Gloucestershire
COUNTY COUNCIL


# GLOUCESTERSHIRE MINERALS & WASTE DEVELOPMENT FRAMEWORK

# SUSTAINABILITY APPRAISAL CONTEXT & SCOPING REPORT FOR STRATEGIC WASTE SITES

**July 2008**

## Contents

## 1. Introduction

This report is the Sustainability Appraisal (SA) combined Context and Scoping Report for Strategic Waste Sites and it is an integral part of Gloucestershire's existing Minerals and Waste Development Framework (MWDF) Sustainability Appraisal Framework.

The latest SA Context & Scoping Reports (Update 2) making up the SA Framework can be found at the following web address:

http://www.gloucestershire.gov.uk/index.cfm?articleid=11577

An Update 3 was due to be produced early in 2008 and work is substantially complete. However its publication has been postponed until this consultation / scoping exercise is complete. This postponement will ensure that Update 3 will then be able to incorporate the changes to the SA Framework and in particular the new / revised SA Objectives for assessing waste sites.

For information about the proposed timetable for the Waste Core Strategy, please refer to Appendix 2.

***For quick reference:*** If you wish to see a basic list of the new proposed SA Objectives please see Appendix 3.

## 2. How to comment on this report

Your comments and observations on this report are welcomed. In particular comments from authorities with environmental responsibility in relation to the SEA Directive (Natural England, The Environment Agency, English Heritage and the Director of Public Health for the relevant Primary Care Trust) will be important.

If you wish to submit a representation, this can be done via:

Email: m-wplans@gloucestershire.gov.uk

Post: Mr. Kevin Phillips – Team Leader
Minerals & Waste Planning Policy
Gloucestershire County Council
Shire Hall
Westgate Street
Gloucester
GL1 2TH

This is a 5 week consultation. The closing date is: **Friday 15th August 2008**

## 3. Initial questions

### ◘ What is Strategic Environmental Assessment and Sustainability Appraisal?

Strategic Environmental Assessment (SEA): In 2001 a European Union Directive 'the SEA Directive on the assessment of the effects of certain plans and programmes on the environment' (2001/42/EC) was adopted. It came into force in the UK on the 21st of July 2004 and applies to a range of plans and programmes in England including Minerals and Waste Development Frameworks.

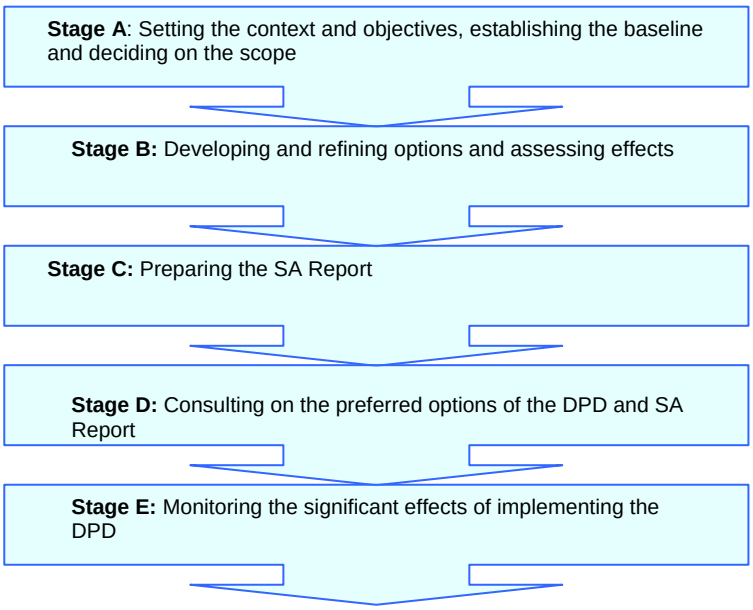
Sustainability Appraisal (SA): includes a consideration of social and economic issues and impacts as well as environmental ones, thus it has a broader scope and remit than SEA. Under the Planning and Compulsory Purchase Act 2004 Local Planning Authorities (LPAs) are required to undertake Sustainability Appraisals of Development Plan Documents (DPDs) and Supplementary Planning Documents (SPDs), this includes Minerals and Waste DPDs and SPDs.

In conjunction with Gloucestershire's existing SA Context and Scoping Reports, (See Table 1.) this report fulfills the requirements of Stage A1 to A5 of the Office of the Deputy Prime Minister (ODPM)[1] Guidance 'Sustainability Appraisal of Regional Spatial Strategies and Local Development Frameworks' (November 2005) – Available at:

http://www.communities.gov.uk/planningandbuilding/planning/sustainabilityenvironmental/sustainabilityappraisalsa/

The Stages are as follows:
A1: Identifying other relevant policies, plans and programmes and sustainability objectives.
A2: Collecting baseline information.
A3: Identifying sustainability issues and problems.
A4: Developing the SA framework.
A5: Consulting on the scope of the SA.

