestershire. To protect and enhance water quality in Gloucestershire. 12. To reduce the adverse impacts of lorry traffic on communities through means such as: a) reducing the need to travel. b) promoting more sustainable means of transport e.g. by rail or water. c) sensitive lorry routing. d) the use of sustainable alternative fuels. e) promoting the management of waste in one of the nearest appropriate installations. 14. To reduce waste to landfill and in dealing with all waste streams to actively promote the waste hierarchy to achieve the sustainable management of waste. 15. To reduce contributions to and to adapt to climate change. Derived from this objective is a site focused objective which seeks: To reduce the global use of primary materials and minimise net energy balance requirements.
Other Relevant Aims, Objectives and Targets	International & National	National Waste Strategy (2007) - recovery of municipal waste – 53% by 2010, 67% by 2015 and 75% by 2020. Energy from waste is expected to account for 25% of municipal waste by 2020. Landfill Allowance Trading Scheme (LATS) requirements for Gloucestershire to 2020 i.e. permitted landfill of 50,069 tonnes per annum.
	Regional	Regional Waste Strategy – to reuse, recycle and recover value from the maximum practicable amount of waste that is

		produced. By 2020, value should be recovered from the residual municipal waste by mechanical, biological or thermal treatment or a combination of these processes, having regard to the waste hierarchy. Waste development plans should make provision for sufficient facilities for treatment of this proportion of waste arisings. Waste development plans should make provision for facilities to recover value from an additional 39% of anticipated commercial and industrial waste by means of mechanical, biological or thermal treatment or a combination of these processes by 2020. Development plans should encourage the provision of waste management facilities which are capable of dealing with more than one waste stream where the waste is of similar nature.
	Local	SCS - to manage waste in a sustainable way. Reduce the amount of waste sent to landfill, incineration, energy recovery and maximising the waste reused, recycled and composted – (currently within Local Area Agreement (LAA)).
Baseline Position[59]		There are currently very few 'other recovery' waste management facilities in Gloucestershire. There are few recovery facilities for MSW and limited capacity for C&I waste. Due in part to this lack of facilities, in 2008, 57.5% of MSW and 83.7% of C&I waste was sent to landfill.
Indicators	National	Core Output E3: Renewable energy generation. Percentage of municipal waste landfilled (currently NI 193).
	Local	Amount of residual waste recovery capacity for MSW and C&I waste. Total amount and percentage of C&I waste and MSW 'treated' through 'other recovery' waste management processes per year. Installed capacity of new renewable energy systems. (currently LAA: LI 21) Percentage of renewable energy sourced from the by-products of waste management. Number of facilities developed on strategic sites allocated in the WCS. Number of 'strategic' scale residual waste recovery facilities permitted within and outside 'Zone C' per year. Number of 'non-strategic' residual waste recovery facilities permitted within and outside 'Zone C' per year.
	Significant Effect	Air quality. Household recycling and composting rate. Per capita reduction in CO_2 emissions in the LA area. (currently NI 186) Levels of NO_2 and other pollutants from road traffic. Landfill void capacity.
Data Sources		Annual Monitoring Report (AMR) GCC
Monitoring Body		GCC

[59] Includes relevant Contextual Indicators

Policy		**WCS5 – Waste Water**
Policy Aims, Objectives and Targets		The policy provides a framework against which proposals for new or expanded waste water treatment facilities will be considered. The aim is to ensure that proposals are only permitted where needed to serve existing or proposed development or in the interests of Gloucestershire's waste water management provided the need outweighs any impact and that any impact can be mitigated. Particular support will be given to proposals that utilise Anaerobic Digestion (AD). No specific sites are allocated or targets identified because at this stage Gloucestershire's waste water treatment capacity requirements are unknown due to lack of certainty over the future location and quantum of growth.
Relevant SA objectives		<u>Broad SA Objectives</u> 5. To safeguard the amenity of local communities from the potential adverse impacts of minerals and waste development. 8. To protect, conserve and enhance Gloucestershire's wildlife and natural environment – its landscape and biodiversity. Derived from this objective is an objective which seeks: To ensure that waste sites have the potential for adequate screening and/or innovative design to be incorporated. 11. To prevent the pollution of land, air and water in Gloucestershire and to apply the precaution principle. Derived from this objective is an objective which seeks: To protect and enhance water quality in Gloucestershire. 12. To reduce the adverse impacts of lorry traffic on communities through means such as: a) reducing the need to travel. b) promoting more sustainable means of transport e.g. by rail or water. c) sensitive lorry routing. d) the use of sustainable alternative fuels. e) promoting the management of waste in one of the nearest appropriate installations. 15. To reduce contributions to and to adapt to climate change. Derived from this objective is a site focused objective which seeks: To reduce the global use of primary materials and minimise net energy balance requirements.
Other Relevant Aims, Objectives and Targets	International & National	Future Water – The Government's Water Strategy for England - water companies will seek to ensure that at least 20% of all energy used by the UK water industry comes from renewable sources by 2020.
	Regional	N/a although the RSS Proposed Changes (2008) included Policy RE6 which stated that local authorities must ensure that rates of planned development do not exceed the capacity of existing water supply and wastewater treatment systems and do not proceed ahead of essential planned improvements to these systems.
	Local	More resilient communities (currently LAA Outcome 13). SCS - To manage waste in a sustainable way. A key consideration will be the quantum and location of housing and employment growth yet to be determined through District Council Core Strategies and the associated infrastructure requirements identified through that

Baseline Position[60]		There are currently 84 operational waste water treatment facilities in Gloucestershire. The two major facilities are Netheridge west of Gloucester City Centre and Hayden, south west of Cheltenham. Both of these major facilities have Anaerobic Digestion (AD) on-site allowing for energy generation used on site and exported to the national grid.
Indicators	National	E3: Renewable energy generation. W1: Capacity of new waste management facilities by waste planning authority.
	Local	Total number of waste water treatment facilities in Gloucestershire. Number of new or expanded waste water treatment facilities permitted per year. Installed capacity of new renewable energy systems associated with waste water proposals (LI 21). Percentage of renewable energy sourced from the by-products of waste management. Energy capacity in mega watts from renewable energy facilities associated with waste water treatment in Gloucestershire and the % this represents of total renewable energy capacity in Gloucestershire.
	Significant Effect	Per capita reduction in CO_2 emissions in the LA area (currently NI 1860. Water quality. Overall/general satisfaction with local area (currently NI 005).
Data Sources		Annual Monitoring Report (AMR) GCC Water Utility Companies
Monitoring Body		GCC
Disposal		
Policy		**WCS6 – Hazardous Waste**
Policy Aims, Objectives and Targets		The policy aims to provide a policy framework to determine hazardous waste proposals that would help move the management of hazardous waste up the waste hierarchy. The policy does not make any specific site allocations or include any specific targets.
Relevant SA objectives		<u>Broad SA Objectives</u> 3. To protect and improve the health and well-being of people living and working in Gloucestershire as well as visitors to the county. 5. To safeguard the amenity of local communities from the potential adverse impacts of minerals and waste development. 10. To ensure that waste sites have the potential for adequate screening and / or innovative design to be incorporated. 11. To prevent the pollution of land, air and water in Gloucestershire and to apply the precautionary principle. 14. To reduce waste to landfill and in dealing with all waste streams to actively promote the waste hierarchy (i.e. Prevent, Reduce, Reuse, Recycle, Recover, Dispose) to achieve the sustainable management of waste.

[60] Includes relevant Contextual Indicators

Other Relevant Aims, Objectives and Targets	International & National	National Waste Strategy (2007) key objective – to secure the investment in infrastructure needed to divert waste from landfill and for the management of hazardous waste. The Government will continue to pursue policies which lead to reductions in hazardous waste arisings. DEFRA Hazardous Waste Policy Statement (2010) - Hazardous waste should be managed by waste producers and waste managers in accordance with the EU waste hierarchy.
	Regional	Regional Waste Strategy - Waste streams that are hazardous or costly to recycle will be phased out and replaced by new clean materials that can be reused/ recycled effectively.
	Local	SCS - to manage waste in a sustainable way. Reduce the amount of waste sent to landfill, incineration, energy recovery and maximising the waste reused, recycled and composted – (currently within Local Area Agreement (LAA)).
Baseline Position[61]		The amount of hazardous waste produced in Gloucestershire in 2008 was 38,000 tonnes. The total managed in the County in 2008 was 90,000 tonnes due to some waste being imported. Most of the managed total (94.5%) was disposed of at the specialist landfill at Wingmoor Farm (East) near Bishop's Cleeve. Additionally a number of the County's waste transfer stations, household recycling centres and End of Life Vehicle (ELV) dismantlers handle small tonnages of hazardous wastes such as oils, lubricants and asbestos.
Indicators	National	Core Output Indicator W1: Capacity of new waste management facilities by waste planning authority.
	Local	Total amount of hazardous waste arising in Gloucestershire. Total amount of hazardous waste managed in Gloucestershire. Percentage of hazardous waste managed in Gloucestershire sent to landfill versus that which is recovered including recycling.
	Significant Effect	Air quality. Landfill void capacity. Overall/general satisfaction with local area (currently NI 005).
Data Sources		Annual Monitoring Report (AMR) GCC Environment Agency
Monitoring Body		GCC

[61] Includes relevant Contextual Indicators

Minimising Impact		
Policy		**WCS7 – Cumulative Impact**
Policy Aims, Objectives and Targets		The policy aims to provide a policy framework to determine whether proposals for waste related development on or in close proximity to an existing waste management site will have an unacceptable 'cumulative' impact on the local community and environment with regard to issues such as noise, smell, traffic, dust etc. The policy does not include any specific targets.
Relevant SA objectives		Broad SA Objectives 3. To protect and improve the health and well-being of people living and working in Gloucestershire as well as visitors to the county. 5. To safeguard the amenity of local communities from the potential adverse impacts of minerals and waste development. 11.To prevent the pollution of land, air and water in Gloucestershire and to apply the precautionary principle. Derived from this objective are 4 site focused objectives as follows: To prevent pollution and to apply the precautionary principle in consultation with waste regulation authorities. To protect and enhance soil / land quality in Gloucestershire. To protect and enhance air quality in Gloucestershire. To protect and enhance water quality in Gloucestershire. 12. To reduce the adverse impacts of lorry traffic on communities through means such as: a) reducing the need to travel. b) promoting more sustainable means of transport e.g. by rail or water. c) sensitive lorry routing. d) the use of sustainable alternative fuels. e) promoting the management of waste in one of the nearest appropriate installations.
Other Relevant Aims, Objectives and Targets	International & National	PPS10 - In deciding which sites and areas to identify for waste management facilities, waste planning authorities should assess their suitability for development against a number of criteria including 'the cumulative effect of previous waste disposal facilities on the well-being of the local community, including any significant adverse impacts on environmental quality, social cohesion and inclusion or economic potential'.
	Regional	-
	Local	SCS - we do not compromise the quality of life for future generations. Our environment is central to our quality of life and we take action year-on-year to enhance, protect and cherish it.
Baseline Position[62]		The total amount of managed waste in the base years 2008 and 2009/10 was 1,183,000 tonnes. This waste is managed at a number of facilities including 3 non-hazardous landfills, 1 hazardous landfill, 6 household recycling centres, 22 waste transfer stations, 34 ELV/metal facilities, 7 composting facilities, 2 treatment facilities, 19 inert disposal sites, 29 C&D waste

[62] Includes relevant Contextual Indicators.

		management sites, 2 aggregate recycling sites, 2 clinical waste transfer, 1 clinical waste treatment, 1 radioactive waste storage facility, 2 major sewage treatment works, 1 storage facility for road planings etc. and 2 'other' facilities (metal drum recycling etc).
Indicators	National	Core Output Indicator W1: Capacity of new waste management facilities by waste planning authority.
	Local	Number and % of waste related proposals permitted on existing waste management sites per annum. Number and % of proposals where cumulative impact was cited as a reason for refusal.
	Significant Effect	Air quality. Overall/general satisfaction with local area (currently NI 005).
Data Sources		Annual Monitoring Report (AMR) GCC
Monitoring Body		GCC
Policy		**WCS8 – Safeguarding Sites for Waste Management**
Policy Aims, Objectives and Targets		The aim of the policy is to safeguard existing waste management facilities/capacity and proposed (allocated) sites for waste management, from other uses that would affect or be affected by, those sites. Proposals that would prejudice the use of these sites for waste management will be resisted.
Relevant SA objectives		<u>Broad SA Objectives</u> 1. To promote sustainable development and sustainable communities in Gloucestershire giving people the opportunity to live in an affordable and sustainably designed and constructed home. 2. To safeguard sites suitable for the location of waste management facilities or future mineral development from other proposed development. 10. To prevent flooding, in particular preventing inappropriate development in the floodplain and to ensure that development does not compromise sustainable sources of water supply. 15. To reduce contributions to and to adapt to climate change. Derived from this objective is a site focused objective which seeks: To reduce the global use of primary materials and minimise net energy balance requirements. Additionally another site focused objective seeks: To reduce contributions to and to adapt to climate change.
Other Relevant Aims, Objectives and Targets	International & National	PPS10 states that 'In determining planning applications, all planning authorities should, where relevant, consider the likely impact of proposed, non-waste related, development on existing waste management facilities, and on sites and areas allocated for waste management. Where proposals would prejudice the implementation of the waste strategy in the development plan, consideration should be given to how they could be amended to make them acceptable or, where this is

		not practicable, to refusing planning permission.
	Regional	-
	Local	SCS - to manage waste in a sustainable way. To make concerted local efforts to address climate change and deal with the consequences. Protecting the natural and built environment in the face of climate change and the challenges posed by economic growth (including housing, traffic, and waste management). Reduce the amount of waste sent to landfill, incineration, energy recovery and maximising the waste reused, recycled and composted & more resilient communities – (currently within Local Area Agreement (LAA)).
Baseline Position[63]		The total amount of managed waste in the base years 2008 and 2009/10 was 1,183,000 tonnes. This waste is managed at a number of facilities including 3 non-hazardous landfills, 1 hazardous landfill, 6 household recycling centres, 22 waste transfer stations, 34 ELV/metal facilities, 7 composting facilities, 2 treatment facilities, 19 inert disposal sites, 29 C&D waste management sites, 2 aggregate recycling sites, 2 clinical waste transfer, 1 clinical waste treatment, 1 radioactive waste storage facility, 2 major sewage treatment works, 1 storage facility for road planings etc. and 2 'other' facilities (metal drum recycling etc).
Indicators	National	Core Output Indicator W1: Capacity of new waste management facilities by waste planning authority.
	Local	Number and % of non-waste developments permitted on existing waste management sites. Number and % of non-waste developments permitted on proposed (allocated) waste sites. Number and % of proposals where impact on an existing or proposed waste management facility was cited as a reason for refusal .
	Significant Effect	Overall/general satisfaction with local area (currently NI 005). Achievement of housing and employment provision targets established through LDF process.
Data Sources		Annual Monitoring Report (AMR) District Councils GCC
Monitoring Body		GCC

[63] Includes relevant Contextual Indicators

Policy		**WCS9 – Flood Risk**
Policy Aims, Objectives and Targets		The aim of the policy is to ensure that waste related development is not at risk of flooding and does not exacerbate the risk of flooding elsewhere. The sequential test will be applied with preference given to proposals within low risk flood areas. The design of all new development will be required to take account of current and potential future flood risk both on and off-site. The policy does not include any specific targets.
Relevant SA objectives		<u>Broad SA Objectives</u> 1. To promote sustainable development and sustainable communities and to protect and improve the health and well-being of people living and working in Gloucestershire as well as visitors to the county. 5. To safeguard the amenity of local communities from the potential adverse impacts of minerals and waste development. 10. To prevent flooding, in particular preventing inappropriate development in the floodplain and to ensure that development does not compromise sustainable sources of water supply. 15. To reduce contributions to and to adapt to climate change.
Other Relevant Aims, Objectives and Targets	International & National	Making Space for Water – To manage the risks from flooding and coastal erosion by employing an integrated portfolio of approaches which reflect both national and local priorities. Future Water (Government's Water Strategy for England) - sustainable delivery of secure water supplies and an improved and protected water environment. Vision for 2030 includes; more adaptable drainage systems delivering reduced flood risk and better management of surface water drainage and consistent and holistic management of urban flood risk, with strategic planning, partnerships of responsible bodies and clear understanding of various flood risk responsibilities.
	Regional	N/a although the RSS (Proposed Changes) which is proposed to be abolished requires the use of sustainable drainage systems to minimise flood risk, and, taking account of climate change and the increasing risk of flooding (coastal and river) the priority is to defend existing properties, and where possible locate new development into places with little or no risk of flooding, protect floodplains, follow a sequential approach to development in flood risk areas, use development to reduce the risk of flooding and identify opportunities for managed realignment to reduce the risk of flooding and create new wildlife areas.
	Local	SCS - to manage waste in a sustainable way. To make concerted local efforts to address climate change and deal with the consequences. Protecting the natural and built environment in the face of climate change and the challenges posed by economic growth (including housing, traffic, and waste management). More resilient communities (currently LAA - Outcome 13).
Baseline Position[64]		The County is drained predominantly by the lower reaches of the River Severn, which flows through the centre of Gloucestershire from the north east to the south west. The Cotswold Hills to the east of the county and the upland areas of the Forest of Dean to the west form the Severn's catchment boundary; areas which are in sharp contrast to the lowland river

[64] Includes relevant Contextual Indicators

		valley. To the south east of the Cotswold Hills the prevalent catchment is the River Thames catchment, which drains the majority of the Cotswold District. Almost 11,000 properties in Gloucestershire are at risk of river flooding from a 1-in-100 year event. The most recent major flood event was in 2007 with the following numbers of properties affected in each District; 1,831 in Tewkesbury Borough, 965 in Gloucester City, 900 in Cotswold District, 623 in Cheltenham Borough, 200 in Stroud District and 93 in Forest of Dean District.
Indicators	National	Core Output Indicator E1: Number of planning permissions granted contrary to Environment Agency advice on flooding and water quality grounds.
	Local	The number and % of waste permissions located upon designated floodplain land per annum. The number and % of waste refusals where the floodplain and safeguarding water supplies acted as part of the reason for the refusal per annum. Number and % of waste management proposals incorporating sustainable drainage measures per annum.
	Significant Effect	Overall/general satisfaction with local area (currently NI 005). Total waste management capacity.
Data Sources		Annual Monitoring Report (AMR) GCC Development Management Environment Agency (EA)
Monitoring Body		GCC
Policy		**WCS10 – Green Belt**
Policy Aims, Objectives and Targets		The aim of the policy is to safeguard the Gloucester – Cheltenham Green Belt from inappropriate development that would compromise the objectives of the designation. Waste related development within the Green Belt will only be permitted where specified criteria can be met. The policy does not include any specific targets. The policy also acknowledges potential future revisions to the Green Belt and the possibility of defining inset sites for existing and proposed waste management sites within the Green Belt.
Relevant SA objectives		<u>Broad SA Objectives</u> 8. To protect, conserve and enhance Gloucestershire's wildlife and natural environment – its landscape and biodiversity. 9. To protect, conserve and enhance Gloucestershire's material, cultural and recreational assets including its architectural and archaeological heritage.
Other Relevant Aims, Objectives and Targets	International & National	PPG2: Green Belts - maintains the presumption against inappropriate development within Green Belts. Green Belt policies in development plans should ensure that any planning applications for inappropriate development would not be in accord with the plan. With suitable safeguards, the re-use of buildings should not prejudice the openness of Green Belts. Local planning authorities should include in their development plans policies for the re-use of buildings in Green Belts.