The full stages A to E are outlined in the chart below:




Under the SEA Directive it is a requirement that as part of the preparation of an 'Environmental Report' "an outline of the contents, main objectives of the plan or programme and relationship with other plans and programmes" should be considered. (Annex 1 (a)).The SEA Directive in (Annex 1 (e)) also requires a consideration of "the environmental protection objectives, established at international, Community or Member State level, which are also relevant to the plan or programme…" The ODPM Guidance makes clear the importance of a detailed consideration of other plans and programmes, "…which may influence the

[1] Now the Department for Communities and Local Government (DCLG) http://www.communities.gov.uk/corporate/

options to be considered in the preparation of the DPD." It is considered that this report along with the existing SA Framework satisfies these particular requirements of the SEA Directive as well as the ODPM Guidance (November 2005). The following (also contained in the SA Scoping Report Update 2) is a check to see that these and other SEA Directive requirements have been met:

| SEA Directive Requirement: | check | Addressed in: |
|---|---|---|
| "an outline of the contents, main objectives of the plan or programme and relationship with other relevant plans and programmes" - **Annex 1 (a)** | ✓ | Section 4 of Scoping Report Update 2 and the Context Report plus Section 4 of this Report |
| "the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme" - **Annex 1 (b)** | ✓ | Sections 5 and 6 and Appendix 3 of Scoping Report Update 2 and Sections 5 to 10 of this Report |
| "the environmental characteristics of areas likely to be significantly affected" - **Annex 1 (c)** | ✓ | Sections 5 and 6 and Appendix 3 of Scoping Report Update 2 and Sections 5 to 10 of this Report & the end of Section 9 in particular |
| "any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC [the Birds Directive] and 92/43/EEC [the Habitats Directive]" - **Annex 1 (d)** | ✓ | Section 5 and Appendix 4 of Scoping Report Update 2 and Sections 5 and 6 of this Report |
| "the environmental protection objectives, established at international, Community or Member State level, which are relevant to the plan or programme…" - **Annex 1 (e)** | ✓ | Section 4 of Scoping Report Update 2 and the Context Report plus Section 4 of this Report |
| " The [Environmental] authorities [designated for the purpose of the SEA Directive in each EU Member State]…shall be consulted when deciding on the scope and level of detail of the information which must be included in the environmental report" - **Article 5 (4)** | ✓ | Consultation has been undertaken on the original version of the SA Context and Scoping Reports and these authorities are also asked to comment on this Report during the 5-week consultation |

**◘ If there is an existing SA Framework with SA Objectives why is there a need for new / revised SA Objectives?**

Following the recent consultation on Gloucestershire's Waste Core Strategy (WCS) Preferred Options (31st January to 13th March 2008) Government Office for the South West (GOSW) recommended that strategic sites for the management of Municipal Solid Waste (MSW) should be included in the WCS. Up to this point the Waste Planning Authority (WPA) had been following guidance in Planning Policy Statement 12 (PPS12 - 2004) that Core Strategies should not include sites, and as advised by GOSW. However a revision to PPS12 was published in June 2008, and this states (at Para 4.6) that Core Strategies may now contain sites for strategic development proposals. Gloucestershire County Council have accepted that the WCS will now need to include strategic sites in order to proceed to adoption. A revision to the Minerals & Waste Development Scheme contains the new plan preparation timetable.

The SA Objectives that have been developed so far through the SA Framework, were developed specifically to assess the sustainability of options within a 'high level' strategic DPD. But now, in a changed situation,

given the need to include waste sites in the WCS, there is a need to 'scope in' SA Objectives that are site focused and 'scope out' Objectives that are higher level and not appropriate for site assessment work. Fundamentally the current SA Framework is fit for purpose, and the most up to date versions of the Context and Scoping Reports should be referred to and read in conjunction with this report. The 15 current SA Objectives will continue to be used for the progression of the Minerals Core Strategy (MCS) and for the WCS when the strategy progresses again at Preferred Options stage.

**◘ What has been produced to date in terms of the Sustainability Appraisal (SA) Framework for the Gloucestershire Minerals and Waste Development Framework?**

See table below:

**Table 1. Reports produced to date for the MWDF SA Framework.**

| SA Document | Date |
|---|---|
| Original SA Framework Context & Scoping Report | August 2005 |
| Update 1 SA Framework Context & Scoping Report | November 2005 |
| Update 2 SA Framework Context & Scoping Report | April 2006 |
| Update 3 SA Framework Context & Scoping Report | Due to be produced following the consultation on this report. The site focused objectives will be added to this update |
| SA Framework Combined Context & Scoping Report for Waste Sites | This report – June 2008 |
| An SA Report for Waste Minimisation in Development Projects SPD | April 2006 |
| An SA Report for the WCS Issues & Options | July 2006 |
| An SA Report for the MCS Issues & Options | September 2006 |
| An SA Report for the WCS Preferred Options | January 2008 |
| An SA Report for the MCS Preferred Options | January 2008 |

**◘ Gloucestershire County Council as Waste Disposal Authority have an Adopted Joint Municipal Waste Management Strategy (JMWMS). How does the SEA / Environmental Report of the JMWMS link to this report?**

The Gloucestershire JMWMS was adopted in April 2008. It sets out nine core objectives that aim to take waste management within Gloucestershire forward to 2020. The strategy incorporates plans for dealing with new regulatory requirements that have been introduced since the original Joint Strategy was adopted in 2002. In addition to the overarching core objectives, it identifies a number of strategic options for dealing with waste at each level of the waste hierarchy – i.e. waste prevention, waste collection for recycling and composting and residual waste treatment options.