		PPS10: Planning for Sustainable Waste Management – planning strategies should protect green belts but recognise the particular locational needs of some types of waste management facilities when defining detailed green belt boundaries and, in determining planning applications.
	Regional	Regional Waste Strategy – recognises the potential constraints arising from Green Belt and other national designations such as AONB in finding waste management sites close to the sources of the waste arising. The draft RSS (Proposed Changes) which is proposed to be abolished, states that where the general extent of the Green Belt is changed, detailed boundaries will be set in the relevant Local Development Frameworks. In relation to Gloucestershire it states that the green belt will continue to maintain the separate identities of Cheltenham and Gloucester by keeping land open between them. However, necessary provision for new homes and to fulfil Gloucester and Cheltenham's economic potential cannot be met within the existing urban areas.
	Local	More resilient natural & built environment (currently within LAA). SCS – to manage waste in a sustainable way. Protecting the natural and built environment in the face of climate change and the challenges posed by economic growth (including housing, traffic, and waste management).
Baseline Position[65]		The current Gloucester / Cheltenham Green Belt was incorporated into the County of Gloucestershire Development Plan First Quinquennial Review published in 1960. In the 1981 Structure Plan the Green Belt was extended to the north of Cheltenham to prevent coalescence with Bishops Cleeve. It covers an area of approx 8,100 hectares the vast majority of this being within Tewkesbury Borough. Existing waste facilities within the Green Belt include the Wingmoor Farm (East) and Wingmoor Farm (West) waste management operations near Bishop's Cleeve. Also, preferred sites and areas of search at Wingmoor Farm were identified in the Waste Local Plan (2004) originally saved under transitional arrangements but not saved from 2007 due to a direction from the Secretary of State. They remain a material consideration however until replaced.
Indicators	National	N/a
	Local	Total extent of the Gloucester/Cheltenham Green Belt (hectares). Number of waste related planning permissions granted in the Green Belt per annum. Number of waste related planning applications refused per annum where Green Belt issues were cited as part of the reasons for refusal.
	Significant Effect	Overall/general satisfaction with local area (currently NI 005). Total waste management capacity.
Data Sources		Annual Monitoring Report (AMR) GCC Development Management
Monitoring Body		GCC

[65] Includes relevant Contextual Indicators

Policy		**WCS11 – Areas of Outstanding Natural Beauty (AONB)**
Policy Aims, Objectives and Targets		The policy aims to ensure that waste development does not have a harmful impact on any of the three Areas of Outstanding Natural Beauty located in Gloucestershire. Proposals for waste development will only be permitted where certain criteria can be met. In the case of major development within the AONB, permission will only be granted in exceptional circumstances where a proven public interest can be shown. The policy also aims to continue partnership working between the County Council and AONB management boards. The policy does not include any specific targets.
Relevant SA objectives		<u>Broad SA Objectives</u> 5. To safeguard the amenity of local communities from the potential adverse impacts of minerals and waste development. 8. To protect, conserve and enhance Gloucestershire's wildlife and natural environment – its landscape and biodiversity. Derived from this objective is a site focused objective which seeks: To protect, conserve and enhance the landscape in Gloucestershire. Another site focused objective seeks: To ensure that waste sites have the potential for adequate screening and/or innovative design to be incorporated. 9. To protect, conserve and enhance Gloucestershire's material, cultural and recreational assets including its architectural and archaeological heritage.
Other Relevant Aims, Objectives and Targets	International & National	PPS7: Sustainable Development in Rural Areas - Nationally designated areas comprising National Parks, the Broads, the New Forest Heritage Area and Areas of Outstanding Natural Beauty (AONB), have been confirmed by the Government as having the highest status of protection in relation to landscape and scenic beauty. The conservation of the natural beauty of the landscape and countryside should therefore be given great weight in planning policies and development control decisions in these areas. Major developments should not take place in these designated areas, except in exceptional circumstances. PPS10: In testing the suitability of sites and areas local authorities should take into account a number of factors including visual intrusion and the need to protect landscapes of national importance including AONB.
	Regional	Regional Waste Strategy – recognises the potential constraints arising from Green Belt and other national designations such as AONB in finding waste management sites close to the sources of the waste arising. Regional Spatial Strategy Proposed Changes 2008 – although proposed to be abolished, states that "*The quality, character, diversity and local distinctiveness of the natural and historic environment in the South West will be protected and enhanced, and developments which support their positive management will be encouraged. Where development and changes in land use are planned which would affect these assets, Local Authorities will first seek to avoid loss of or damage to the assets, then mitigate any unavoidable damage, and compensate for loss or damage through offsetting actions. Priority will be given to preserving and enhancing sites of international or national landscape, nature conservation, geological, archaeological or historic importance".*
	Local	More resilient natural & built environment. (currently within the LAA).

		SCS – to manage waste in a sustainable way. Protecting the natural and built environment in the face of climate change and the challenges posed by economic growth (including housing, traffic, and waste management).
Baseline Position[66]		There are 47 Areas of Outstanding Natural Beauty (AONB) in the UK. There are three AONB in Gloucestershire, the largest being the Cotswolds AONB which covers around 51% of the County. Parts of the Wye Valley AONB and Malvern Hills AONB also fall within Gloucestershire.
Indicators	National	N/a
	Local	Number of waste related planning applications refused per annum where AONB issues were cited as part of the reasons for refusal. Number of waste related planning permissions granted in an AONB per annum.
	Significant Effect	Overall/general satisfaction with local area (currently NI 005). Total waste management capacity. E2: Change in areas of biodiversity importance.
Data Sources		Annual Monitoring Report (AMR) GCC AONB Advisory Committees/Conservation Boards
Monitoring Body		GCC
Policy		**WCS12 – Nature Conservation (Biodiversity and Geodiversity)**
Policy Aims, Objectives and Targets		The policy aims to ensure that sites of national and local importance for biodiversity and nature conservation are safeguarded from inappropriate waste management development. Planning permission will only be granted where certain criteria can be met including mitigation ~~or~~ and where it can be shown that the benefit of the development outweighs the impacts the proposal would have. Favourable consideration will be given to proposals that incorporate beneficial biodiversity or geological features into their design and layout. ~~Major developments proposed within or close to Strategic Nature Areas (SNAs) will be required to assess and make an appropriate contribution to nature conservation targets in those areas~~. Development proposals will be required to assess their impact on the natural environment and make a contribution to local nature conservation targets to ensure gain for net biodiversity.
Relevant SA objectives		Broad SA Objectives 5. To safeguard the amenity of local communities from the potential adverse impacts of minerals and waste development. 8. To protect, conserve and enhance Gloucestershire's wildlife and natural environment – its landscape and biodiversity. Derived from this objective is a site focused objective which seeks: To protect, conserve and enhance biodiversity in Gloucestershire. Another site focused objective seeks: To protect, conserve and enhance the landscape in Gloucestershire.

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[66] Includes relevant Contextual Indicators.

		9. To protect, conserve and enhance Gloucestershire's material, cultural and recreational assets including its architectural and archaeological heritage. Derived from this objective is a site focused objective which seeks: To protect, conserve and enhance geodiversity in Gloucestershire. 11.To prevent the pollution of land, air and water in Gloucestershire and to apply the precautionary principle. Derived from this objective are 4 site focused objectives as follows: To prevent pollution and to apply the precautionary principle in consultation with waste regulation authorities. To protect and enhance soil / land quality in Gloucestershire. To protect and enhance air quality in Gloucestershire. To protect and enhance water quality in Gloucestershire.
Other Relevant Aims, Objectives and Targets	International & National	PPS9: Biodiversity Geological Conservation - Plan policies and planning decisions should aim to maintain, and enhance, restore or add to biodiversity and geological conservation interests. In taking decisions, local planning authorities should ensure that appropriate weight is attached to designated sites of international, national and local importance; protected species; and to biodiversity and geological interests within the wider environment. Where a proposed development on land within or outside a SSSI is likely to have an adverse effect on an SSSI (either individually or in combination with other developments), planning permission should not normally be granted. Sites of regional and local biodiversity and geological interest, which include Regionally Important Geological Sites, Local Nature Reserves and Local Sites, have a fundamental role to play in meeting overall national biodiversity targets. Criteria-based policies should be established in local development documents against which proposals for any development on, or affecting, such sites will be judged.
	Regional	Regional Spatial Strategy Proposed Changes (2008) – although proposed to be abolished states that local authorities should use the SW Nature Map and work with interested local stakeholders including local biodiversity partnerships and local record centres to map local opportunities for biodiversity enhancement in Local Development Documents. Proposals which provide opportunities for the beneficial management of these areas and habitats and species generally should be supported.
	Local	More Resilient Natural & Built Environment (currently within the LAA). SCS - To manage waste in a sustainable way. SCS - Protecting the natural and built environment in the face of climate change and the challenges posed by economic growth (including housing, traffic, and waste management).
Baseline Position[67]		The South West supports some 25 species that are globally important, 700 species that are of national conservation concern, 34 species that are endemic to the UK, 11 of which are only found in the South West. In Gloucestershire there are currently 122 Sites of Special Scientific Interest (SSSI) 755 Key Wildlife Sites (KWS) 11 Local Nature Reserves and 4 National Nature Reserves (NNR). A Nature Map has been compiled for Gloucestershire and identifies landscape-scale blocks of land referred to as Strategic Nature Areas (SNAs). The SNAs identify where the greatest opportunities for habitat restoration and creation lie.
	National	Core Output Indicator E2: Change in areas of biodiversity importance.

[67] Includes relevant Contextual Indicators.

Indicators		Improved local biodiversity – proportion of local sites where positive conservation management has been or is being implemented (currently NI 197).
	Local	Number of waste related planning applications refused per annum where nature conservation issues were cited as part of the reasons for refusal. Number of waste related planning permissions granted in an area with features of national or local nature conservation importance.
	Significant Effect	Overall/general satisfaction with local area (currently NI 005). Total waste management capacity. Extent of implementation of Gloucestershire Nature Map (related to waste management). Per capita reduction in CO_2 emissions in the LA area (currently NI 186).
Data Sources		Annual Monitoring Report (AMR) GCC Gloucestershire Biodiversity Partnership/LAA
Monitoring Body		GCC Gloucestershire Biodiversity Partnership
Policy		**WCS13 – Design**
Policy Aims, Objectives and Targets		The policy aims to ensure that all waste related development achieves a high standard of design, clearly and robustly articulated through a Design and Access Statement. Poor quality design will be rejected. The policy includes no specific targets although in line with national requirements, all development must be supported by a design and access statement.
Relevant SA objectives		<u>Broad SA Objectives</u> 1. To promote sustainable development and sustainable communities in Gloucestershire giving people the opportunity to live in an affordable and sustainably designed and constructed home. 3. To protect and improve the health and well-being of people living and working in Gloucestershire as well as visitors to the county. 5. To safeguard the amenity of local communities from the potential adverse impacts of minerals and waste development. 8. To protect, conserve and enhance Gloucestershire's wildlife and natural environment – its landscape and biodiversity. Derived from this objective is a site focused objective which seeks: To protect, conserve and enhance the landscape in Gloucestershire. Another site focused objective seeks: To ensure that waste sites have the potential for adequate screening and / or innovative design to be incorporated. 9. To protect, conserve and enhance Gloucestershire's material, cultural and recreational assets including its architectural and archaeological heritage. Derived from this objective is a site focused objective which seeks: To protect conserve and enhance townscapes and Gloucestershire's architectural and archaeological heritage. 10. To prevent flooding, in particular preventing inappropriate development in the floodplain and to ensure that waste development does not compromise sustainable sources of water supply.

		15. To reduce contributions to and to adapt to climate change.
Other Relevant Aims, Objectives and Targets	International & National	DEFRA/CABE: Designing Waste Facilities (2008) - In terms of impact, a design solution should respect local character and context. It should be assimilated into its setting and use materials appropriate to its context. Regard should also be had to build quality. It is designed and built to last? New development must be fit for purpose. Design information and the key design messages need to be communicated as an integral part of the planning application submission process. PPS1: Delivering Sustainable Development – Planning policies should promote high quality inclusive design in the layout of new developments and individual buildings in terms of function and impact, not just for the short term but over the lifetime of the development. Design which fails to take the opportunities available for improving the character and quality of an area should not be accepted. Planning authorities should prepare robust policies on design and access. Key objectives include ensuring that developments are sustainable, durable and adaptable, optimise the potential of the site to accommodate development and respond to their local context. PPS10: Sustainable Waste Management - Waste management facilities should be well-designed, so that they contribute positively to the character and quality of the area in which they are located. Poor design is in itself undesirable, undermines community acceptance of waste facilities and should be rejected.
	Regional	Regional Waste Strategy - New building design and layout can contribute to effective waste management. While special care will need to be given to development in sensitive areas, good design aspects of waste management should be promoted. Where waste facilities require new buildings, it has been demonstrated by the waste industry that innovative and high quality design is possible. Local Planning Authorities should seek to ensure that proposals for new, refurbished or extended waste facilities represent current good design practices.
	Local	SCS - Protecting the natural and built environment in the face of climate change and the challenges posed by economic growth (including housing, traffic, and waste management). Our environment is central to our quality of life and we take action year-on-year to enhance, protect and cherish it.
Baseline Position[68]		N/a
Indicators	National	-
	Local	Number and percentage of waste related developments refused planning permission where design was cited as a reason for refusal. Number of waste management planning applications submitted with a design and access statement.

[68] Includes relevant Contextual Indicators.

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	Significant Effect	Overall/general satisfaction with local area (currently NI 005).
Data Sources		Annual Monitoring Report (AMR) GCC
Monitoring Body		GCC
Policy		**WCS13a –Bulking and Transfer**
Policy Aims, Objectives and Targets		The aim of the policy is to provide a framework against which to consider proposals for new or expanded bulking and transfer facilities. A further aim is to promote greater efficiency and to reduce the potential impact of transporting waste by road, particularly the Strategic Road Network (SRN). Planning permission will be granted subject to a number of criteria being met.
Relevant SA objectives		Broad SA Objectives 5. To safeguard the amenity of local communities from the potential adverse impacts of minerals and waste development. 12. To reduce the adverse impacts of lorry traffic on communities through means such as: a) reducing the need to travel b) promoting more sustainable means of transport e.g. by rail or water c) sensitive lorry routing d) the use of sustainable alternative fuels e) promoting the management of waste in one of the nearest appropriate installations. 15. To reduce contributions to and to adapt to climate change. Derived from this objective is a site focused objective which seeks: To reduce the global use of primary materials and minimise net energy balance requirements.
Other Relevant Aims, Objectives and Targets	International & National	PPG13: Transport - Planning can help to reduce the need to travel, reduce the length of journeys and make it safer and easier for people to access jobs, shopping, leisure facilities and services by public transport, walking, and cycling. Consistent application of these planning policies will help to reduce some of the need for car journeys (by reducing the physical separation of key land uses) and enable people to make sustainable transport choices.
	Regional	Regional Spatial Strategy (incorporating the Regional Transport Strategy) although proposed to be abolished, states that waste planning authorities should make provision in their waste development frameworks for a network of strategic and local waste collection, transfer, treatment (including recycling) and disposal sites to provide the capacity to meet the indicative allocations for their area.
	Local	SCS - Protecting the natural and built environment in the face of climate change and the challenges posed by economic growth (including housing, traffic, and waste management). To manage waste in a sustainable way. To make concerted local efforts to address climate change and deal with the consequences.

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		Gloucestershire Local Transport Plan 2006 – 2011: to reduce the impact of road transport on communities and the environment. Integrate all forms of transport, land use and economic planning leading to a better more efficient transport system. Gloucestershire Draft Local Transport Plan 2011-2026: to reduce transport's emissions of carbon dioxide and other greenhouse gases, with the desired outcomes of tackling climate change.
Baseline Position[69]		There are currently 22 waste transfer stations in Gloucestershire dealing with MSW, C&I and C&D waste and two dealing specifically with the transfer of clinical waste[70]. Six are used for MSW transfer and these have a total capacity of 157,000 tonnes/year including 122,000 tonnes/year for general/ residual waste to landfill disposal and 35,000 tonnes/year for the transfer of recyclables.
Indicators	National	Core Output Indicator W1: capacity of new waste management facilities by waste planning authority. Average journey time per mile during the morning peak (currently NI 167 Congestion). Per capita reduction in CO2 emissions in the LA area (currently NI 186).
	Local	Total available bulking and transfer capacity. Number of new/expanded bulking and transfer facilities permitted per year. Number of planning applications refused on the basis of Policy WCS13a.
	Significant Effect	Per capita reduction in CO_2 emissions in the LA area (largely reported through District Councils AMRs) (currently NI 186). Number of people employed in waste-related activities.
Data Sources		GCC Annual Monitoring Report (AMR)
Monitoring Body		GCC
Policy		**WCS14 – Sustainable Transport**
Policy Aims, Objectives and Targets		The policy seeks to encourage waste related development that utilises alternative modes of transport to the road including rail and water. Where appropriate development must be supported by a Transport Assessment and Travel Plan. Any development that would have an adverse impact on the highway network will be refused unless it can be mitigated.
Relevant SA objectives		Broad SA Objectives 1. To promote sustainable development and sustainable communities in Gloucestershire giving people the opportunity to live

[69] Includes relevant Contextual Indicators
[70] Transfer also takes place at other facilities including metal and end of life vehicles facilities.

		in an affordable and sustainably designed and constructed home. 11. To prevent the pollution of land, air and water in Gloucestershire and to apply the precautionary principle. 12. To reduce the adverse impacts of lorry traffic on communities through means such as: a) reducing the need to travel. b) promoting more sustainable means of transport e.g. by rail or water. c) sensitive lorry routing. d) the use of sustainable alternative fuels. e) promoting the management of waste in one of the nearest appropriate installations. 15. To reduce contributions to and to adapt to climate change.
Other Relevant Aims, Objectives and Targets	International & National	PPG13: Transport – To promote more sustainable transport choices for both people and for moving freight. Ensure that development comprising jobs, shopping, leisure and services offers a realistic choice of access by public transport, walking, and cycling, recognising that this may be less achievable in some rural areas. Where developments will have significant transport implications, Transport Assessments should be prepared and submitted alongside the relevant planning applications for development. In preparing their development plans local authorities should promote opportunities for freight generating development to be served by rail or waterways by influencing the location of development and by identifying and where appropriate protecting realistic opportunities for rail or waterway connections.
	Regional	Regional Spatial Strategy (incorporating the Regional Transport Strategy) although proposed to be abolished, states that waste should be managed as close as practicable to where it arises in order to minimise the distance waste is transported, particularly by road.
	Local	SCS - Protecting the natural and built environment in the face of climate change and the challenges posed by economic growth (including housing, traffic, and waste management). To manage waste in a sustainable way. To make concerted local efforts to address climate change and deal with the consequences. Gloucestershire Local Transport Plan 2006 – 2011: to reduce the impact of road transport on communities and the environment. Integrate all forms of transport, land use and economic planning leading to a better more efficient transport system. Gloucestershire Draft Local Transport Plan 2011-2026: to reduce transport's emissions of carbon dioxide and other greenhouse gases, with the desired outcomes of tackling climate change.
Baseline Position[71]		Within Gloucestershire, there is over 3000 miles of road, of which 80 miles are motorway or Trunk Road (managed by the Highways Agency) and 3,300 miles are local roads managed by the County Council. The M5 is the busiest route carrying up to 90,000 vehicles a day. Across Gloucestershire, daily traffic flows increased by 6.1% between 2000 and 2006.

[71] Includes relevant Contextual Indicators.

		Gloucestershire is served by three main railway lines: Birmingham to Bristol main line. Gloucester (Standish Junction) to Swindon. Newport (Severn Tunnel Junction) to Gloucester. There are nine stations on this network in Gloucestershire. There are currently no dedicated rail freight terminals in Gloucestershire and all rail freight is transiting through the County. Commercial shipping is limited to small scale operations at Sharpness Docks. Some existing waste management facilities and some of the strategic allocations listed under Core Policy WCS4 have potential to link to the rail and water network. No rail handling of waste currently occurs in the County but waste metal is transferred by ship at Sharpness Docks.
Indicators	National	Average journey time per mile during the morning peak (currently NI 167 Congestion). Per capita reduction in CO_2 emissions in the LA area (currently NI 186).
	Local	Number and % of waste related developments utilising non-road means of transport (rail, water). Number and % of waste related planning applications supported by a Transport Assessment (TA). Number and % of waste related planning applications supported by a Travel Plan. Number of Section 106 agreements relating to transport entered into per annum. The number and % of all waste refusals per annum, where highways was cited as part of the reason for refusal.
	Significant Effect	Overall/general satisfaction with local area (currently NI 005). Air Quality. Levels of NO_2 and other pollutants from road traffic.
Data Sources		Annual Monitoring Report (AMR) GCC
Monitoring Body		GCC

Glossary of Terms

Phrase/Abbreviation	Explanation
Aggregate	(1) Sand, gravel, crushed rock and other bulk materials used by the construction industry. (2) Inert particulate matter which is suitable for use (on its own or with the addition of cement or bituminous material) in construction as concrete, mortar, finishes, roadstone, asphalt or drainage course, or for use as constructional fill or railway ballast. Recycled aggregate is that which is derived from the crushing and screening (sorting) of inert waste e.g. concrete, bricks.
Agricultural Waste	Waste specifically generated by agricultural activities. 'Natural' agricultural waste includes a material such as animal excreta, litter, straw waste, carcasses and silage liquors. 'Non-natural' agricultural waste includes material such as packaging, plastics, sheep dip, unused medicines, machinery, oil and tyres.
Anaerobic Digestion (AD)	The biological digestion of organic wastes by micro-organisms in an oxygen free atmosphere to produce simpler and less offensive organic compounds; commonly carbon dioxide/methane mixture (biogas) and a stabiliser residue. The biogas may be collected and used as a fuel either for electricity generation or to provide heat.
Annual Monitoring Report (AMR)	Report submitted annually by Local Planning Authorities (LPA) to Central Government setting out the progress made by the LPA in preparing local development documents as well as the impact which policies are having.
Area of Outstanding Natural Beauty (AONB)	Areas of high scenic quality that enjoy statutory protection under the National Parks and Access to the Countryside Act 1949. The primary objective is the conservation of the natural beauty of the landscape. There are currently 33 AONB designations wholly within England along with the Wye Valley which spans the English-Welsh border.
Autoclave	A high temperature (170°C) steam process suitable for MSW and C&I waste. After arriving at the facility the waste is put into a rotating steel cylinder into which high temperature steam is pumped. This sterilises the waste which is then removed and sorted with recyclable materials taken out. The process also creates an organic product known as fibre or floc. This can be used as a bio-fuel, composted or can be used in construction products and cardboard. If no user can be found for the fibre it may be landfilled.
Biodegradable waste	Waste that is able to decompose through the action of bacteria or other microbes. It included materials such as food and garden waste, paper and cardboard.

Phrase/Abbreviation	Explanation
Biodiversity Action Plan (BAP)	The UK Biodiversity Action Plan (UK BAP) was launched in 1994 as a means of meeting the UK's obligations under the Biodiversity Convention. It identifies priority habitats and species. Implemented at the local level through Local Biodiversity Action Plans. The Biodiversity Action Plan for Gloucestershire (2000) was published as a strategic document that identifies the most urgent priorities for wildlife conservation in the county.
Clinical Waste	Any waste which poses a threat of infection to humans. It includes drugs or other pharmaceutical products and is mainly produced by hospitals, health clinics, doctors' surgeries and veterinary practices, but also arises from residential homes, nursing homes and private households.
Combined Heat and Power (CHP)	The simultaneous generation of heat and electricity in a single process by the generation of steam/gas. The process may utilise waste materials as a fuel source.
Commercial and Industrial (C&I) Waste	Waste from premises used mainly for trade, business, sport, recreation or entertainment (1990 EPA 5.75 (7)).
Composting	The degradation of organic wastes in the presence of oxygen to produce a compost, fertiliser or soil conditioner. This can either be an enclosed process (in-vessel) or operated as an 'open windrow' process.
Conservation Area	As designated under section 69 of the listed Buildings Act 1990 which states that: Every Local Planning Authority – a) Shall from time to time determine which parts of their area are areas of special architectural or historic interest, the character or appearance of which it is desirable to preserve or enhance, or b) Shall designate those areas as conservation areas.
Construction and Demolition (C&D) Waste	Controlled waste arising from the construction, repair, maintenance and demolition of buildings and structures.
Contextual Indicators	Measure changes in the wider social, economic, and environmental background against which policies operate.
Core Output Indicators	Measure the direct effect of a policy. Must be reported on in the Annual Monitoring Report (AMR) – see above. Provide a clear and consistent data source across local authorities for strategic monitoring by national and regional planning bodies.
Design and Access Statement (DAS)	A written submission that accompanies a planning application explaining how the design of the proposal responds to the local context and whether it improves the character, quality and functioning of an area.
Development management	The system through which planning applications are determined (previously referred to as development control)
Development Plan	Sets out the policies and proposals for development and the use of land within the Local Planning Authority (LPA) area.
Energy Recovery	Includes a number of established and emerging technologies whereby energy is recovered through the treatment of waste to provide heat and/or power.

Phrase/Abbreviation	Explanation
Environment Agency (EA)	Established in April 1996, combining the functions of former local waste regulation authorities, the National Rivers Authority and Her Majesty's Inspectorate of Pollution. Intended to promote a more integrated approach to waste management and consistency in waste regulation. The Agency also conducts national surveys of waste arising and waste facilities.
EU Landfill Directive 99/31/EC	The objective of the Directive is to prevent or reduce as far as possible the negative effects on the environment from the landfilling of waste, by introducing stringent technical requirements for waste and landfills.
Exemption/Exempt facility	Exempt waste facilities are low risk waste handling operations that are exempt from environmental permitting (i.e. do not require an environmental permit from the Environment Agency to operate).
Flood Risk Assessment (FRA)	Detailed assessment of flood risk often applied to new development proposed in the flood plain. Required for all development of more than 1 ha irrespective of location.
Gasification	Gasification is a waste recovery (treatment) process whereby waste is broken down at high temperatures (above 650^{o}c) in the presence of some oxygen. Produces syngas and ash.
Gloucestershire Waste Partnership	Partnership made up of the County Council as Waste Disposal Authority (WDA) and the District Councils as Waste Collection Authorities (WCA). Meets quarterly and comprises a mix of Officers and Councillors.
Green Belt	Areas of land defined in Regional Spatial Strategies, Structure Plans and district wide Local Plans that are rural in character and adjacent to urban areas, where permanent and strict planning controls apply in order to; check the unrestricted sprawl of built up areas; safeguard the surrounding countryside from further encroachment; prevent neighbouring towns from merging into one another; preserve the special character of historic towns and assist urban regeneration.
Habitats Regulation Assessment (HRA)	Ensures that the protection of the integrity of European sites is considered as part of the planning process. The requirement for HRA of plans or projects is outlined in Article 6(3) and (4) of the European Communities (1992) Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora ("Habitats Directive").
Hazardous Waste	Waste that, by virtue of its composition, carries the risk of death, injury, or impairment to health, to humans or animals, the pollution of waters, or could have an unacceptable environmental impact unless properly handled, treated or disposed of. The term should not be used for waste that merely contains a hazardous material or materials. It should be used only to describe wastes that contain sufficient of these materials to render waste as a whole as hazardous within the definition above.

Phrase/Abbreviation	Explanation
Household Recycling Centre (HRC)	A site operated in accordance with the Environmental Protection Act 1990 to which the public may deliver non-business waste and at which a range of materials (e.g. metals, paper, glass, engine oil) can be recovered for recycling.
Incineration	The controlled burning of waste, either to reduce its volume, or its toxicity. Energy recovery from incineration can be achieved by utilising the calorific value of paper, plastic, etc to produce heat or power. Current flue-gas emission standards are very high. Ash residues must be disposed of at specialist facilities.
Inert Waste	Inert waste is waste that is non-reactive and doesn't undergo any significant chemical or biological change when landfilled. Inert waste material typically includes top soil; subsoil; clay; sand; brickworks; stone; silica; and glass.
In-vessel composting (IVC)	The composting of biodegradable material in a closed reactor where the composting process is accelerated by optimising air exchange, water content and temperature control.
Joint Core Strategy (JCS)	A partnership between Cheltenham Borough Council, Gloucester City Council and Tewkesbury Borough Council to produce a joint planning strategy for all three Districts.
Joint Municipal Waste Management Strategy (JMWMS)	Sets out our current position, and the aims, objectives and future plans of the Gloucestershire Waste Partnership. It provides a framework for the development of municipal waste management services through to 2020, and informs the business and financial planning of each of the Gloucestershire Local Authorities. It sets key aims and objectives to ensure waste is managed effectively.
Key Wildlife Sites (KWS)	Areas of local nature conservation value designated by the Gloucestershire Wildlife Trust.
Landfill/ Landraise	The physical deposition of waste into (landfill) and onto (landraise) land in such a way that pollution or harm to the environment is prevented and through restoration, to provide land which may be used for another purpose (e.g. recreation).
Landfill Allowance Trading Scheme (LATS)	Sets targets for reducing the amount of biodegradable municipal waste sent to landfill. Each local authority is allocated an allowance by Government for the amount of biodegradable municipal waste it can send to landfill. The allocation reduces progressively year on year until 2020. For every tonne of waste landfilled above the allowance the local authority may be charged £150.
Landfill Tax	A tax introduced in 1996 by HM Customs and Excise on waste deposited in licensed landfill sites, with the aim of encouraging more sustainable waste management methods and generating fund for local environmental projects. Currently £48 per tonne and will increase by £8 each year to £80 per tonne by 2014/15.

Phrase/Abbreviation	Explanation
Listed Building	A building which has been placed on the Statutory List of Buildings of Special Architectural or Historic Interest. There are three categories of listed building, Grade I (exceptional interest) Grade II (more than special interest) and Grade II* (nationally important and of special interest). Once a building is listed it becomes subject to special planning controls whereby listed building consent is required for works that affect its special interest.
Local Development Framework (LDF)	Comprises a portfolio of local development documents that together provide the framework for delivering the spatial planning strategy for the area.
Local Nature Reserves (LNR)	Habitats of local significance, which contribute to both nature conservation and provide opportunities for the public to see, learn and enjoy wildlife. LNRs are designated by Local Authorities under Section 21 of the National Parks and Access to the Countryside Act 1949.
Local Output Indicators	Locally derived indicators used to measure the outputs of policies. Sit alongside the national set of Core Output Indicators.
Local Transport Plan	Sets out the transport strategy for Gloucestershire.
Materials Recovery Facility (MRF)	A site where recyclable waste, usually collected via kerbside collections or from Household Recycling Centres, is mechanically or manually separated, baled and stored prior to reprocessing.
Mechanical Biological Treatment (MBT)	A form of waste processing that involves several elements including the physical sorting of waste followed by the biological treatment of any remaining organic waste through composting or anaerobic digestion – see above.
Municipal Waste or Municipal Solid Waste (MSW)	Municipal waste (MSW) is waste that is collected and disposed of by or on behalf of a local authority. It generally consists of household waste, some commercial waste, and waste taken to civic amenity waste collection/disposal sites by the general public. In addition, it may include road and pavement sweepings, gully emptying wastes, and some construction and demolition waste arising from local authority activities.
Minerals and Waste Development Framework (MWDF)	Similar to a Local Development Framework (LDF) but dealing specifically with minerals and waste planning. Prepared by minerals and waste planning authorities.
Minerals and Waste Development Scheme (MWDS)	Project plan setting out what local development documents will be produced and when under the Minerals and Waste Development Framework (MWDF).
National Nature Reserves (NNR)	Areas of national and some international nature conservation importance, managed primarily to safeguard such interest in accordance with English Nature's requirements. NNRs are designated under section 19 of the National Parks and Access to the Countryside Act 1949 or section 35 of the Wildlife and Countryside Act 1981.

Phrase/Abbreviation	Explanation
National Waste Strategy	Sets out the Government's vision for sustainable waste management in England. The current strategy covers the period to 2020.
Pyrolysis	Thermo-chemical decomposition of waste in the absence of oxygen.
Radioactive Waste	Waste that has become contaminated with radioactive material or has become radioactive through exposure to neutron radiation.
RAMSAR site	Wetlands of international importance, designated under the Ramsar Convention.
Refuse Derived Fuel (RDF)	A fuel produced by shredding and dehydrating municipal solid waste (MSW) in a converter or steam pressure treating in an autoclave.
Regional Waste Strategy (RWS)	The south west regional waste strategy aims to ensure that by the year 2020 over 45% of waste is recycled and reused and less than 20% of waste produced in the south west region will be landfilled. The strategy is non-statutory.
Regionally Important Geological Sites (RIGS)	A non-statutory regionally important geological or geo-morphological site (basically relating to rocks, the Earth's structure and landform).
Residual waste	Waste that is not/cannot be re-used, recycled or composted.
Scheduled Monument (SM)	Sites and remains designated under the Ancient Monuments and Archaeological Act 1979 to ensure protection from development.
Sequential Approach	A planning principle that seeks to identify, allocate or develop certain types or locations of land before others. Often applied to retail development and development proposed in the floodplain e.g. priority given to sites in low flood risk areas compared to sites in medium or high flood-risk areas.
Significant Effects Indicator	Establishes the effects that policies are having on the goals/objectives set out in the Sustainability Appraisal (SA).
Site Waste Management Plans	A national requirement for all construction projects that will cost over £300,000. It ensures that building materials are managed effectively, waste is disposed of legally and materials recycling re-use and recovery is maximised.
Sites of Special Scientific Interest (SSSI)	A site statutorily protected for its nature conservation, geological or scientific value.
Special Areas of Conservation (SAC)	Areas which have been given special protection under the European Union’s Habitats Directive. They provide increased protection to a variety of wild animals, plants and habitats.

Phrase/Abbreviation	Explanation
Special Protection Area	Areas which have been identified as being of international importance for the breeding, feeding, wintering or the migration of rare and vulnerable species of birds found within European Union countries. They are European designated sites, classified under the 'Birds Directive 1979' which provides enhanced protection given by the Site of Special Scientific Interest (SSSI) status all SPAs also hold.
Solid Recovered Fuel (SRF)	This is RDF (see above) which meets a specific specification (CEN/TS 15359) in terms of the amount of biomass within it. The specification is set by the European Commission for Standardization.
Strategic Flood Risk Assessment (SFRA)	The aim of the SFRA is to map all forms of flood risk and use this as an evidence base to locate new development primarily in low flood risk areas (Zone 1). Areas of 'low' (zone 1), 'medium' (zone 2) and 'high' (zone 3) risk.
Strategic Nature Areas (SNA)	Landscape-scale blocks of land which show opportunities for habitat expansion within the County. Form part of the Gloucestershire Nature Map, which itself forms part of the South West Nature Map.
Strategic Road Network (SRN)	Includes most motorways and some major "A" classified roads, which are the responsibility of the Secretary of State for Transport as highway authority, and managed by the Highways Agency (an Executive Agency of the Department for Transport).
Sustainability Appraisal (SA)	An appraisal of the economic, environmental and social effects of a plan, applied from the outset of the plan preparation process to allow decisions to be made that accord with sustainable development.
Sustainable Community Strategy (SCS)	A local strategy prepared by a partnership of local organisations and individuals under a Local Strategic Partnership (LSP). Often includes a set of goals and actions which they, in representing the residential, business, statutory and voluntary interests of an area, wish to promote. The SCS informs the MWDF and acts as an umbrella for all other strategies devised for the area. It is now is a statutory requirement to produce a Sustainable Community Strategy.

Phrase/Abbreviation	Explanation
Sustainable Drainage System (SUDs)	Surface water drainage methods that take account of quantity, quality and amenity issues are collectively referred to as Sustainable Drainage Systems (SUDS). These systems are more sustainable than conventional drainage methods because they manage runoff flow rates, reducing the impact of urbanisation on flooding, protect or enhance water quality, are sympathetic to the environmental setting and the needs of the local community, provide a habitat for wildlife in urban watercourses and encourage natural groundwater recharge (where appropriate).
Transport Assessment (TA)	A document that accompanies a planning application for schemes that would have significant transport impacts. The assessment should describe and analyse existing transport conditions, explain how the development would affect those conditions and measures proposed to overcome any problems.
Travel Plan	A package of measures to encourage staff/visitors/residents to use alternatives to the private car e.g. walking, bus, rail.
Voidspace	In relation to landfill voidspace is the amount of remaining space available for tipping, often expressed in m^3.
Waste Collection Authority (WCA)	Local authority responsible for the collection of household waste. In Gloucestershire the District Councils fulfil this role.
Waste Core Strategy (WCS)	Provides an overarching planning framework for waste management. One of a number of development plan documents (DPDs) that together form the Minerals and Waste Development Framework (MWDF).
Waste Disposal Authority	Authority responsible for the disposal of WCA collected waste and the disposal of waste to the Civic Amenity (CA) sites.
Waste Framework Directive	Sets the basic concepts and definitions related to waste management and lays down waste management principles such as the "polluter pays principle" or the "waste hierarchy".
Waste Hierarchy	An established concept whereby the most sustainable solution is to prevent or reduce the amount of waste produced in the first place. Where waste is produced it should be re-used if possible. If the waste cannot be re-used it should be recycled or composted and if that is not possible the aim should be to recover energy from the waste through appropriate treatment. Disposal to landfill is seen as a last resort.
Waste Local Plan	A statutory land- use plan. Its purpose is to set out detailed land-use policies in relation to waste management development. The objectives of the policies are to guide development in terms of acceptability or otherwise of locations, and to control development through setting out a range of standards and assessment criteria against which applications for planning permission will be judged.