The SEA of the JMWMS, produced for Gloucestershire County Council by *Eunomia Research and Consulting* in September 2007, highlights the potential environmental, social and economic impacts of the strategy together with alternatives. It informs Gloucestershire's authorities and stakeholders and acts as a guide in the selection of waste management initiatives and the implementation of them in such a way that any negative impacts can be avoided, mitigated and monitored. The Environmental Report (ER) is the key output of the SEA process. This document contains:

- Baseline information about the environmental, social and economic characteristics of the area covered by the JMWMS, including key sustainability issues of the areas likely to be affected.
- Details of the environmental, social and economic criteria against which the strategy has been assessed.
- An assessment of the likely significant effects of the options within the JMWMS detailed below:

1. The 9 Core Objectives
2. Waste Prevention Options
3. Waste Recycling and Composting Options
4. Waste Treatment / Disposal Options.

- Measures to mitigate any significant negative impacts that arise from the assessment.
- Measures to monitor the progress of the JMWMS against the sustainability objectives.

In reading and understanding this ER, it is important to recognise the limitations that have been encountered during its development.

- The appraisal process with regard to the waste collection, treatment and disposal sections of this report was based on modelling work undertaken for Gloucestershire County Council by *Enviros Consultants*.
- The JMWMS does not determine any location of facilities. As such, site specific assessments were not undertaken through the SEA process.

Government Guidance in the Companion Guide to Planning Policy Statement 10 (PPS10) points to the fact that there should ideally be a level of joint working in terms of the SA requirements for waste DPDs and the SEA requirements for Municipal Waste Management Strategies.

The Companion Guide to PPS10 states:

*"Up-to-date MWMS will provide a steer in appraising the extent to which RSS and LDD documents help to drive municipal waste management up the waste hierarchy."* (Box at Para 3.10. Page 17).

*"In carrying out an SA, it is important that account is taken of the vertical links between planning strategies and the horizontal links with other strategies. This applies in particular to:*
*- links between the SA of the RSS and an SA of LDD, including opportunities for portability between appraisals; and*
*- at the local level to the MWMS and the supporting SEA."* (Para 3.19, Page 19).

*"Where an appraisal of the relevant MWMS has already been undertaken, it can be appropriate for the SA of the RSS or LDD to accept its results, provided that there have been no significant developments since adoption."* (Para 4, Page 99).

There has already been a level of joint working / integration in that:
- The Minerals and Waste Planning Policy Team were involved in early scoping of the initial JMWMS SEA Objectives.
- There was an initial attempt at SA Objective integration.
- The assessment of the WCS Preferred options 'Recovery' options WPO6A, B, C, D took account of the results of the JMWMS SEA scoring results.

In this report, Tables 4 and 5 in Section 11 of this report highlight the links between the JMWMS SEA Objectives and Sub-questions and the new proposed SA Objectives for assessing strategic waste sites as part of the WCS.

## 4. List of Additional Relevant Plans, Programmes and Strategies

The following list of relevant plans, programmes and strategies is from the Update 2 of Gloucestershire's SA Context Report. The detailed review of their content is considered on Pages 8 to 130. The Key Messages from the review are detailed on Pages 131 to 140.

| **International / European** |
|---|
| EU Water Framework Directive |
| EU Birds and Habitats Directives (i.e. EU Directive on the Conservation of Wild Birds (79/409/EEC) and EU Directive on the Conservation of Natural Habitats and of Wild Fauna and Flora (92/43/EEC)) |
| EU Landfill Directive |
| EU Mining Directive (Proposed) |
| EU Waste Framework and Hazardous Waste Directives |
| EU Waste Electrical and Electronic Equipment Directives |
| EU Packaging and Packaging Waste Directive |
| EU Incineration Directive |
| EU End of Life Vehicles Directive |
| EU Animal By-Products Regulation |
| **National** |
| PPS1: Delivering Sustainable Development |
| PPG2: Green Belts |
| PPG3: Housing |
| PPG4: Industrial, Commercial Development and Small Firms |
| PPS7: Sustainable Development in Rural Areas |
| PPS9: Biodiversity and Geological Conservation |
| PPG10: Planning and Waste Management |
| PPS10: Planning for Sustainable Waste Management |
| PPS10: Companion Guide |
| PPS11: Regional Spatial Strategies |
| PPS12: Local Development Frameworks<br>Also including ▪ A Companion Guide to PPS12<br>▪ Sustainability Appraisal of Regional Spatial Strategies and Local Development Frameworks<br>▪ PPS12 Monitoring Guidance |
| PPG13: Transport |
| PPG14: Planning Development on Unstable Land |
| PPG15: Planning and the Historic Environment |