Phrase/Abbreviation	Explanation
Waste Minimisation Statement (WMS)	A statement accompanying a planning application setting out how waste arising during the demolition, construction and occupation of the development is to be minimised and managed, and how recycling during the occupational life of the development has been incorporated. In Gloucestershire, all developments of 10+ dwellings (or residential development on a site larger than 0.5 hectare), or for any other type of development where the floorspace exceeds 1,000 square metres or site area is 1 hectare or more must be supported by a WMS.
Waste Planning Authority (WPA)	Local authority responsible for the implementation of the provision of the Town and Country Planning Act 1990 in respect of waste planning.
Waste Transfer Station (WTS)	A depot where waste from collection vehicles is stored temporarily prior to carriage in bulk to a treatment or disposal site.
Waste Water	Generally a mixture of domestic waste water from baths, sinks, washing machines and toilets, waste water from industry and rainwater run-off from roads and other surfaced areas.
Windrow Composting	A form of composting in which green waste e.g. garden waste is laid out in long rows and periodically turned, breaking down and decomposing in the presence of oxygen. Can take place in an open air environment or within a large covered area.

Gloucestershire Waste Core Strategy (WCS)

Appendices

Appendix 1

Schedule of Waste Local Plan Policies

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Policy	Status (i.e. saved under transitional arrangements or not saved)	Proposed Action
1 - Best Practicable Environmental Option	Not Saved	N/a
2 - Regional Self Sufficiency	Not Saved	N/a
3 - Proximity Principle	Not Saved	N/a
4 - Waste Management Facilities for Strategic Sites	Not Saved	N/a
5 - Waste Management Facilities for Local Sites	Not Saved	N/a
6 - Waste Management Facilities for Other Sites	Not Saved	N/a
7 - Safeguarding Sites for Waste Management Facilities	Not Saved	N/a
8 - Anaerobic Digestion	Saved	Replaced by Core Policy WCS3a ~~WCS2 – Recycling & Composting/~~Anaerobic Digestion ~~(including bulking and transfer) and Core Policy WCS4 – Other Recovery (including Energy Recovery)~~
9 – Composting	Saved	Replaced by Core Policy WCS2 – Recycling & Composting~~/Anaerobic Digestion (including bulking and transfer)~~
10 – Household Waste Recycling Centres	Saved	Replaced by Core Policy WCS2 – Recycling & Composting~~/Anaerobic Digestion (including bulking and transfer)~~
11 – Waste Collection Facilities	Saved	Policy remains in force. Potential replacement at a later date through other Development Plan Document (DPD)
12 – Inert Recovery and Recycling	Saved	Replaced by Core Policy WCS3 – Inert Waste Recycling and Recovery
13 - Materials Recovery & Waste Transfer Facilities	Not Saved	N/a
14 - Metal Recycling Facilities	Not Saved	N/a
15 - Waste to Energy Facilities	Saved	Replaced by Core Policy WCS4 – Other Recovery (including Energy Recovery)
16 - Special Waste Facilities	Saved	Replaced by Core Policy WCS6 – Hazardous Waste
17 – Mining of Waste	Saved	Policy remains in force. Potential replacement at a later date through other Development Plan Document (DPD)
18 - Non-Energy Recovery Incineration	Not Saved	N/a
19 - Sewage and Water Treatment	Saved	Replaced by Core Policy WCS5 – Waste Water
20 - Landfill / Landraising	Not Saved	N/a
21 - Agricultural Improvements	Not Saved	N/a

Policy	Status (i.e. saved under transitional arrangements or not saved)	Proposed Action
22 - Landspreading	Saved	Policy remains in force. Potential replacement at a later date through other Development Plan Document (DPD)
23 - Internationally and Nationally Designated Sites for Nature Conservation	Not Saved	N/a
24 - Locally Designated Sites for Nature Conservation	Saved	Replaced through Core Policy WCS12 – Nature Conservation (Biodiversity & Geodiversity)
25 - Conservation Outside Designated Sites	Saved	Policy remains in force. Potential replacement at a later date through other Development Plan Document (DPD)
26 - Areas of Outstanding Natural Beauty	Not Saved	N/a
27 - Special Landscape Areas	Not Saved	N/a
28 - Sites of National Archaeological Importance	Saved	Policy remains in force. Potential replacement at a later date through other Development Plan Document (DPD)
29 - Sites of Local Archaeological Importance	Saved	Policy remains in force. Potential replacement at a later date through other Development Plan Document (DPD)
30 - Listed Buildings and Conservation Areas	Not Saved	N/a
31 - Historic Heritage	Saved	Policy remains in force. Potential replacement at a later date through other Development Plan Document (DPD)
32 – Agricultural Land	Not Saved	N/a
33 – Water Resources – Pollution Control	Saved	Policy remains in force. Potential replacement at a later date through other Development Plan Document (DPD)
34 – Water Resources – Water Control	Not Saved	N/a
35 – Green Belt	Not Saved	N/a
36 – Waste Minimisation	Saved	Replaced by Core Policy WCS1 – Waste Reduction
37 - Proximity to Other Land Uses	Saved	Policy remains in force. Potential replacement at a later date through other Development Plan Document (DPD)
38 – Hours of Operation	Saved	Policy remains in force. Potential replacement at a later date through other Development Plan Document (DPD)
39 – Transport	Saved	Replaced by Core Policy WCS14 – Sustainable Transport
40 - Traffic	Saved	Replaced by Core Policy WCS14 – Sustainable Transport
41 – Public Rights of Way	Saved	Policy remains in force. Potential replacement at a later date through other Development Plan Document (DPD)
42 - Reinstatement	Saved	Policy remains in force. Potential replacement at a later date through other Development Plan Document (DPD)

Policy	Status (i.e. saved under transitional arrangements or not saved)	Proposed Action
43 – After Use	Saved	Policy remains in force. Potential replacement at a later date through other Development Plan Document (DPD)
44 – Airport Safeguarding	Not Saved	N/a
45 – Planning Obligations	Saved	Policy remains in force. Potential replacement at a later date through other Development Plan Document (DPD)

Appendix 2

Influences on the Waste Core Strategy

International		
Name of Plan/Programme/Strategy	**Key Aims/Objectives/Targets**	**How has this been reflected in the WCS?**
EC Directive 92/43/EEC - The Habitats Directive	Aims to conserve fauna, flora and natural habitats of EU importance. The Habitats Regulations require the review of outstanding decisions, permissions, consents and other authorisations which would be likely to have a significant effect on a European Site. If as a result of an application there is 'likely to be a significant effect' on the designated features of the SAC (this could include impacts from activities not within the boundaries of the SAC and the cumulative effect of several separate applications) then the planning authority must obtain an 'Appropriate Assessment' of the application and its likely effect.	The WCS has been subjected to an initial HRA screening process and subsequently a Habitat Regulations Assessment (HRA) the results of which have been taken into account in the publication version of the WCS.
Kyoto Protocol on Climate Change	Drawn up in Kyoto, Japan in 1997 to implement the United Nations Framework Convention for Climate Change. The major feature of the Kyoto Protocol is that it sets binding targets for 37 industrialized countries and the European community for reducing greenhouse gas (GHG) emissions .These amount to an average of five per cent against 1990 levels over the five-year period 2008-2012. Notably the Protocol places a heavier burden on developed nations under the principle of 'common but differentiated responsibilities'.	The WCS highlights the issue of climate change as a key driver for waste management in Gloucestershire and includes a range of policies that will help to reduce the impact of waste management on climate change and also help mitigate the impacts of climate change already set in motion including for example flood risk, sustainable transport, reduction, re-use, recycling and recovery.

Name of Plan/Programme/Strategy	Key Aims/Objectives/Targets	How has this been reflected in the WCS?
Sixth Environment Action Programme for the European Community	Identifies four priority areas; climate change, nature and biodiversity, environment and health, natural resources & waste. In terms of the approach to waste management it is to prioritise waste prevention, followed by recycling, waste recovery and Modern Thermal Treatment and finally, only as a last resort, landfill.	The WCS addresses a number of these issues including climate change, nature conservation and biodiversity and environmental impact. It is also consistent with the objectives of the action programme regarding waste prevention (reduction) recycling, recovery and disposal. With regard to thermal treatment the Council is technology neutral and the strategic site allocations identified in the WCS are capable of accommodating a range of different technologies.
EU Landfill Directive (1999)	The Directive introduces stringent technical requirements for the operation of landfills. It is intended to prevent or reduce the adverse effects of the landfill of waste on the environment, in particular on surface water, groundwater, soil, air and human health. Implemented in the UK through the Waste and Emissions Trading Bill. Includes targets relating to reduction in the amount of biodegradable waste sent to landfill. Requires landfill sites to be classified as 'inert' 'hazardous' or 'non-hazardous'. Also requires waste to be pre-treated prior to landfill with no co-disposal of hazardous and non-hazardous waste.	The vision, objectives and policies of the WCS are geared towards reducing the amount of waste sent to landfill. The WCS makes clear distinction between the three main types of landfill and sets out a policy framework appropriately. The WCS recognises the continuing role that landfill will play with regard to certain types of waste and waste and engineering operations.

Name of Plan/Programme/Strategy	Key Aims/Objectives/Targets	How has this been reflected in the WCS?
Landfill Regulations (2002)	Implements the landfill directive (see above) which aims to prevent, or to reduce as far as possible, the negative environmental effects of landfill.	The vision, objectives and policies of the WCS are geared towards reducing the amount of waste sent to landfill. The WCS makes clear distinction between the three main types of landfill and sets out a policy framework appropriately. The WCS recognises the continuing role that landfill will play with regard to certain types of waste and waste and engineering operations.
Waste Framework Directive (2008)	Aims to protect the environment and human health through the prevention of the harmful effects of waste generation and waste management. Promotes the waste hierarchy of prevention, preparing for re-use, recycling, other recovery notably energy recovery and disposal. Dangerous waste must be stored and treated in conditions that ensure the protection of health and the environment. Any establishment or undertaking intending to carry out waste treatment must obtain a permit. Any incineration or co-incineration method aimed at energy recovery must only be carried out if this recovery takes place with a high level of energy efficiency.	The vision, objectives and policies of the WCS are in line with the waste hierarchy and reference is made to the revised hierarchy set out in the Directive. The WCS deals with the issue of hazardous waste. With regard to incineration the WCS is technology neutral identifying sites that are capable of accommodating a range of waste treatment options.

Name of Plan/Programme/Strategy	Key Aims/Objectives/Targets	How has this been reflected in the WCS?
Directive on Hazardous Waste	The primary aim of the HWD is to formulate a common definition of hazardous waste and introduce greater harmonisation of its management. It lists hazardous wastes as well as the properties which render waste hazardous. Under the Directive hazardous waste management plans have to be published by the competent authorities. The Directive requires the registration and identification of every site where hazardous waste is delivered packaging and labelling according to EC and international standards when such waste is collected, transported and temporarily stored. Installations producing and receiving hazardous waste, as well as means of transporting the waste must be inspected by competent authorities. Hazardous waste must not be mixed with non-hazardous waste, unless the necessary measures have been taken to safeguard the environment as well as human health. Different categories of hazardous waste must not be mixed.	The WCS explains what hazardous waste is and how it is currently managed in Gloucestershire (predominantly at the specialist landfill near Bishop's Cleeve). The strategy sets out how hazardous waste will be managed in the period up to 2027 and encourages the movement of hazardous waste management up the waste hierarchy in line with national policy.
Directive on Waste Incineration	Aims to prevent or, where that is not practicable, to reduce as far as possible negative effects on the environment caused by the incineration and co-incineration of waste.	The WCS includes a general policy on waste recovery and describes a range of different treatment options including incineration. The strategic site allocations identified are capable of accommodating a range of different waste recovery types. The Council is, however, technology neutral.

Name of Plan/Programme/Strategy	Key Aims/Objectives/Targets	How has this been reflected in the WCS?
Packaging and Packaging Waste Directive	Requires EC member states take measures to prevent the formation of packaging waste, and to develop packaging reuse systems reducing their impact on the environment. Concerned with minimising the creation of packaging waste material and promotes energy recovery, re-use and recycling of packaging. Implemented in the UK through the Producer Responsibility Obligations (Packaging Waste) Regulations 2007 (as amended) and the Packaging (Essential Requirements) Regulations 2003.	The issue of packaging waste is referred to in the WCS which also includes general policies on waste reduction, re-use, recycling and recovery. Producer behaviour is however outside the scope of the WCS.
End of Life Vehicles Directive	Aims to reduce the amount of waste produced from vehicles when they are scrapped. Requires ELV treatment sites to meet stricter environmental standards. The last owner of a vehicle must be issued with a Certificate of Destruction for their vehicle and they must be able to dispose of their vehicle free of charge. Vehicle manufacturers and importers must cover all or most of the cost of the free take-back system. It also sets higher reuse, recycling and recovery targets and limits the use of hazardous substances in both new vehicles and replacement vehicle parts.	No direct relationship although the WCS provides an overall policy framework for recycling and recovery including metals (scrapped cars etc.).

Name of Plan/Programme/Strategy	Key Aims/Objectives/Targets	How has this been reflected in the WCS?
Waste Electrical and Electronic Equipment (WEEE) Directive	Aims to reduce the amount of WEEE being produced and encourages everyone to reuse, recycle and recover it. It also aims to improve the environmental performance of businesses that manufacture, supply, use, recycle and recover electrical and electronic equipment (EEE).	The WCS includes general policies on waste reduction, recycling and recovery including electrical and electronic equipment.
National		
Name of Plan/Programme/Strategy		
Climate Change Act 2008	Makes the UK the first country in the world to have a legally binding long-term framework to cut carbon emissions. It also creates a framework for building the UK's ability to adapt to climate change. Key aims relate to improving carbon management and demonstrating UK leadership internationally. Key provisions include a legally binding target of at least an 80% cut in greenhouse gas emissions by 2050 (and at least 34% by 2020).	The WCS highlights the issue of climate change as a key driver for waste management in Gloucestershire and includes a range of policies that will help to reduce the impact of waste management on climate change and also help mitigate the impacts of climate change already set in motion including for example flood risk, sustainable transport, reduction, re-use, recycling and recovery.
National Waste Strategy (2007)	Aims to change the way waste and resources are managed and tackle the amount of waste produced breaking the link between economic growth and increased waste. Where waste is produced the priority is to put it to good use through re-use, recycling, composting and recovering energy. Targets include meeting the landfill directive diversion targets (see above) increasing diversion from landfill of non-	The WCS recognises the link between economic growth and increased waste. It also aims to make better use of waste that is produced through re-use, recycling, recovery etc. The allocation of strategic sites for waste recovery will provide an alternative to landfill which will help contribute towards the objective of recovering 75% of municipal waste by 2020.

	municipal waste, recycling and composting 50% of household waste by 2050 and recovering 75% of municipal waste by 2020.	
Waste Infrastructure Delivery Programme (WIDP)	Established to support local authorities to accelerate investment in the large-scale infrastructure required to treat residual waste, without compromising efforts to minimise waste and increase recycling levels.	The WCS highlights the importance of residual waste treatment and identifies the level of additional capacity needed over the plan period. The strategic site allocations will help to increase the prospects of a residual waste treatment facility coming forward.
DEFRA: Review of National Waste Policy	A review of waste policies and delivery in England. To ensure that the right steps are being taken towards the creation of a 'zero-waste' economy where resources are fully valued and nothing of any value gets thrown away. The review will look at all aspects of waste policy and delivery including household and business waste and recycling collection arrangements. It will consider how the Government can incentivise the delivery of the waste hierarchy moving towards zero waste to landfill. It includes the revised waste hierarchy set out in the Waste Framework Directive 2008.	Preliminary findings from the waste policy review will be published in Spring 2011. Due to this timing it is not possible to take into full account the review in finalising the WCS although reference to the review and the revised waste hierarchy is made. Any significant revisions to national waste policy will need to be reflected through future revisions to the WCS.
Planning Policy Statement 1: Delivering Sustainable Development	Sets out the Government's overarching objectives for the planning system. Key aims include ensuring suitable land is available for development, contributing to sustainable development, protecting and enhancing the natural and historic environment, ensuring high quality development and ensuring that development supports existing communities. Specific objectives include mitigation of the effects of and adaptation to climate change, avoiding flood risk areas, minimising the consumption of resources, promoting economic	The WCS addresses a range of issues identified in PPS1 including sustainable development, natural and historic environment, design, climate change and flood risk. These are identified as key issues and duly addressed through appropriate core policies.

	development, reducing the need to travel and promoting the efficient use of land. With specific regard to waste, PPS1 requires waste to be managed in ways that protect the environment and human health including producing less waste and using it as a resource wherever possible.	
Supplement to Planning Policy Statement 1: Planning and Climate Change	The supplement to PPS1 requires local planning authorities to prepare planning strategies that make a full contribution to the Government's climate change programme, ensure energy efficiency and reduction in emissions, secure the use of sustainable transport, promote resilience to climate change, conserve and enhance biodiversity and reflect the development needs and interests of communities.	The WCS highlights climate change as a key driver and identifies a number of specific issues and policies underneath this broad heading including flood risk, biodiversity and nature conservation, design (including sustainable drainage) and sustainable transport. The strategic site allocations will help to reduce the current reliance on landfill in Gloucestershire which itself will help to reduce contributions to climate change.
Planning Policy Statement 10: Planning for Sustainable Waste Management	PPS10 sets out the Government's overarching planning policy framework on waste management. The overall objective is to produce less waste and use it as a resource wherever possible. The aim is to break the link between economic growth and the environmental impact of waste by moving the management of waste up the waste hierarchy. Other aims include communities taking more responsibility for their own waste, enabling sufficient and timely provision of waste management facilities, secure recovery or disposal of waste with endangering human health and without harming the environment, reflect the concerns and interests of communities, waste collection authorities, waste disposal authorities and business, protect green belts whilst recognising the locational needs of waste facilities and ensuring design and	The key aims and objectives of PPS10 have been embraced in the WCS which ensures that sufficient opportunities for the provision of waste management facilities in appropriate locations have been made available through the identification of land for waste management. It also sets out criteria to allow speculative development proposals to be determined. Other issues addressed include Green Belt, the waste hierarchy, community responsibility and the natural and historic environment.