| |
|---|
| PPG16: Archaeology and Planning |
| PPG18: Enforcing Planning Control |
| PPG21: Tourism |
| PPS22: Renewable Energy |
| PPS23: Planning and Pollution Control |
| PPS23: Annex 1 |
| PPS23: Annex 2 |
| PPG24: Planning and Noise |
| PPG25: Development and Flood-risk |
| MPG1: General Considerations |
| MPS1: Consultation Paper: Planning and Minerals (and Associated Good Practice Guidance) |
| MPG2: Applications, Permissions and Conditions |
| MPS2: Controlling and Mitigating the Environmental Effects of Mineral Workings |
| MPS2: Annex 1: Dust |
| MPS2: Annex 2: Noise |
| MPG3: Coal Mining and Colliery Spoil Disposal |
| MPG4: Compensation Regulations |
| MPG5: Stability in Surface Mineral Workings and Tips |
| MPG6: Aggregates Provision |
| National and Regional Guidelines for Aggregates Provision in England 2001 - 2011 |
| MPG7: Reclamation of Mineral Workings |
| MPG8: Interim Development Order Permissions |
| MPG9: Interim Development Order Permissions - Conditions |
| MPG10: Provision of Raw Materials for the Cement Industry |
| MPG12: Treatment of Disused Mine Openings |
| MPG14: Review of Mineral Planning Permissions |
| Rural White Paper |
| Urban White Paper |
| Waste Strategy 2000 |
| Changes to Waste Strategy 2000 |
| Review of England's Waste Strategy - A Consultation Document |

| |
|---|
| Defra Guidance on Municipal Waste Management Strategies |
| UK Biodiversity Action Plan |
| National Sustainable Development Strategy |
| Waste not, Want not – A Strategy for Tackling the Waste Problem in England |
| The Sustainable Communities Plan |
| DTI Sustainability Strategy |
| A Development Plan for Marine Aggregate Extraction |
| Better Buildings |
| Planning for the Supply of Natural Building Stone |
| Planning for Waste Management Facilities |
| Collation of the Results of The 2001 Aggregate Mineral Survey for England and Wales |
| Survey of Land for Mineral Workings in England 2000 |
| Survey of Arisings and Use of Construction, Demolition and Excavation Waste as Aggregate in England in 2003 |
| Circular 1/97 Planning Obligations |
| Circular 6/98 Planning and Affordable Housing |
| Circular 15/97 The UK National Air Quality Strategy |
| Circular 02/98 Prevention of Dereliction through the Planning System |
| Circular 2/99 Environmental Impact Assessment |
| Circular 4/01 Control of Development Affecting Trunk Roads |
| Circular 1/03 Safeguarding Aerodromes |
| Circular 06/05 Biodiversity and Geological Conservation |
| **Authorities with Environmental Responsibility in Relation to the SEA Directive** |
| The Countryside Agency, English Heritage, English Nature, Environment Agency -Environmental Quality in Spatial Planning |
| The Countryside Agency – The State of the Countryside in the South West |
| English Nature – Policy Position Statement on Aggregate Extraction and Nature Conservation |
| English Nature - Policy Position Statement on Non-Aggregate Mineral Extraction |
| English Heritage - A Strategy for the Historic Environment in the South West |
| The Environment Agency – Position Statement on Sustainable Construction |
| The Environment Agency – Position Statement on Managing Hazardous Waste |
| The Environment Agency – Position Statement on Resource Efficiency |

| **Regional** |
| --- |
| Draft Regional Spatial Strategy for the South West |
| South West Climate Change Impact Scoping Study |
| South West Biodiversity Implementation Plan |
| Regional Economic Strategy for the South West of England |
| Our Environment Our Future -The Regional Strategy for the South West Environment |
| Regional Sustainable Development Framework for the South West |
| Regional Quality of Life Counts |
| Towards 2015 – Shaping Tomorrow's Tourism |
| Sustainable Communities in the South West – Building for the Future |
| Just Connect – An Integrated Regional Strategy for the South West 2004 –2026 (Draft) |
| Regional Planning Guidance for the South West (RPG10 – Interim RSS10) |
| Regional Waste Strategy for the South West |
| **County & Local** |
| Municipal Waste Management Strategy for Gloucestershire |
| Gloucestershire Waste Partnership Joint Strategy Statement |
| Gloucestershire Landscape Character Assessment |
| Gloucestershire Renewable Energy Action Plan |
| The Community Strategy for Gloucestershire |
| Local Agenda 21 Strategy for a Sustainable Gloucestershire |
| Health Plan – Gloucestershire NHS Trust Annual Report 2003/04 and Service Development Strategy 2005 – 2008 (On health see also relevant sections in County and District Community Strategies) |
| Education Plan – Gloucestershire Education Development Plan Submission 2002 – 2007 Gloucestershire: A Learning County (On education see also relevant sections in County and District Community Strategies) |
| Gloucestershire Structure Plan Second Review (Adopted Plan) |
| Gloucestershire Local Transport Plan |
| Gloucestershire Local Transport Plan (2) |
| The Gloucestershire Economic Strategy |
| The Rural Economic Strategy for Gloucestershire |
| Biodiversity Action Plan for Gloucestershire |
| Cotswold Water Park Biodiversity Action Plan |
| Cotswold Water Park Supplementary Planning Guidance |

| |
|---|
| Wye Valley AONB Management Plan |
| Cotswolds AONB Management Plan |
| Gloucester Local Plan |
| Gloucester Community Strategy |
| Tewkesbury Local Plan |
| The Partnership Plan for Tewkesbury |
| Stroud Local Plan |
| Stroud District Community Strategy |
| Cheltenham Local Plan |
| Cheltenham's Community Plan |
| Forest of Dean Local Plan |
| Forest of Dean Community Plan |
| Cotswolds Local Plan |
| Cotswolds Community Strategy |

The following list is additional to the above comprehensive list. It includes more recent relevant plans, programmes and strategies as well as those outlined in the SEA Environmental Report of the JMWMS.