	layout of new development supports sustainable waste management.	
Planning Policy Statement 25: Development and Flood Risk	Sets out the Government's planning policy on development in flood risk areas. Key objectives include the appraisal of flood risk, the management of flood risk (location of development) and reducing risk (safeguarding land required for flood management, location, design and layout of development) and partnership working e.g. with the Environment Agency. Local authorities should adopt a sequential approach steering new development to low-risk flood areas in preference to medium and high-risk flood areas.	Flood risk is highlighted in the WCS as one of the key issues of importance in Gloucestershire particularly in light of major flooding in 2007. The vision includes reference to safeguarding land liable to current and potential future flood risk. Flood risk is also addressed through the spatial strategy including a core policy. The implementation and monitoring sections of the WCS explain how the core policy will be delivered and monitored.
Regional		
Name of Plan/Programme/Strategy		
Regional Waste Strategy for the South West 'From Rubbish to Resource' (2004)	Published in 2004, the Regional Waste Strategy covers the period to 2020 and aims to ensure that by 2020 over 45% of waste in the south west is recycled and re-used and less than 20% of waste produced in the region is landfilled. Key areas for action identified include adoption of the waste hierarchy. The vision is that by 2030 the south west region will become a minimum waste producer with business and households maximising opportunities for re-use and recycling.	The WCS highlights the Regional Waste Strategy as a key driver and takes into account the data set out in the strategy in identifying future capacity requirements in Gloucestershire. In line with the waste hierarchy, the WCS focuses on reducing waste, re-using more waste and reducing the current reliance on landfill.
Draft Regional Spatial Strategy for the South West Proposed Changes (2008)	The draft Regional Spatial Strategy for the South West was published in 2006 and revised in 2008. It provides the overall planning framework for future development in the south west region in the period	The strategic site allocations and preferred locational strategy (Zone C) contained in the WCS were identified having regard to the sequential approach set out in the RSS. Although it is the intention of the Government to

	2006 – 2026. Although it is the intention of the Government to abolish the RSS, at the present time it remains a material consideration. With regard to waste, the RSS states that proposals should consider opportunities to provide treatment facilities for multiple waste streams and the need to accommodate new treatment facilities. Other factors to consider include the role played by mobile crushing and screening equipment and exempt sites in managing C&D waste. Proposals should also take account of significant and sustained transfers of waste across regional boundaries. Planning authorities should make provision for a network of strategic and local waste collection, transfer, treatment (including recycling) and disposal sites. In terms of the location of strategic waste facilities the RSS adopts a sequential approach requiring them to be located within, on the edge of or close the main urban areas (Gloucester and Cheltenham). Priority should be given to re-use of previously developed land, opportunities for connecting to the rail network and the scope for co-location of complimentary activities.	abolish the RSS, at the present time it remains a material consideration. Furthermore the proposed spatial strategy is consistent with other national and regional policy. The strategic site allocations allow for the possibility of multiple waste streams being treated at the same site. The WCS also addresses the issue of C&D waste including mobile crushing and screening and exempt facilities through the core policy on inert waste recovery and recycling.

Local		
Name of Plan/Programme/Strategy		
Gloucestershire Joint Municipal Waste Management Strategy 2007 – 2020 (JMWMS)	Adopted by all seven local authorities in Gloucestershire the JMWMS provides a framework for the development of municipal waste management services through to 2020. It is guided by the principles of the waste hierarchy, aiming to minimise waste generation and view waste materials as a resource. It explains the current situation with regard to waste management in Gloucestershire (how much waste, what type, how it is managed etc.) and the future situation having regard to various key drivers including climate change and changes in waste arisings. Strategy objectives relate to changing behaviour, waste reduction, waste segregation at source, composting, providing residual waste treatment capacity and working in partnership.	The WCS has a key role to play in delivering the JMWMS including in particular the residual waste treatment capacity that is identified. The JMWMS is highlighted in the WCS as a key driver and the strategic site allocations will help to ensure that provision is made to meet the residual waste treatment capacity requirement. Other issues addressed in the WCS include composting, changing behaviour, waste reduction and working in partnership.
Gloucestershire Sustainable Community Strategy (2007 – 2017)	Sets out the current and future challenges affecting Gloucestershire and agrees the aims that set a framework for joint action over the next 10 years. The strategy has five aims; a place where the future matters (climate change, protecting the environment, managing waste in a sustainable way, managing local heritage) a place where communities matter (giving communities a voice, communities prosper, feel and are safe) a place where everybody matters (deprived communities supported, access to decent affordable housing, improved health) a place where people want	The Gloucestershire SCS is highlighted as a key driver in the WCS. The WCS has a key role to play in delivering a number of the aims and objectives set out in the SCS including the mitigation of and adaptation to climate change, environmental protection, sustainable management of waste, protecting local heritage and sustainable transport. The vision of the WCS is consistent with that set out in the SCS including the intention to ensure that Gloucestershire remains a great place to live and work.

	to live (accessible facilities, affordable transport, recreational opportunities) a place that thrives (strong economy, sustainable levels of investment). The environment is recognised as a future challenge protecting it in the face of climate change and the challenges posed by economic growth (housing, traffic and waste management).	
Gloucestershire Local Area Agreement (LAA)	The LAA is an agreement between the government and a partnership of local public and voluntary organisations, led by Gloucestershire County Council. It sets a range of improvement targets aimed to help partners concentrate on working to achieve their top priorities and to make a real difference for local people. Priority outcomes relevant to the WCS include the development of more resilient communities with indicators to be used including residual waste per household and percentage of household waste sent for re-use, recycling and composting. Other indicators relevant to the WCS include CO_2 emissions, number and capacity of renewable energy installations and planning to adapt to climate change. Currently the Gloucestershire LAA covers the period 2008-2011. The Government has announced the revocation of LAAs, however they will still be reported locally to the Gloucestershire Strategic Partnership. It is envisaged that new local agreements will be made which might draw upon the LAA targets.	The WCS addresses a number of the issues and priorities set out in the existing Gloucestershire Local Area Agreement (LAA) including reducing the amount of residual waste per household and promoting more re-use, recycling and composting. The WCS also has a role to play in relation to the LAA objectives concerning renewable energy generation and climate change.

Gloucestershire County Council Corporate Climate Change Strategy & Action Plan	The Council's climate change strategy sets out the sets out the Council's priorities for adapting to and mitigating against causes of climate change through its estate, services and leadership role within the county. It takes a long-term view, looking forward to 2040 and even beyond. The main ambition is that climate change will be a key factor in decision making when deciding how services are delivered and in working with partners. The aim is to reduce our carbon emissions by 10% by 2012 (against the 2005/06 baseline) and by 2.5% every year to achieve a 60% reduction by 2050, the current UK target.	Climate change is identified as a key driver for the WCS and is reflected in the vision, objectives and core policies. Waste management and climate change are fundamentally linked including in particular the impact of landfill. The allocation of strategic sites for residual waste treatment will help to reduce the current reliance placed on landfill as the primary means of waste management in Gloucestershire. The proposed locational strategy will help to ensure that the future potential impacts of climate change including increased flood risk are fully taken into account.
Second Gloucestershire Local Transport Plan 2006-2011	The aim of the strategy is to improve the social, environmental and economic well-being of the county. The vision is to enable people in Gloucestershire to enjoy real choices of ways of travel with viable alternatives to the car and high quality access to services on a safe and efficient transport network. The vision is expanded into six objectives; maintenance and improvement, economy and integration, accessibility, real choices and awareness and environment. Specific aims include supporting regeneration and sustainable growth, reducing road casualties, improving community safety, enabling high quality access to services, meet the needs of people with disabilities, facilitate alternatives to the car, reduce the impact of road transport on communities and the environment and improving air quality.	The issue of transport is highlighted in the WCS as a key issue for Gloucestershire. The core policy on sustainable transport will help to ensure that alternatives to road transport are duly considered where viable including rail and water. The locational strategy focused on Zone C includes the majority of the county's main transport infrastructure thereby increasing the potential use of sustainable modes of transport for the movement and management of waste.

	Draft Third Gloucestershire Local Transport Plan 2011-2026	This draft plan sets out the transport strategy for the County from 2011 to 2026. The strategy's vision is 'providing a safe and sustainable transport network within Gloucestershire'. The strategy aims to deliver four main themes; a green, healthier Gloucestershire, sustainable economic growth, a safer, securer transport system and good access to services.	The issue of transport is highlighted in the WCS as a key issue for Gloucestershire. The core policy on sustainable transport will help to ensure that alternatives to road transport are duly considered where viable including rail and water. The locational strategy focused on Zone C includes the majority of the county's main transport infrastructure thereby increasing the potential use of sustainable modes of transport for the movement and management of waste.
FC38	AONB Management Plans (Cotswold, Wye Valley and Malvern Hills)	Some of the main aims and objectives of these management plans include; tackling climate change, conserving and enhancing the character of the landscape and historic environment, sustainable transport, reducing waste, protecting water quality and resources, providing housing and employment opportunities, protecting and enhancing biodiversity and geodiversity, sustainable woodland management, rural enterprise and encouraging the use of local materials and food.	The WCS specifically identifies the presence of AONB in Gloucestershire as a key issue to be addressed. Safeguarding landscape and environmental assets forms part of the spatial vision and Strategic Objective 5 addresses a number of the issues raised in the AONB Management Plans including climate change, sustainable transport and the protection of national landscape designations. Core Policy WCS11 relates specifically to the AONB. Other relevant policies include waste reduction, nature conservation, design and sustainable transport.

Appendix 3

Schedule of Core Policies and Strategic Objectives

Core Policy	Strategic Objective 1 - Waste Reduction	Strategic Objective 2 - Re-Use, Recycling & Composting	Strategic Objective 3 - Other Recovery (including energy recovery)	Strategic Objective 4 - Waste Disposal	Strategic Objective 5 - Minimising Impact
WCS1 – Waste Reduction	The policy has a direct correlation with this objective and will help to ensure greater awareness of waste issues and waste reduction as well as achieving less waste in new development at construction and in perpetuity.	The policy will help to raise awareness of the need to re-use waste and will encourage more waste to be re-used. The policy will also help to ensure that 'domestic' scale recycling and composting facilities are provided within all major new development.	No direct relationship although increases in waste reduction will influence the amount of 'residual' waste that needs to be dealt with through 'other recovery' processes.	Increased waste reduction will reduce the amount of 'residual' waste to be disposed of. This in turn will have a positive impact on Strategic Objective 4 helping to reduce the amount of waste sent to landfill.	Increased waste reduction will mean there is less waste to manage and therefore potentially fewer waste management facilities. This would have a positive impact in terms of minimising the impact associated with waste management.
WCS2 – Recycling & Composting~~/Anaerobic Digestion (including bulking and transfer)~~	The policy is consistent with this objective insofar as it will help to ensure that waste is seen as a potential resource.	The policy has a direct correlation with this objective. The provision of new recycling and composting facilities will help to ensure the Council's targets are met. The policy also encourages the development of markets for recycled materials.	The policy is consistent with this objective insofar as it will help to recover value from waste. Increased recycling and composting will also influence the amount of 'residual' waste that requires management. ~~The provision of bulking and transfer facilities could support any 'other recovery' facilities that come forward.~~	Increased recycling and composting will reduce the amount of 'residual' waste to be disposed of. This in turn will have a positive impact on Strategic Objective 4 helping to reduce the amount of waste sent to landfill. ~~The provision of bulking and transfer facilities may support the existing landfill operations.~~	The criteria set out in the policy will help to ensure that the impact of any recycling, composting, ~~bulking or transfer~~ facility is kept to an acceptable minimum. The support expressed for previously developed land, co-location and sustainable transport will further reduce impact.

FC13

Core Policy	Strategic Objective 1 - Waste Reduction	Strategic Objective 2 - Re-Use, Recycling & Composting	Strategic Objective 3 - Other Recovery (including energy recovery)	Strategic Objective 4 - Waste Disposal	Strategic Objective 5 - Minimising Impact
WCS3 – Inert Waste Recycling and Recovery	No direct relationship although the policy will help to reduce the amount of inert waste being sent to landfill.	The policy has a direct correlation with this objective. It will help to ensure that inert waste including mainly C&D waste is either re-used intact or recycled e.g. into recycled aggregates.	The policy is consistent with this objective insofar as it will help to recover value from inert waste for example recycled aggregates that may be used on or off-site and materials that may be salvaged for re-use e.g. windows, doors etc.	Increased recycling and recovery of inert waste will help to reduce the amount of waste that is sent to landfill helping to reduce our reliance on landfill as the primary means of waste disposal in Gloucestershire.	The criteria set out in the policy will help to ensure that the potential impact of any development relating to inert waste recycling and recovery whether temporary or permanent are kept to an acceptable minimum.
FC13 WCS3a – Anaerobic Digestion	No direct relationship although the policy will help to reduce the amount of biodegradable waste sent to landfill.	AD is similar to IVC and could be seen as contributing towards the Council's recycling/composting target.	AD is a form of energy recovery and the policy will help maximise the recovery of energy from organic waste such as food through the provision of new AD facilities in appropriate locations.	No direct relationship although the policy will help to reduce the amount of biodegradable waste sent to landfill.	The criteria set out in the policy will help to ensure that the impact of any AD facility is kept to an acceptable minimum. The support expressed for previously developed land, co-location and sustainable transport will further reduce impact.
WCS4 – Other Recovery (including Energy Recovery)	No direct relationship. The policy is intended to provide a framework for dealing with the residual waste that cannot be reduced, re-used, recycled or composted. The policy will however	No direct relationship. The policy is intended to provide a framework for dealing with the residual waste that cannot be reduced, re-used, recycled or composted. It will however be	The policy has a direct correlation with this objective and will help to ensure that other recovery facilities are provided to gain maximum value from the residual waste that	Other recovery including energy recovery will help to reduce the amount of waste that is sent to landfill. The policy is therefore consistent with this objective.	The policy will have a positive impact in several ways. First the recovery of residual waste will help to reduce the environmental impact associated with landfill. Secondly, the criteria set

	help to reduce the amount of residual waste sent to landfill.	consistent with the objective insofar as the policy will help to make the best use of Gloucestershire's waste.	cannot be re-used, recycled or composted including potentially energy recovery.		out in the policy and attached in the strategic site schedules will help to ensure that the impacts of planned and speculative residual waste recovery facilities are kept to a minimum.
WCS5 – Waste Water	No direct relationship.	No direct relationship although the policy will help encourage the use of waste water including for example energy generation from Anaerobic Digestion (AD) associated with treatment.	No direct relationship although the policy does lend particular support to waste water treatment proposals that involve the development of energy recovery such as Anaerobic Digestion (AD).	No direct relationship.	The policy seeks to ensure that any adverse land use or environmental impact are mitigated in order to keep them to an acceptable minimum.
WCS6 – Hazardous Waste	No direct relationship although the policy does encourage waste being seen as a potential resource.	The policy aims to support the movement of hazardous waste management up the waste hierarchy including recycling and other forms of recovery. This in turn will help to ensure the	The policy encourages the movement of hazardous waste up the waste hierarchy including recovery in order to secure any potential value from the waste in preference to landfill.	No direct relationship. Whilst the policy encourages the movement of hazardous waste up the waste hierarchy the supporting text recognises the continuing role of landfill for disposing of certain types of waste including some hazardous waste.	The policy clearly sets out a number of criteria that will be used to ensure the impact of hazardous waste proposals are kept to an acceptable minimum.

Core Policy	Strategic Objective 1 - Waste Reduction	Strategic Objective 2 - Re-Use, Recycling & Composting	Strategic Objective 3 - Other Recovery (including energy recovery)	Strategic Objective 4 - Waste Disposal	Strategic Objective 5 - Minimising Impact
WCS7 – Cumulative Impact	No direct relationship.	No direct relationship.	No direct relationship.	No direct relationship.	The policy has a direct correlation with this objective and will help to ensure that the cumulative impacts of proposed development are duly considered.
WCS8 – Safeguarding Sites for Waste Management	No direct relationship.	The policy will help to ensure that existing waste management facilities used for recycling and composting are safeguarded from inappropriate development.	The policy will help to ensure that existing waste management sites used for residual recovery are safeguarded from inappropriate development.	The policy will help to safeguard existing facilities used for waste disposal in Gloucestershire.	The policy will help to ensure the number of new sites that need to be identified which will help to reduce the impact of those new facilities on existing communities and businesses.
WCS9 – Flood Risk	No direct relationship.	No direct relationship although the policy will help to ensure that new facilities involving preparation of waste for re-use, recycling and composting are located in areas that are not at risk of flooding and do not increase the risk of flooding elsewhere.	No direct relationship although the policy will help to ensure that new facilities involving residual waste recovery are located in areas that are not at risk of flooding and do not increase the risk of flooding elsewhere.	No direct relationship although the policy will help to ensure that new facilities involving waste disposal are located in areas that are not at risk of flooding and do not increase the risk of flooding elsewhere.	The policy has a direct correlation with this objective. It will help to ensure the potential impact of new waste related development on flood risk is kept to an acceptable minimum. The use of sustainable drainage will further reduce potential impact.

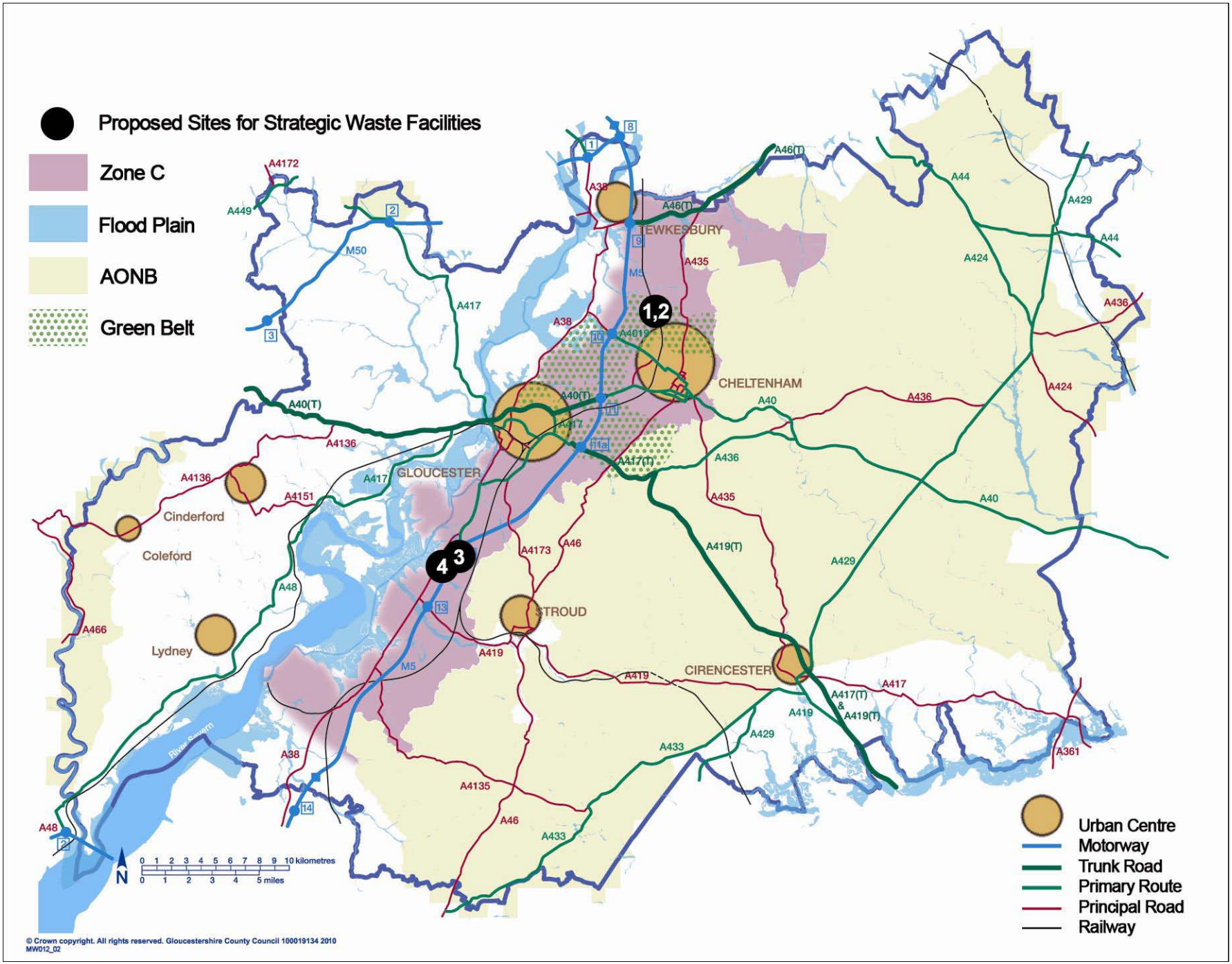
Core Policy	Strategic Objective 1 - Waste Reduction	Strategic Objective 2 - Re-Use, Recycling & Composting	Strategic Objective 3 - Other Recovery (including energy recovery)	Strategic Objective 4 - Waste Disposal	Strategic Objective 5 - Minimising Impact
WCS10 – Green Belt	No direct relationship.	No direct relationship although the policy provides a framework for determining re-use, recycling and composting operations that may be located within the Gloucester – Cheltenham Green Belt.	No direct relationship although the policy provides a framework for determining residual waste recovery operations that may be located within the Gloucester – Cheltenham Green Belt.	No direct relationship although the policy provides a framework for determining applications for disposal operations that may be located within the Gloucester – Cheltenham Green Belt.	The policy has a direct correlation with this objective. It recognises the locational requirements of waste facilities and sets out a number of criteria to ensure that any impact on the Green Belt and its key objectives are kept to an acceptable minimum.
WCS11 – Areas of Outstanding Natural Beauty (AONB)	No direct relationship.	No direct relationship although the policy provides a framework for determining re-use, recycling and composting operations that may be located within an AONB.	No direct relationship although the policy provides a framework for determining residual waste recovery operations that may be located within an AONB.	No direct relationship although the policy provides a framework for determining applications for disposal operations that may be located within an AONB.	The policy has a direct correlation with this objective. It provides a policy framework to determine waste development within the AONB and the criteria will keep any impact to an acceptable level.
WCS12 – Nature Conservation (Biodiversity & Geodiversity)	No direct relationship.	No direct relationship although the policy provides a framework for determining re-use, recycling and composting operations that may impact on an area of nature conservation interest.	No direct relationship although the policy provides a framework for determining residual waste recovery operations that may impact on an area of nature conservation interest.	No direct relationship although the policy provides a framework for determining applications for disposal operations that may impact on an area of nature conservation interest.	The policy has a direct correlation with this objective. It provides a policy framework to determine waste development within or affecting a site of nature conservation importance and the criteria provided will keep any impact to

						an acceptable level. The policy may also lead to positive impacts.
	WCS13 - Design	The policy requires development to make the most efficient use of a site which will help to reduce waste.	No direct relationship although the policy will help to ensure high quality design in any re-use, recycling and composting facilities that come forward.	No direct relationship although the policy will help to ensure high quality design in any residual waste recovery facility.	No direct relationship although the policy will help to ensure high quality design in any development associated with landfill.	The policy has a direct correlation with this objective. It will help to minimise the impact of waste development on the environment and local communities by ensuring that all development achieves a high standard of design appropriate to the local context.
FC13	WCS13a – Bulking and Transfer	No direct relationship.	No direct relationship although bulking and transfer facilities may come forward in relation to the movement of recyclates.	No direct relationship although bulking and transfer facilities may come forward in support of waste recovery facilities including those sites identified in Core Policy WCS4.	No direct relationship although bulking and transfer facilities may come forward in support of the disposal of waste to landfill.	The policy has a direct correlation with this objective. It will help to minimise the impact of moving waste by road by allowing for waste to be bulked up onto fewer, larger vehicles. The criteria set out in the policy will help to ensure the impact of any bulking and transfer facility is kept to an acceptable level.

Core Policy	Strategic Objective 1 - Waste Reduction	Strategic Objective 2 - Re-Use, Recycling & Composting	Strategic Objective 3 - Other Recovery (including energy recovery)	Strategic Objective 4 - Waste Disposal	Strategic Objective 5 - Minimising Impact
WCS14 – Sustainable Transport	No direct relationship.	No direct relationship although the policy will help to ensure that the transport impacts of any proposal for waste re-use, recycling and composting are kept to an acceptable minimum and that wherever viable alternative modes of transport to the road are considered.	No direct relationship although the policy will help to ensure that the transport impacts of any proposal for residual waste recovery are kept to an acceptable minimum and that wherever viable alternative modes of transport to the road are considered.	No direct relationship although the policy will help to ensure that the transport impacts of any proposal for waste disposal are kept to an acceptable minimum and that wherever viable alternative modes of transport to the road are considered.	The policy has a direct correlation with this objective helping to ensure that the transport impacts of any waste management proposal are kept to an acceptable minimum and that wherever viable alternative modes of transport to the road are considered.

Appendix 4

Key Diagram



Appendix 5

Strategic Site Schedules

General Development Criteria (applicable to all sites)	
Policy	Core Policy WCS4
Key Development Criteria	
Access/Highways	A full Transport Assessment will need to accompany any proposal for development.
Airport Safeguarding	Where a proposal falls within the safeguarding area of a civil or military airport, the developer should consult with the appropriate organisation (i.e. Civil Aviation Authority, Gloucestershire Airport or Ministry of Defence).
Amenity Impact	An evaluation should be carried out of the potential environmental impact of development, including noise, dust, fumes, smell and traffic, on the surrounding area and highway network. Appropriate measures would be required to ensure that there would be no unacceptable impact on the local community. The evaluation should be carried out in accordance with the requirements of Core Policy WCS4 of this document.
Archaeology	In accordance with PPS 5 Planning for the Historic Environment: Pre-validation/determination: a description of the significance of the heritage assets affected and the contribution of their setting to that significance, together with an assessment of the impact of the proposals, should be provided. Desk-based assessment, followed by field evaluation if necessary, should be undertaken in order to assess the significance of the heritage assets affected. Post-permission: mitigation of the loss of significance of any identified heritage assets through appropriate recording will be secured by planning conditions or agreements.
CHP	Where an Energy from Waste facility is proposed, applicants will need to outline the details of the energy recovery / and heating system proposed and should identify the envisaged energy client.
Contaminated and Unstable Land	Where contaminated and/or unstable land has been identified or could be present, development should provide the opportunity for investigation and remediation.
Design	All proposals need to consider the matters raised through Core Policy 13 and endeavour to meet the highest design standards.
Ecology/HRA	Survey(s) are required to determine whether notable species, habitats or possibly designated sites may be adversely affected by development. All surveys carried out should be assessed to determine: 1. The biodiversity importance of the land and its surrounds. 2. All impacts of the proposed development on biodiversity. 3. The choice of any necessary avoidance, mitigation and/or compensation measures for biodiversity. 4. Provision of landscaping/restoration and where possible enhancements for biodiversity on the land and/or

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	surrounds. 5. Arrangements for appropriate after-care and long-term management of the land and/or surrounds. Habitats Regulations Assessment (HRA): The strategic sites identified within Policy WCS 4 have been subject to a study to consider any potentially significant effects on Natura 2000 sites i.e. European Sites of Nature Conservation Importance protected under the EU Habitats Directive (92/43/EEC) as transposed into UK law by the Conservation of Habitats and Species Regulations 2010 (the 2010 Regulations). European Sites include Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). It is government policy to also consider Ramsar sites (wetlands of international importance) as if they were European Sites. Further information regarding European Sites and the results of the HRA are contained in the detailed report which supports the WCS. The overall aim of the HRA is to ensure that the strategy will not affect the integrity of these protected sites. Any development proposals for waste management facilities which come forward at any of the strategic sites contained in Policy WCS 4 will need to refer to the detailed findings of the HRA report. In most cases the strategic waste sites are some way distant from European Sites and therefore many forms of waste management development would potentially not have a significant impact on European Sites. The HRA has not precluded the development of thermal treatment facilities at any waste site, but for these proposals it must be demonstrated that there will be no significant effect on European Sites either alone or in combination with other plans or projects. Each individual waste site schedule indicates the particular European Sites which will need to be considered at the planning application stage. The following applies: Section 61 of The Conservation of Habitats and Species Regulations 2010.
Flood Risk/Water Protection	Surface Water Mapping should be undertaken on the site. A site-specific FRA should be undertaken on the site. This should include a Drainage Impact Assessment to assess the appropriate SUDS techniques that should be adopted to attenuate runoff. Adoption of SUDS is critical to ensure that the development does not exacerbate flood risk elsewhere, and should be reviewed at the masterplanning stage, specifically the space required in the site for SUDS. Any SUDS design must take account of groundwater and geological conditions and should consider the opportunity for biodiversity enhancement. The EA strongly supports opportunities for de-culverting and restoration to natural channels. Where culverts have been identified, opportunities for this should be investigated as part of the FRA.
Landscape/Visual Impact	The landscape appraisal for all sites considered the possible building height and land take for three different facility sizes: Small - 2000-6000m^2, with buildings up to 20m in height and potential emissions stack up to 40m in height. Medium - 3000-7000m^2, with buildings up to 30m in height and potential emissions stack up to 60m in height. Large - 4000-9000m^2, with buildings up to 40m in height and potential emissions stack up to 80m in height.
Proximity to Railway Network	Network Rail should be consulted on all planning applications for waste management proposals within 250m of the railway property.

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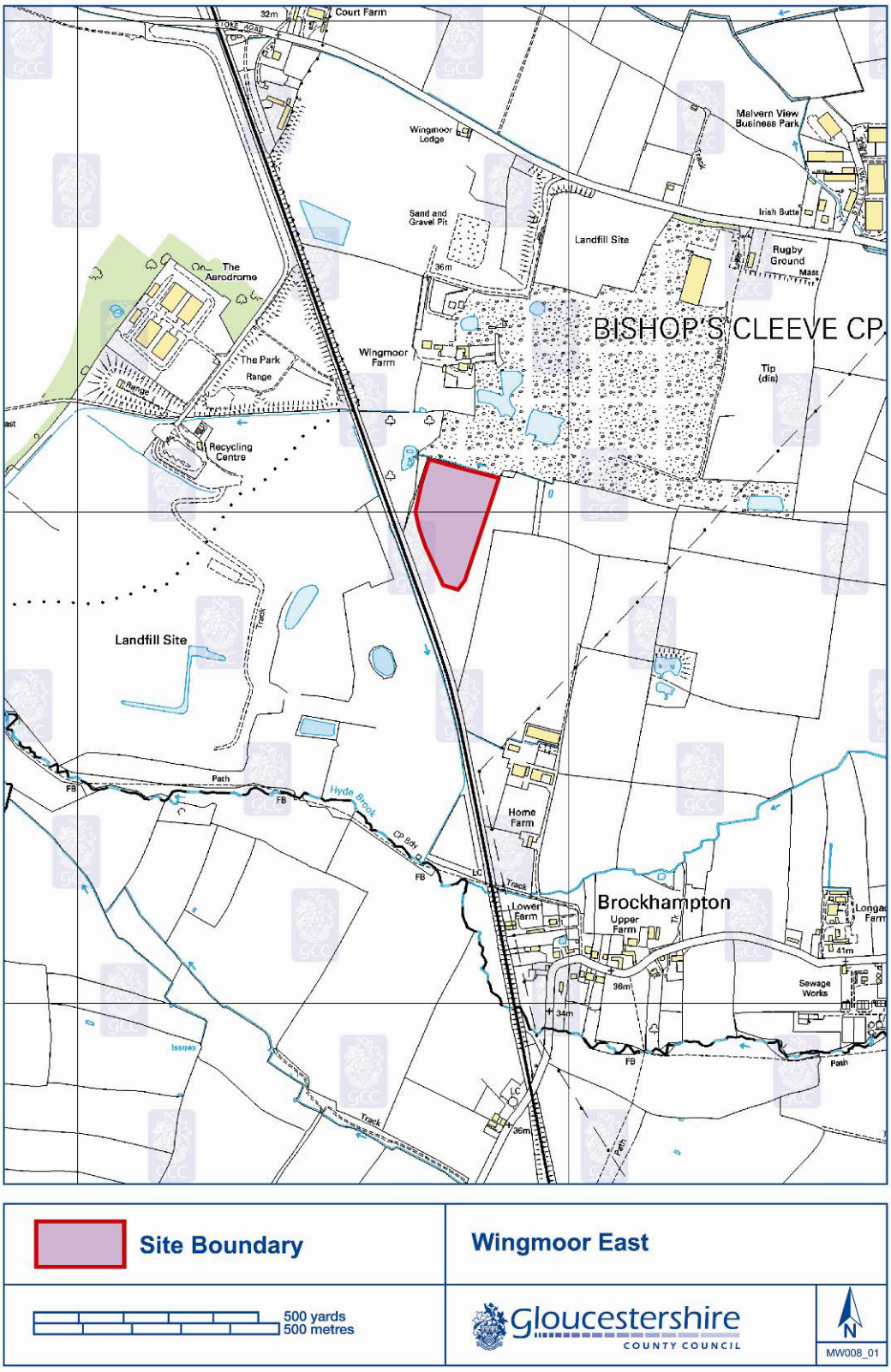
INSET MAP 1 – WINGMOOR FARM EAST



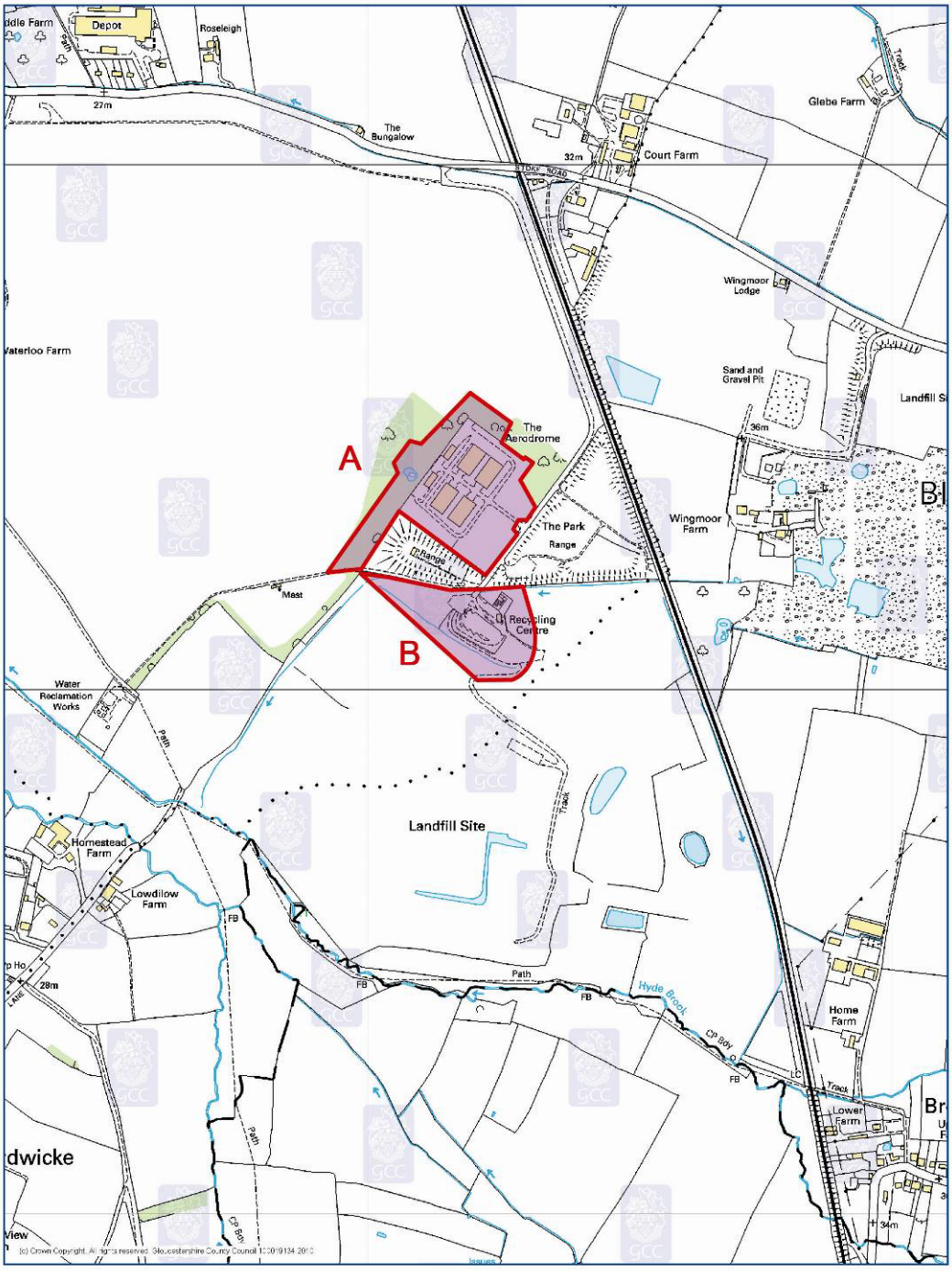
Site Name	Wingmoor Farm East		
Site No	1		
Policy	Core Policy WCS4		
Suitable Uses	Primarily C&I waste with some capacity for treatment of MSW.		
Locational Information			
District	Tewkesbury	Parish	Bishop's Cleeve
Easting	393733	Northing	227027
Site Area (hectares)	c. 2.8 hectares		
Site Location	The site is situated within the Wingmoor Farm East landfill, recycling and quarry complex. This is located to the west of Bishop's Cleeve, five miles north of Cheltenham on the Stoke Road leading from the A435 to Stoke Orchard.		
Site Description	The site is located with the former Waste Local Plan strategic site allocation and forms part of the larger landfill scheme for the site. However, to date, this part of the site remains unworked.		
Neighbouring Uses	The only neighbouring uses within 250metres of the site are associated with existing waste management operations, farmland and the railway. There are a few residential properties, a rugby ground, businesses and shooting clubs within 1km of the site, including the small settlement of Brockhampton c. 700m south of the site.		
Planning Status	All permissions relating to waste activities and the landfill technically expired in 2009. The operator has applied to extend the date of landfill operations until around 2029/30, which includes the site proposed here. Due to the large amount of voidspace for landfill remaining and the submitted proposals for waste management to continue until 2029, for the purposes of Waste Core Strategy preparation there is sufficient evidence to suggest that there is prospect for delivery of proposals at this site. Clearly this is subject to the determination of the application to extend operations.		
Environmental Considerations			
Access/Highways	HGV vehicles are required to access Stoke Road from the A435 and not via Stoke Orchard village. This would still have an impact on Stoke Road. There could also be significant traffic on local roads south of Bishop's Cleeve in North and West Cheltenham. Some nearby A435 junctions are forecast to have operational problems including A435/Southam Lane lights. The adjacent railway line provides the opportunity for a potential rail connection, but sidings would be required and the costs are likely to be very high.		