| **International / European** |
|---|
| The World Summit on Sustainable Development, Johannesburg 2002 – Commitments arising from the Summit |
| EU Air Quality Framework Directives |
| EU Sixth Environmental Action Plan |
| EU Drinking Water Directive |
| **National** |
| PPS12: Local Spatial Planning (2008) plus the Plan-Making Manual at: www.pas.gov.uk/planmakingmanual |
| Waste Strategy for England 2007 |
| PPS25: Development and Flood Risk |
| PPS1: Climate Change Supplement |
| Wessex Water Resources Draft Management Plan |
| Thames Water Resources Management Plan |
| Severn Trent Water Draft Resources Management Plan |
| Energy White Paper – Our Energy Future |
| Rural Strategy 2004 |

| |
|---|
| Working with the Grain of Nature: A Bio-diversity Strategy for England |
| **Authorities with Environmental Responsibility in Relation to the SEA Directive** |
| Draft Guidance on Health in Strategic Environmental Assessment |
| **Regional** |
| / |
| **County & Local** |
| Gloucestershire Conference Sustainable Community Strategy |
| Gloucestershire County Council's Draft Corporate Climate Change Strategy & Action Plan |

**Table 2. Review of Additional Relevant Plans, Programmes & Strategies (ODPM Guidance Stage A1).**

| THE WORLD SUMMIT ON SUSTAINABLE DEVELOPMENT, JOHANNESBURG 2002 – COMMITMENTS ARISING FROM THE SUMMIT | | | |
|---|---|---|---|
| **KEY OBJECTIVES RELEVANT TO PLAN AND SA** | **KEY TARGETS AND INDICATORS RELEVANT TO PLAN AND SA** | **IMPLICATIONS FOR PLAN** | **IMPLICATIONS FOR SA** |
| · Sustainable consumption and production patterns.<br>· Accelerate shift towards sustainable consumption and production – 10 year framework of programmes of action.<br>Reverse trend in loss of natural Resources.<br>· Renewable Energy and Energy Efficiency.<br>· Urgently and substantially increase Global share of renewable energy.<br>· Significantly reduce the rate of biodiversity loss by 2010. | No targets or indicators, however actions include:<br>· Greater resource efficiency.<br>· Support business innovation and take up of best practice in technology and management.<br>· Waste reduction and producer responsibility.<br>· Sustainable consumer consumption and procurement.<br>· Creating a level playing field for renewable energy and energy efficiency.<br>· New technology development.<br>· Push on energy efficiency. | The WCS should encourage greater efficiency of resources and the use of sustainable waste management technology.<br><br>The WCS should acknowledge the importance of protecting biodiversity. It should consider the maintenance of good air quality, the measures that can be taken to improve it and encouragement to reduce vehicle movements and minimisation of emissions from waste management facilities. | The SA should include objectives that cover the action areas and consider the improvement of air quality. |

| EU AIR QUALITY FRAMEWORK DIRECTIVES (2000/60/EC) | | | |
|---|---|---|---|
| **KEY OBJECTIVES RELEVANT TO PLAN AND SA** | **KEY TARGETS AND INDICATORS RELEVANT TO PLAN AND SA** | **IMPLICATIONS FOR PLAN** | **IMPLICATIONS FOR SA** |
| Relevant objectives include:<br>Maintain ambient air quality where it is good and improve it in other cases with respect to sulphur dioxide, nitrogen and oxides of nitrogen, particulate matter and lead. | No targets or indicators although there are thresholds for pollutants. | The WCS should consider the maintenance of good air quality and the measures that can be taken to improve it through e.g. fewer vehicle movements. | The SA should consider the improvement of air quality. |

| EU SIXTH ENVIRONMENTAL ACTION PLAN | | | |
|---|---|---|---|
| **KEY OBJECTIVES RELEVANT TO PLAN AND SA** | **KEY TARGETS AND INDICATORS RELEVANT TO PLAN AND SA** | **IMPLICATIONS FOR PLAN** | **IMPLICATIONS FOR SA** |
| Approach to waste management is to prioritise waste prevention, followed by recycling, waste recovery and Modern Thermal Treatment and finally, only as a last resort, landfilling. | Reduce the quantity of waste going to final disposal by around 20% of 2000 levels by 2010 and by 50% by 2050. | The WCS should contain measures to encourage residents and businesses to reduce the amount of waste they produce. | Possible SA objective relating to waste minimisation and waste management hierarchy. |

| EU DRINKING WATER DIRECTIVE | | | |
|---|---|---|---|
| **KEY OBJECTIVES RELEVANT TO PLAN AND SA** | **KEY TARGETS AND INDICATORS RELEVANT TO PLAN AND SA** | **IMPLICATIONS FOR PLAN** | **IMPLICATIONS FOR SA** |
| Provide for the quality of drinking water. | The standards in the Directive are legally binding. | The WCS should recognise that waste development can impact upon drinking water quality and include Policy measures to protect these resources. | The SA Framework should consider water quality. |

| PPS12: LOCAL SPATIAL PLANNING (JUNE 2008) & PLAN MAKING MANUAL | | | |
|---|---|---|---|
| **KEY OBJECTIVES RELEVANT TO PLAN AND SA** | **KEY TARGETS AND INDICATORS RELEVANT TO PLAN AND SA** | **IMPLICATIONS FOR PLAN** | **IMPLICATIONS FOR SA** |
| The aims of Spatial Planning are as follows:<br><br>▪ To produce a vision for the future of places that responds to the local challenges and opportunities, and is based on evidence, a sense of local distinctiveness and community derived objectives within the overall framework of national policy and regional strategies.<br><br>▪ To translate the vision into a set of priorities, programmes, policies and land allocations together with the public sector resources to deliver them.<br><br>▪ To create a framework for private investment and regeneration that promotes economic, environmental and social well being for the area.<br><br>▪ To coordinate and deliver the public sector components of this vision with other agencies and processes (e.g. LAAs).<br><br>▪ To create a positive framework for action on climate change and to contribute to the achievement of sustainable development. | N/A. | The main implication from the revised PPS12 is the statement at Para 4.6 "Core strategies may allocate strategic sites for development". | Gloucestershire's SA Framework should contain SA Objectives that are appropriate for assessing the sustainability of strategic sites in accordance with SA Guidance and the SEA Directive requirements. |

| WASTE STRATEGY FOR ENGLAND 2007 | | | |
|---|---|---|---|
| **KEY OBJECTIVES RELEVANT TO PLAN AND SA** | **KEY TARGETS AND INDICATORS RELEVANT TO PLAN AND SA** | **IMPLICATIONS FOR PLAN** | **IMPLICATIONS FOR SA** |
| The National Waste Strategy sets out a key vision for waste:<br><br>· Changing the way we manage waste and resources can make an important contribution to improving our quality of life.<br>· We need to tackle the amount of waste produced, breaking the link between economic growth and increased waste.<br>· Where waste is produced we must put it to good use, through re use, recycling composting and recovering energy.<br>· Reduce waste by making products with fewer natural resources. Most products should be reused or their materials recycled. Energy should be recovered from other wastes where possible. | Sets out a number of objectives and targets including:<br>· Meet and exceed the landfill directive diversion targets.<br>· Increase diversion from landfill of non-municipal waste.<br>· Secure investment in infrastructure needed to divert waste from landfill.<br>· Recycling and composting targets for household waste as follows:<br><br>40% by 2010<br>45% by 2015<br>50% by 2020<br><br>Recovery of municipal waste:<br><br>53% by 2010<br>67% by 2015<br>75% by 2020 | The WCS (including the strategic sites element) along with Gloucestershire's JMWMS should aim to at least meet these targets. | The SA Framework should include objectives for waste prevention, recycling and composting, moving waste up the hierarchy away from landfill. |

| PPS25: DEVELOPMENT AND FLOOD RISK | | | |
|---|---|---|---|
| **KEY OBJECTIVES RELEVANT TO PLAN AND SA** | **KEY TARGETS AND INDICATORS RELEVANT TO PLAN AND SA** | **IMPLICATIONS FOR PLAN** | **IMPLICATIONS FOR SA** |
| The aims of planning policy on development and flood risk are to ensure that flood risk is taken into account at all stages in the planning process to avoid inappropriate development in areas at risk of flooding, and to direct development away from areas at highest risk. Where new development is, exceptionally, necessary in such areas, policy aims to make it safe without increasing flood risk elsewhere and where possible, reducing flood risk overall.<br><br>Sustainable development should be developed through:<br><br>· Appraising risk.<br><br>· Managing risk.<br><br>· Reducing risk.<br><br>· A partnership approach. | No specific targets but a risk based approach should be applied to all development. | All options and sites will need to be tested against the SFRA and the risk-based Sequential Test. | The SFRA should be a free standing assessment that contributes to the SA. SA objectives should cover flood risk. |

| PPS1 CLIMATE CHANGE SUPPLEMENT | | | |
|---|---|---|---|
| **KEY OBJECTIVES RELEVANT TO PLAN AND SA** | **KEY TARGETS AND INDICATORS RELEVANT TO PLAN AND SA** | **IMPLICATIONS FOR PLAN** | **IMPLICATIONS FOR SA** |
| – Make a full contribution to delivering the Government's Climate Change Programme and energy policies, and in doing so contribute to global sustainability.<br>– In providing for the homes, jobs, services and infrastructure needed by communities, and in renewing and shaping the places where they live and work, secure the highest viable resource and energy efficiency and reduction in emissions.<br>– Deliver patterns of urban growth and sustainable rural developments that help secure the fullest possible use of sustainable transport for moving freight, public transport, cycling and walking; and, which overall, reduce the need to travel, especially by car.<br>– Secure new development and shape paces that minimise vulnerability, and provide resilience, to climate change; and in ways that are consistent with social cohesion and inclusion.<br>– Conserve and enhance biodiversity, recognising that the distribution of habitats and species will be affected by climate change.<br>– Reflect the development needs and interests of communities and enable them to contribute effectively to tackling climate change.<br>– Respond to the concerns of business and encourage competitiveness and technological innovation in mitigating and adapting to climate change. | No specific targets or indicators. | The WCS should aim to meet the relevant objectives of the PPS in order to deliver the Government's Climate Change Programme.<br><br>This will cross over many themes, such as transport, biodiversity and flooding. | The SA Objectives should reflect those of the PPS Supplement particularly in relation to how the waste management industry can improve its environmental performance and efficiency. |