	Airport Safeguarding	The site lies within the Gloucestershire Airport zone for: *"All buildings, structures, erections and works exceeding 90 metres in height (295.3 feet) plus all applications involving major tree planting schemes, mineral extraction or quarrying, a refuse tip, a reservoir, a sewage disposal works, a nature reserve or a bird sanctuary and all applications connected with an aviation use."*
FC41	Archaeology	Possible evidence of prehistoric or Roman settlement in the area; archaeological potential of the site is uncertain. There are four Grade II Listed buildings within 1km of the site boundary.
	CHP Potential	Within 1km of the site there are over 35 business and 65 residential properties and 2 sporting clubs. Potential development within 2km includes a local plan allocation and 2 SHLAA sites (c.7300 properties). The initial assessment work indicates that there would be a potential demand for a heat network within the existing development. However the heat network would have to be retrofitted. There is good potential for a heat network to be included within any future development.
	Contaminated Land	The site is not classified as "Contaminated Land" under Section 2a of the Environmental Protection Act 1990.
	Ecology/HRA	The nearest European site is Dixton Wood SAC, at a distance of 5.2 km. Wingmoor Farm Meadow GWT Reserve & Key Wildlife Site; Lowland meadows Priority Habitat and Wingmoor Farm Meadow GC/SO92/W01 Grassland Inventory sites are located adjacent to the site. Brown Hares *(Lepus capensis)* have been identified adjacent to the site. Brown Argus *(Aricia agestis)*, Small Heath *(Coenonympha pamphilus),* Wall *(Lasiommata megera),* White Letter Hairstreak *(Satyrium w-album)* and hoverflies *(Volucella inflate)* have all been identified within 1km of the site.
FC42	Flood Risk/Water Protection	The site is not within a Source Protection Zone. ~~The site is adjacent to, but not within, a minor aquifer although the EA identified the site as a non-aqufier with un productive strate and low risk to groundwater.~~ The EA identified the site as overlying unproductive strata with the groundwater risks associated with the location as low for the geological setting. The site lies fully within Flood Zone 1, but a drain and a water body is located within the site. The railway line forms the western boundary of the site and a drain is culverted beneath the railway line from which some residual risk may be presented. There are no records of historic flooding or flooding from sources including groundwater and surface water have not been recorded on the site. No canals, defences or culverts are known to exist in the site. However, the OS map shows drains which may be culverted through parts of the site. No flood zones have been produced for the unnamed drains and while these do not show fluvial flood risk, in reality some risk is posed.

Geodiversity	There was a Geological Local Site recorded over 300 metres away from the site: GLS – Wingmoor Farm Pit [GGT Site No. 231] A large working gravel pit extracting sand and gravel from the Quaternary 'Avon Valley Formation' (2nd Avon Terrace). Since the original technical work, Wingmoor Farm Quarry has also been designated as a RIG with the reason that the "site is of national importance in that it exposes the Oxynotum Zone (within the Charmouth Mudstone Formation), which is rarely seen in the UK. It is absent from the Dorset Coast Section and is only permanently visible elsewhere in the UK at Robin Hoods Bay in Yorkshire. For several years the quarries at Wingmoor Farm site have exposed the oxynotum Subzone) and good specimens of the zonal species, Oxynoticeras Oxynotum, can be found there. The exposures are temporary however, they are working along the strike of the beds meaning that there will be accessible exposures for many years. The exposures are accessible and the quarrying company are keen to encourage visitors"
Green Belt	The site is located within the Gloucester/Cheltenham Greenbelt.
Landscape/Visual Impact	The site is considered to be of poor landscape quality and condition with a medium capacity to accept change and medium landscape suitability for development of a waste facility, but is considered to have a low capacity to accommodate larger structures. The site could be potentially viewed at oblique angles from the north of Swindon village and Brockhampton Lane. If proposals included the erection of an emissions stack (e.g. 40-80m in height), this would probably create a significant vertical landmark out of keeping with the surrounding landscape character. There could be impact on the natural quality of the landscape setting for the Cotswold AONB.
PRoW	There are no public paths within or near the suggested site.
Key Development Criteria	
Access/Highways	The TA will need to include the potential or otherwise of using more sustainable modes of transport and in particular the rail network. For road transport the TA should include a full assessment of the site access onto Stoke Road and routes to connect to the M5, Cheltenham, Gloucester and Tewkesbury. All HGV traffic will be required to access the site from the east and utilise the A435 to access the principal road network. All vehicles should be encouraged to travel directly to/from the east of the site using Stoke Road to avoid Stoke Orchard. Contributions towards both maintenance and junction improvements along the transport routes to and from the site may be required particularly along the A435, where capacity problems already exist.
Ecology/HRA	In respect of the General Development Criteria, the presence of Key Wildlife Site (Wingmoor Farm Meadow) is confirmed as adjacent to the land and protected species (e.g. badger and great crested newt) may occur nearby or on the land. Trees, ponds and rough grassland are habitat features which could be affected by development on this land.

	Any proposal for waste management at Wingmoor Farm East will need to demonstrate that there will be no significant effect on European Sites either alone or in combination with other plans or projects. Dixton Wood SAC will require specific consideration.
Green Belt	The Green Belt status of the site may require demountable buildings to be provided on Wingmoor Farm East and their use limited to the duration of the landfill operations and site restoration.
Landscape/Visual Impact	On site buildings, developers are encouraged to use materials and infrastructure that should reflect the local agricultural style of the surrounding area, designed to sit as low in the landscape as possible using neutral, matt colours and avoiding the introduction of reflective materials. Sensitive site planning to reduce the requirement for additional infrastructure and expansive areas of hardstanding. Significant boundary enhancements including the advanced planting of a native woodland mix of primarily deciduous trees and shrub understory planting to screen the site.

INSET MAP 2 – WINGMOOR FARM WEST (SITES A & B)



Site Boundary	Area A The Park and Area B at Wingmoor Farm West
500 yards 500 metres	Gloucestershire COUNTY COUNCIL
	N
	MW004_02

Site Name	Wingmoor Farm West (Areas A&B)		
Site No	2		
Policy	Core Policy WCS4		
Suitable Uses	Primarily MSW with some C&I. Area B may be too small to deliver a one-site solution, but could form part of a multi-site solution.		
Locational Information			
District	Tewkesbury	Parish	Stoke Orchard
Easting Wingmoor West The Park	 393172 393181	Northing Wingmoor West The Park	 227390 227124
Site Area (hectares)	Area A (The Park) – c. 6.8ha Area B (Wingmoor West) – c. 4.0ha		
Site Location	The site comprises two areas of land. It is located two miles west of Bishops Cleeve and five 5 miles north of Cheltenham, off Stoke Road, south of Stoke Orchard. It is some distance from the Stoke Road, west of the railway line, and accessed via a well-maintained road which also serves other users in area including landfill operations and shooting clubs.		
Site Description	Former second world war aerodrome now used for a mixture of waste-related and other industrial type activities. The area known as the Park consistes of former airplane hangers converted to industrial units and the Wingmoor Farm West area is concreted hardstanding currently used as a Household Recycling Centre.		
Neighbouring Uses	Neighbouring uses within 250metres of the site are farmland, the railway line and uses associated with existing waste management operations. There are a few residential properties and businesses within 1km of the site.		
Planning Status	~~The Park currently has district permissions for warehousing type operations and recycling operations by Printwaste. Cory Environmental Ltd. have permission for an IVC and a dirty MRF, but both are subject to a Section 106 agreement, but the MRF is unlikely to be implementable due to the time limit for implementation having expired.~~ ~~A resource recovery park proposal for 160,000 tpa was submitted in 2005, but withdrawn in 2010 due to the operator wishing to make material amendments which would require re-submission of the application.~~ ~~Wingmoor West – this site is currently permitted for use as a HRC.~~ The Park - currently has district permissions for warehousing type operations. Planning permission has also been granted for an In-Vessel Composting (IVC) facility. Wingmoor West – this site is currently permitted for use as a Household Recycling Centre and the location for a sealed asbestos disposal facility.		

Environmental Considerations	
Access/Highways	HGV vehicles are required to access Stoke Road from the A435 and not via Stoke Orchard village. This would still have an impact on Stoke Road. There could also be significant traffic on local roads south of Bishop's Cleeve in North and West Cheltenham. Some nearby A435 junctions are forecast to have operational problems including A435/Southam Lane lights. May also be long term issues with the railway bridge. The adjacent railway line provides the opportunity for a potential rail connection, but sidings would be required and the costs are likely to be very high.
Airport Safeguarding	The site lies within the Gloucestershire Airport zone for: *"All buildings, structures, erections and works exceeding 90 metres in height (295.3 feet) plus all applications involving major tree planting schemes, mineral extraction or quarrying, a refuse tip, a reservoir, a sewage disposal works, a nature reserve or a bird sanctuary and all applications connected with an aviation use."*
Archaeology	Within WWII airfield. Part of the site has been landfilled; the archaeological potential of the remainder is unknown.
CHP Potential	Within 1km of the site there are less than 15 business and 23 residential properties and a clay pigeon club. Potential development within 2km includes a local plan allocation and 2 SHLAA sites (c.7000 properties). The initial assessment work indicates that there would be a potential demand for a heat network within the existing development. However the heat network would have to be retrofitted. There is good potential for a heat network to be included within any future development.
Contaminated Land	Area A on the Wingmoor West site would have potential for localised contamination from fuel spillages. There are some above ground storage tanks shown on the historic mapping 1954 to 1975. Tewkesbury Borough Council has no details of the industrial units on the site and any potential for contamination of the ground. It is likely that contamination, if any, would be small and localised. This site has not been inspected under Part IIA. It is considered as low priority and unlikely to be determined as Contaminated Land under Part IIA.
Ecology/HRA	The nearest European site is Dixton Wood SAC, at a distance of 5.8 km. Wingmoor Farm Meadow GWT Reserve & Key Wildlife Site; Lowland meadows Priority Habitat and Wingmoor Farm Meadow GC/SO92/W01 Grassland Inventory sites are located within 1km of the two sites. <u>Site A (The Park)</u> Brown Argus *(Aricia agestis)* have been identified within 50m of the site. Rye Brome *(Bromus secalinus)*, Brown Hare *(Lepus capensis)*, Small Heath *(Coenonympha pamphilus)* and Wall *(Lasiommata megera)* have been identified within 1km of the site.

	Site B (Wingmoor West) Brown Hares *(Lepus capensis)* have been identified adjacent to the site. Brown Argus *(Aricia agestis)*, Small Heath *(Coenonympha pamphilus)* and White Letter Hairstreak *(Satyrium w-album)*, have all been identified within 1km of the site.
Flood Risk/Water Protection	The EA identified the site as overlying unproductive strata with the groundwater risks associated with the location as low for the geological setting.~~The two areas are partially overlying a minor aquifer, although the EA identified the sites as a non-aquifer with un productive strate and low risk to groundwater~~. The sites are not within a source protection zone. The sites lie wholly within Flood Zone 1. However, the OS maps indicate that water bodies exist within the (Wingmoor Farm West) site. Flooding from sources including groundwater and surface water have not been recorded on the site. The flood maps do not show fluvial flood risk, but in reality some risk is posed.
Geodiversity	There were no recorded geological features on the site or within 250m.
Green Belt	The site lies upon previously developed land within the Gloucester/Cheltenham Greenbelt.
Landscape/Visual Impact	The Park is a flat site containing four (4 No.) 2-3 storey height, low long hanger style light industrial / storage buildings and a number of smaller container sized structures to the south. Surrounding The Park to the north and west is a heavily vegetated bund which screens views from properties in Stoke Orchard and surrounding areas. To the south is the Wingmoor Farm recycling centre, which is enclosed by remediated landfill of grassed mounds. Due to the disturbed nature of the surrounding landscape (south) and enclosed character of the study area, The Park and Wingmoor Farm West could accommodate a small or medium scale facility with minimal impact on the surrounding area. Though the Waste Management Facility with the remediated landfill screens properties to the south, due to the proximity of Stoke Orchard, The Park site would be considered inappropriate for a large scale development. It should be noted that properties to the south of the existing landfill, in particular those on Lowdilow Land and a lesser extent properties to the north fringe of Swindon village, are currently experiencing substantial adverse impacts in relation to the landfill activities and increasing height of the landform. Any development to this study area should be carefully planned so as to not vertically encroach above the existing landfill height. Inclusion of a medium or large emission stack (60m +) would create a vertical landmark in the surrounding area, however would be of slight to moderate adverse impact due to the frequency of similar structures in the wider area. Other potential landscape impacts: • Wintertime views of the facility from the residential properties located in Stoke Orchard to the north.

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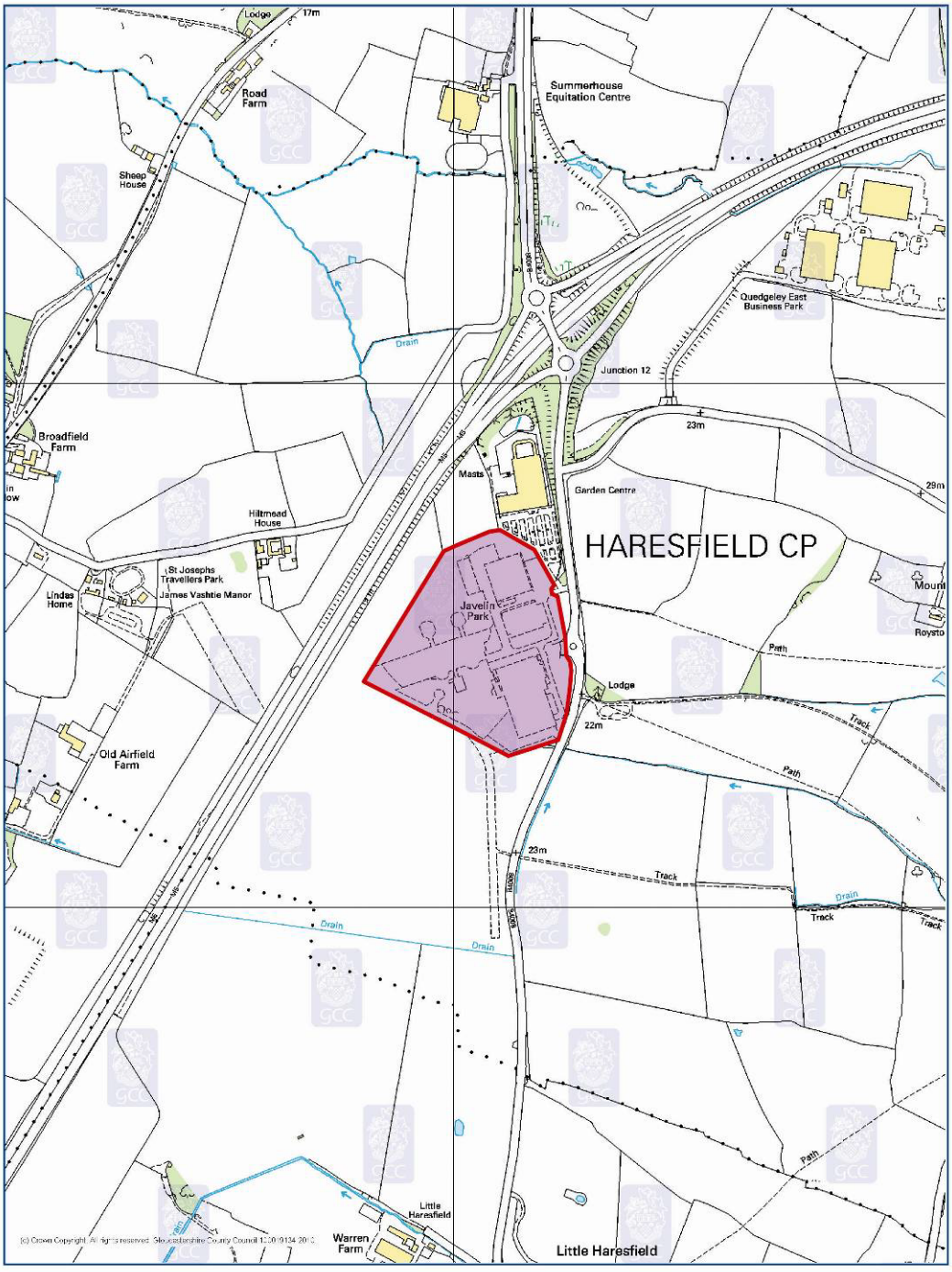
	• Permanent alteration of the site in terms of scale and intensity of development resulting from a facility both taller and larger than the existing units. • Deterioration of the existing landscape character due to the construction of a facility significantly larger than any existing on site, associated external works and activity on site.
PRoW	There are no public paths within or near the suggested site.
Key Development Criteria	
Access/Highways	The TA will need to include the potential or otherwise of using more sustainable modes of transport and in particular the rail network. For road transport the TA should include a full assessment of the site access onto Stoke Road and routes to connect to the M5, Cheltenham, Gloucester and Tewkesbury. All HGV traffic will be required to access the site from the east and utilise the A435 to access the principal road network. All vehicles should be encouraged to travel directly to/from the east of the site using Stoke Road to avoid Stoke Orchard. Contributions towards both maintenance and junction improvements along the transport routes to and from the site may be required particularly along the A 435, where capacity problems already exist. The railway bridge along Stoke Road would need assessment to ascertain whether any improvements are required.
Green Belt	The Green Belt status of the site may require demountable buildings to be provided on Wingmoor Farm West and their use limited to the duration of the landfill operations and site restoration.
Ecology/HRA	In respect of the General Development Criteria, the presence of protected species has been confirmed by surveys connected with previous developments in the vicinity (e.g. great crested newt and badgers) with reptiles and nesting birds also likely to be present on or near this land. Trees, ponds, watercourses and rough grassland are habitat features which could be affected by further development on this land. Any proposal for waste management at Wingmoor Farm West & The Park will need to demonstrate that there will be no significant effect on European Sites either alone or in combination with other plans or projects. Dixton Wood SAC will require specific consideration.
Landscape/Visual Impact	On site buildings, materials and infrastructure should reflect the local agricultural style of the surrounding area, designed to sit as low in the landscape as possible using neutral, matt colours and avoiding the introduction of reflective materials. Sensitive site planning to reduce the requirement for additional infrastructure and expansive areas of hardstanding. Preservation and enhancement of existing on and offsite areas of established woodland and hedgerow planting, in particular to conceal the incongruous landforms associated with the landfill and screening bunds.