| WESSEX WATER DRAFT RESOURCES MANAGEMENT PLAN | | | |
|---|---|---|---|
| **KEY OBJECTIVES RELEVANT TO PLAN AND SA** | **KEY TARGETS AND INDICATORS RELEVANT TO PLAN AND SA** | **IMPLICATIONS FOR PLAN** | **IMPLICATIONS FOR SA** |
| To improve the water supply network to guarantee the security of supply in the event of source failure, to help overcome low river flow problems and to provide alternative supplies when some sources are affected by elevated nitrate levels.<br><br>To move progressively towards metering when a property changes hands, accompanied by tariffs aimed at encouraging sustainable use and protecting those in 'water poverty'.<br><br>Communicating more clearly how customers can be more efficient in their use of water and offering additional services to promote water efficient behaviour.<br><br>Protecting the quality of our water supplies by working with farmers and encouraging the Environment Agency to make full use of their powers to protect groundwater. | No specific targets or indicators that are directly relevant. | Consider the needs and requirements of all licensed water suppliers and statutory waste water undertakers. | The SA should contain objectives protecting water supplies and water bodies from pollution, promoting the efficient and sustainable management of waste water. |

| SEVERN TRENT WATER DRAFT RESOURCES MANAGEMENT PLAN | | | |
|---|---|---|---|
| **KEY OBJECTIVES RELEVANT TO PLAN AND SA** | **KEY TARGETS AND INDICATORS RELEVANT TO PLAN AND SA** | **IMPLICATIONS FOR PLAN** | **IMPLICATIONS FOR SA** |
| · Meet statutory obligations as a licensed water supply and waste water undertaker.<br>· Comply with environmental legislation and meet environmental obligations.<br>· Adopt the overall least financial, social and environmental cost strategy for achieving and maintaining target headroom throughout the planning period to 2035.<br>· Continue to promote and expand water efficiency programmes and water reuse options.<br>· Accelerate the installation of water meters and more sophisticated tariffs.<br>· Continue to drive down the level of leakage from the network.<br>· Reinforce the network to avoid interruptions to supply.<br>· Design and maintain water resource and supply systems to achieve no more that three hosepipe bans in 100 years.<br>· Increase the scope for water transfers across our own region and between water companies.<br>· Develop new sustainable water resources when needed.<br>· Ensure no failures in treated water quality outside the standards that are set. | None specifically relevant to the WCS. | Consider the needs and requirements of all licensed water suppliers and statutory waste water undertakers. | The SA should contain objectives protecting water supplies and water bodies from pollution and promote the efficient and sustainable management of waste water. |

| THAMES WATER RESOURCES MANAGEMENT PLAN | | | |
|---|---|---|---|
| **KEY OBJECTIVES RELEVANT TO PLAN AND SA** | **KEY TARGETS AND INDICATORS RELEVANT TO PLAN AND SA** | **IMPLICATIONS FOR PLAN** | **IMPLICATIONS FOR SA** |
| Further significant reductions in leakage resulting in the reduction in leakage by a third by 2020.<br><br>A ten year programme of targeted compulsory metering.<br><br>An enhanced water efficiency programme.<br><br>An integrated Demand Management (IDM) approach to planning and delivery.<br><br>Development of key schemes including Upper Thames Major Resource Development in 2021/22.<br><br>The development of 'what if' analysis and contingency options. | Reduction in leakage by one third by 2020 followed by further reductions.<br><br>Household meter penetration of around 80% by 2020 and the metering of all connected properties. | Consider the needs and requirements of all licensed water suppliers and statutory waste water undertakers. | The SA should contain objectives protecting water supplies and water bodies from pollution. |

| ENERGY WHITE PAPER – OUR ENERGY FUTURE – CREATING A LOW CARBON FUTURE | | | |
|---|---|---|---|
| **KEY OBJECTIVES RELEVANT TO PLAN AND SA** | **KEY TARGETS AND INDICATORS RELEVANT TO PLAN AND SA** | **IMPLICATIONS FOR PLAN** | **IMPLICATIONS FOR SA** |
| The Energy White Paper has four goals:<br><br>· To cut the UK's carbon dioxide emissions – the main contributor to global warming by 60% by 2050, with real progress by 2020.<br><br>· To maintain the reliability of energy supplies.<br><br>· To promote competitive markets in the UK and beyond, helping to raise the rate of sustainable economic growth and to improve productivity.<br><br>· To ensure that every home is adequately and affordably heated. | Reduction in carbon dioxide emissions of some 60% from current levels by about 2005, with real progress by 2020.<br><br>Carbon rating of construction materials used and those wasted.<br><br>Number of low carbon construction methods used – e.g. low ventilation and lighting. | The WCS should aim to encourage reduction in emissions whilst promoting sustainable waste management.<br><br>It should promote an emphasis on waste reduction of high carbon energy products.<br><br>Sites for waste management that have the potential to utilize combined heat and power should be explored. | The SA Framework should take account of the need to reduce greenhouse gases. |