INSET MAP 3 – JAVELIN PARK



Site Name	Javelin Park		
Site No	3		
Policy	Core Policy WCS4		
Suitable Uses	Primarily MSW, but potentially also C&I waste. The County Council owns just under 5 hectares which is large enough to deliver a one site solution. The southern part of the site owned by the County Council has been identified in the procurement process as a reference site for MSW residual waste management. The owners of the rest of the site have indicated that their land is available, and thus there is the potential for the entire site to be utilised.		
Locational Information			
District	Stroud	Parish	Haresfield
Easting	380054	Northing	210496
Site Area (hectares)	c. 11.2 hectares		
Site Location	The site is the former Moreton Valence Airfield, located off J12 of M5 Motorway, Stroud. It is just south of an out-of-town shopping development and garden centre, the M5 runs to the west of the site.		
Site Description	Large area of previously developed airfield land, which once contained buildings associated with a military airfield. The site is vacant apart from large piles of crushed recycled aggregate.		
Neighbouring Uses	There are 2 residential properties within 250 metres and the site is adjacent to Blooms Garden Centre and some smaller retail units to the north. A large area to the north (known as Hunts Grove) has been permitted for residential development and work on this is currently underway.		
Planning Status	A number of planning permissions and applications relating to storage and distribution exist covering the whole site.		
Environmental Considerations			
Access/Highways	Site has 52,000m^2 B8 (storage/distribution) permission although this is not currently operational. The predicted effect of a new strategic waste facility is a likely net decrease in traffic, when balanced against the existing consents. The site is in very close proximity to Junction 12 of the M5 and thus enjoys very good trunk road accessibility; there should be limited demand for movements on the B road south to Standish. There are known congestion problems at peak times at Junction 12. The site is over a kilometre west of the existing mainline railway. The construction of a new line is likely to need to be around 1.5km length to avoid Haresfield village, and this is likely to be prohibitively expensive and could have land ownership issues.		

Airport Safeguarding	The site lies outside all safeguarding zones for Gloucestershire Airport and MOD aerodromes.
CHP Potential	There over 30 businesses, 40 residential properties and 1 church within 1km. Potential development within 2km includes 2 local plan allocations and 8 SHLAA sites (c.4400 properties). There is also existing permission at Hunts Grove for c.1775 properties, a school and 5.75ha of land for employment uses. The initial assessment work indicates that there would be a limited demand for a retrofitted heat network within the existing development. There is potential for a heat network to be incorporated within any future development.
Archaeology	Within Moreton Valance WWII airfield, later used for aircraft assembly/testing. The archaeological potential of the site is uncertain; some disturbance of the site has taken place recently. There are eight Grade II Listed buildings within 1km of the site boundary and one Scheduled Monument.
Contaminated Land	The site or adjoining land is not classified as 'contaminated land' under the Environment Act 1995.
Ecology/HRA	The nearest European site is the Severn Estuary SAC, SPA, Ramsar at a distance of 6.3 km. Other nearby European sites include Walmore Common SPA, Ramsar (6.7 km), Cotswold Beechwoods SAC (7.1 km) and Rodborough Common SAC (7.6 km). Barn Owls (*Tyto alba*) and Badgers (*Meles meles*) have been recorded within 10m of the site. Polecats *(Mustela putorius)* and Bat Species: Noctule *(Nyctalus noctula)*; Brown Long-Eared Bat (*Plecotus auritus*) and 55kHz Pipistrelle (*Pipistrellus pipistrellus 55kHz)* have been recorded within 1km of the site. There are no designated sites within 1km of the site.
Flood Risk/Water Protection	The EA identified the site as overlying a secondary (undifferentiated) aquifer with the groundwater risks associated with the location as low for the geological setting. ~~The site is within 250m of a Minor Aquifer Intermediate 1 and Minor Aquifer High (H3) although the EA identified the site as a non-aquifer with un productive strate and low risk to groundwater.~~ The site is not within a Source Protection Zone. The site lies fully in Flood Zone 1. The SFRA identified that a small unnamed drain flows along the southern boundary of the site and may be culverted through part of the site.
Geodiversity	There were no recorded geological features on the site or within 250m of its boundary.
Green Belt	The site is outside the Cheltenham/Gloucester Green Belt.
Landscape/Visual Impact	A waste facility could cause permanent alteration of the site in terms of scale, height and intensity of development resulting from a facility both taller and larger than the existing surrounding units. This would lead to further encroachment of urban fringe light industrial / distribution style development into the surrounding agricultural landscape. However, the extant outline permission for the currently undeveloped area permits a

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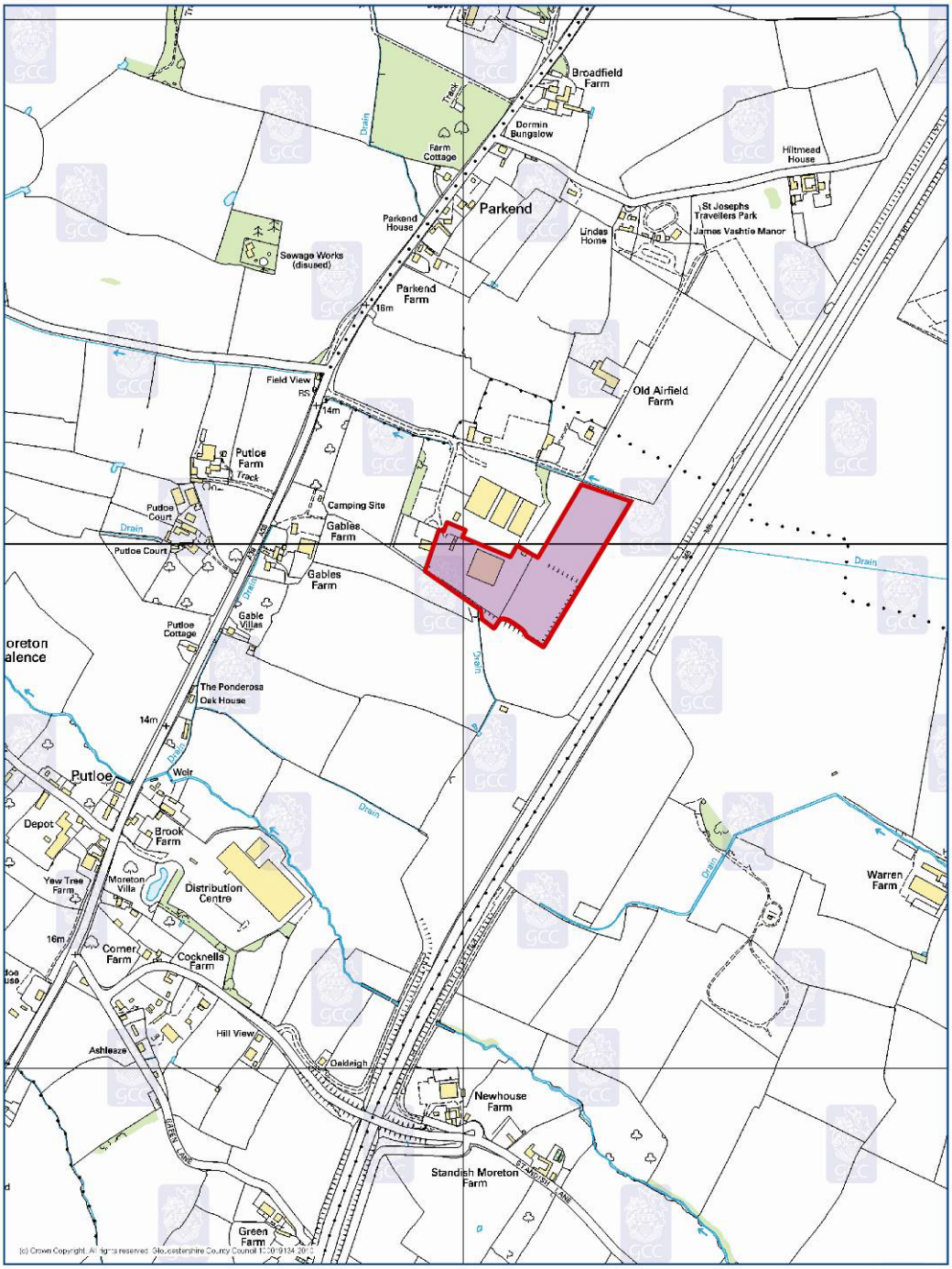
	maximum ridge line height of 15.7m for the two units. The erection of an emissions stack (40 – 80m in height) would create a significant vertical landmark out of keeping with the surrounding landscape character.
PRoW	There are no public paths within or near the suggested site.
Key Development Criteria	
Access/Highways	The TA should include a full assessment of the site access and routes to connect to the M5, and beyond to the wider principal road network. Any material increase in HGV traffic along the Standish road via Stonehouse would need to be prevented. Contributions towards both maintenance and junction improvements along the transport routes to and from the site may be required. The Highways Agency consider that the M5 should be used for strategic journeys therefore this will require careful consideration in any proposals. In particular improvements are likely to be required to junction 12 of the M5 and on the more immediate principal road network such as the A38. Congestion problems are noted at peak times at the Junction 12 to the M5, therefore consideration to traffic flows at these times may need to be assessed. It should be noted that the Highways Agency has programmed an improvement scheme for Junction 12 in 2010/11, but this does not preclude the requirement for the assessment of the impact of any development traffic upon the operation of the Junction.
Ecology/HRA	In respect of the General Development Criteria, the presence of protected species has been confirmed in the surrounding area (e.g. badger and barn owl) but reptiles, nesting birds and bats may also occur on the land itself. There is some probability but not high that water voles and great crested newts may use land around the margins of the land. On site habitat features include scrub and regenerating 'brownfield' land and there are boundary features including hedgerows and a watercourse which could be affected by new development. Any proposal for waste management at Javelin Park will need to demonstrate that there will be no significant effect on European Sites either alone or in combination with other plans or projects. Severn Estuary SAC, SPA, Ramsar, Walmore Common SPA, Ramsar, Cotswold Beechwoods SAC and Rodborough Common SAC will require specific consideration.
Landscape/Visual Impact	There is the potential to create a landmark facility as a gateway to Gloucester to present a high quality architectural statement.Alternatively consideration should be given to on-site buildings, materials and infrastructure that should either reflect the local agricultural style of the surrounding area, designed to sit as low in the landscape as possible using neutral, matt colours and avoiding the introduction of shiny or reflective materials. Where possible, large roof and hardstanding expanses should be avoided or broken up to reduce the perceived scale of the facility with particular consideration to the Cotswold AONB. Significant boundary enhancements to all sides including the advanced planting of a native woodland mix of primarily deciduous trees and shrub understory planting to enhance the screening works already undertaken to the western boundary.

INSET MAP 4 – LAND AT MORETON VALENCE



Site Boundary

Moreton Valence

500 yards
500 metres

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Site Name	Land at Moreton Valence		
Site No	4		
Policy	Core Policy WCS4		
Suitable Uses	Primarily C&I with the potential for some MSW. The site's EA Waste Management License gives it a current capacity of 291,310 tpa.		
Locational Information			
District	Stroud	Parish	Moreton Valence
Easting	379123	Northing	209959
Site Area (hectares)	c. 5.6 hectares		
Site Location	The site is located between the A38 and M5, with access from the A38 south of M5 Junction 12.		
Site Description	The site is an irregular L shape with a grassed earth bund to the east notable from the M5 motorway. The site comprises a variety of buildings and stockpiles of materials associated with the on-site recycling/reuse activities including skip sorting and container delivered C&D & C&I waste in large square central shed and MRF/conveyor system.		
Neighbouring Uses	Within 250metres there are a few scattered farmhouses, residential properties and a campsite plus other business/light industrial uses at Old Airfield Farm. The site is also close the M5 motorway. Neighbouring uses up to 1km away include the small settlement of Parkend, St Joseph's Travellers Site, Javelin Park and Blooms Garden Centre.		
Planning Status	The site benefits from a number of waste-related permissions. It currently has planning permission for C&D, C&I and MSW wastes. The site already contains a MRF and other various crushing, screening & sorting facilities including a concrete batching plant and other ancillary. It also benefits from permission for a small Batch Gasification/Oxidation System (BOS) Advanced Thermal Treatment (ATT) plant (yet to be implemented).		
Environmental Considerations			
Access/Highways	The site has fairly good access with some waste activity already occurring. The site is in close proximity to Strategic Road Network (M5 Junction 12) via A38/Cross Keys Roundabout. There are currently some congestion issues at A38/Cross Keys Roundabout. The current permitted usage is up to 200,000 tonnes/year, but the EA licence limit is up to 300,000 tonnes/year and some parts of site have no restriction, though there is physical limit to how much could be operated on the site. A new facility on the site could probably result in a net increase in traffic, but could be closer to neutral depending on details of what could currently be operated (and assuming strategic waste facility would need to replace current consents).		

	The site is considered to be too far from existing rail/water infrastructure for these modes to be suitable. The site is outside reasonable walking distances, and cycle/bus access is also likely to be fairly limited.
Airport Safeguarding	The site lies outside all safeguarding zones for Gloucestershire Airport and MOD aerodromes.
Archaeology	Within Moreton Valance WWII airfield, later used for aircraft assembly/testing. Possible course of Roman road crosses the site. Archaeological potential unknown. There are six Grade II Listed buildings within 1km of the site boundary and one Scheduled Monument.
CHP Potential	There are over 20 businesses, 50 residential properties and 1 church within 1km. Potential development within 2km includes 1 local plan allocation and 8 SHLAA sites (c.5700 properties). The initial assessment work indicates that there would be a limited demand for a retrofitted heat network within the existing development. There is potential for a heat network to be incorporated within any future development.
Contaminated Land	The site or adjoining land is not classified as 'contaminated land' under the Environment Act 1995, but Stroud District Council identified the site and adjoining area as a site of potential concern.
Ecology/HRA	The nearest European site is the Severn Estuary SAC, SPA, Ramsar at a distance of 5.3 km. Other nearby European sites include Walmore Common SPA, Ramsar (6.3 km), Rodborough Common SAC (7.9 km) and Cotswold Beechwoods SAC (8.0 km). Polecats (*Mustela putorius*) have been identified within 210m of the site, Black Poplars (*Populus nigra ssp. Betulifolia*), Kestrels (*Falco tinnunculus*), Badger (*Meles meles*) Barn Owls (*Tyto alba*) and Swallows (*Hirundo rustica*) have all been identified within 1km of the site. There is a Strategic Nature Area (Severn Vale) site 520 metres from the site.
Flood Risk/Water Protection	Site lies fully in Flood Zone 1. Drains are located along the northern and southern boundaries of the site. No Flood Zones have been produced for the unnamed drains. There are no historic flood outlines and there are no recorded incidents of flooding from other sources such as groundwater or surface water within the site. While the unnamed drains do not show fluvial flood risk, in reality some risk is posed. No canals, defences or culverts are known to exist in the site. The site is not within a source protection zone. The EA identified the site as overlying a secondary (undifferentiated) aquifer with the groundwater risks associated with the location as low for the geological setting.~~Site 546 is mostly lying over a Minor Aquifer Intermediate 1. The site is also within 250m of a Minor Aquifer High (H3) although the EA identified the site as a non-aqufier with un-productive strate and low risk to groundwater.~~

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Geodiversity	There were no recorded geological features on the site or within 250m of its boundary.
Green Belt	The site is outside of the Gloucester/Cheltenham Green Belt.
Landscape/Visual Impact	The existing industrial nature of the site is a detracting feature in the surrounding landscape, however it is well screened to the north, west and south by existing mature vegetation. The existing bund to the east provides some mitigation; however is itself out of keeping with the flat landscape character of the wider area. The study area would be able to accommodate development of a similar scale and height as existing on site with negligible impact, however taller structures (approximately 15m in height or above) would be visible over the existing screening vegetation, in particular the erection of an emissions stack of any height would have a detrimental impact on the wider area as it would create a significant vertical landmark out of keeping with the surround landscape character. Permanent alteration of the site in terms of scale and intensity of development resulting from a facility both taller and larger than the existing surrounding industrial units. Any notable increase in building height (20m +) within a relatively low and flat landscape would be prominent above existing vegetation.
PRoW	There are no public paths within or near the suggested site.
Key Development Criteria	
Access/Highways	The TA should include a full assessment of the site access and routes to connect to the M5 at Junctions 12 and 13, and beyond to the wider principal road network. Contributions towards both maintenance and junction improvements along the transport routes to and from the site may be required. In particular improvements are likely to junction 12 to the M5 and on the more immediate principal road network such as the A38 and its junction with the B4008. The access junction from the A38 to the site itself will likely require improvements due to its proximity to an existing junction on the western side of the A38 and an existing lay-by. It should be noted that the Highways Agency has programmed an improvement scheme for Junction 12 in 2010/11, but this does not preclude the requirement for the assessment of the impact of any development traffic upon the operation of the Junction.
Ecology/HRA	In respect of the General Development Criteria, badgers have been confirmed in the general area and so this protected species may be the main constraint along with boundary features of hedgerows, trees and ditches which may possibly support other protected species (e.g. nesting birds and bats). Any proposal for waste management at Morton Valence will need to demonstrate that there will be no significant effect on European Sites either alone or in combination with other plans or projects. The Severn Estuary SAC, SPA, Ramsar, Walmore Common SPA, Ramsar, Rodborough Common SAC and Cotswold Beechwoods SAC will require specific consideration.

Landscape/Visual Impact	On site buildings, materials and infrastructure should reflect the local agricultural style of the surrounding area, designed to sit as low in the landscape as possible using neutral, matt colours and avoiding the introduction of reflective materials. Where possible, large roof expanses should be avoided or broken up to reduce the perceived scale of the facility with particular consideration to the Cotswold AONB. This site is not recommended for a technology requiring the erection of a medium or large emission stack. Significant boundary enhancements to the north, east and south including the advanced planting of a native woodland mix of primarily deciduous trees and shrub understory planting in conjunction with the approved bund enhancements.

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committed to a 10% reduction
in our carbon emissions by 2012

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