| RURAL STRATEGY 2004 | | | |
|---|---|---|---|
| **KEY OBJECTIVES RELEVANT TO PLAN AND SA** | **KEY TARGETS AND INDICATORS RELEVANT TO PLAN AND SA** | **IMPLICATIONS FOR PLAN** | **IMPLICATIONS FOR SA** |
| The Government's three priorities for rural policy are:<br>· Economic and social regeneration: Supporting enterprise across rural England, but targeting greater resources at areas of greatest need.<br>· Social justice for all: tackling rural social exclusion wherever it occurs and providing fair access to services and opportunities for all rural people.<br>· Enhancing the value of our countryside: protecting the natural environment for this and future generations. | No targets or indicators specifically related to the WCS. | The WCS should give careful consideration to the specific waste management needs of rural Gloucestershire. | The SA Framework should ensure that the needs of rural communities are appropriately considered. |

| WORKING WITH THE GRAIN OF NATURE: A BIO-DIVERSITY STRATEGY FOR ENGLAND | | | |
|---|---|---|---|
| **KEY OBJECTIVES RELEVANT TO PLAN AND SA** | **KEY TARGETS AND INDICATORS RELEVANT TO PLAN AND SA** | **IMPLICATIONS FOR PLAN** | **IMPLICATIONS FOR SA** |
| Agriculture: encouraging the management of farming and agricultural land so as to conserve and enhance biodiversity as part of the Government's Sustainable food and Farming Strategy.<br><br>Water: aiming for a whole catchment approach to the wise, sustainable use of water and wetlands.<br><br>Woodland: with the management and extension of woodland so as to promote enhanced biodiversity and quality of life.<br><br>Marine and Coastal: management so as to achieve the sustainable use and management of our coasts and seas, using natural processes and the ecosystem based approach.<br><br>Urban areas: where biodiversity needs become part of the development of policy on sustainable communities, urban green space and the built environment. | Population of wild birds.<br>Condition of Sites of Special Scientific Interest.<br>Progress of Biodiversity Action Plans.<br>Area of Land under agri-environment Agreements.<br>Biological quality of rivers.<br>Fish stocks around the UK fished within safe limits.<br>Public attitudes to biodiversity. | The protection and enhancement of biodiversity should be taken into account during the development of the WCS and should be integral. | The SA Framework should seek to assess the potential impacts of options on biodiversity. |

| DRAFT GUIDANCE ON HEALTH IN STRATEGIC ENVIRONMENTAL ASSESSMENT | | | |
|---|---|---|---|
| **KEY OBJECTIVES RELEVANT TO PLAN AND SA** | **KEY TARGETS AND INDICATORS RELEVANT TO PLAN AND SA** | **IMPLICATIONS FOR PLAN** | **IMPLICATIONS FOR SA** |
| The key messages are as follows:<br><br>SEA consultation must be carried out with the public and certain 'Consultation Bodies'. The guidance encourages interaction between Responsible Bodies (including WPAs) and health organisations.<br><br>SEA is a major opportunity to prevent ill health and tackle health inequalities.<br><br>Responsible Bodies should know and understand how health is affected by their plans and programmes so that, in assessing them, major relevant health issues are covered, maximising positive effects and preventing, offsetting or minimizing negative ones.<br><br>Health organisations should be effectively engaged in the process. | / | Natural England, English Heritage, the Environment Agency and the relevant Director of Public Health (e.g. for the local Primary Care Trust) should be consulted on the development of plan options and on SA Reports. | Natural England, English Heritage, the Environment Agency and the relevant Director of Public Health (e.g. for the local Primary Care Trust) should be consulted on the development of the SA Framework. |

| THE GLOUCESTERSHIRE CONFERENCE SUSTAINABLE COMMUNITY STRATEGY 2007 - 2017 | | | |
|---|---|---|---|
| **KEY OBJECTIVES RELEVANT TO PLAN AND SA** | **KEY TARGETS AND INDICATORS RELEVANT TO PLAN AND SA** | **IMPLICATIONS FOR PLAN** | **IMPLICATIONS FOR SA** |
| Gloucestershire should be:<br><br>Aim 1: A place where the future matters.<br><br>*- We manage waste in a sustainable way*<br><br>Aim 2: A place where communities matter.<br><br>Aim 3: A place where everyone matters.<br><br>Aim 4: A place where people want to live.<br><br>Aim 5: A place that thrives. | The Gloucestershire Sustainable Community Strategy provides general broad aims. Managing waste in a sustainable way sits under Aim 1 – A Place where the future matters.<br><br>The Gloucestershire Environment Partnership (a thematic partnership of the Gloucestershire Conference) includes 'waste' as an initial priority. | The WCS should reflect the aims and objectives of the Gloucestershire Sustainable Community Strategy, particularly in terms of priorities for reducing waste and managing it in the most sustainable way. | SA Objectives should seek to manage waste in a sustainable way. |

| GLOUCESTERSHIRE COUNTY COUNCIL'S DRAFT CORPORATE CLIMATE CHANGE STRATEGY & ACTION PLAN | | | |
|---|---|---|---|
| **KEY OBJECTIVES RELEVANT TO PLAN AND SA** | **KEY TARGETS AND INDICATORS RELEVANT TO PLAN AND SA** | **IMPLICATIONS FOR PLAN** | **IMPLICATIONS FOR SA** |
| Provide strong leadership to prepare the County for the effects of climate change and to reduce emissions of greenhouse gases, by helping other organisations and citizens of Gloucestershire to understand what they can do and encourage them to change their behaviour.<br><br>Put the Council's own house in order by reducing the contribution of our day to day business (our buildings, land and transport) to climate change and ensuring that we can adapt to the impacts of climate change.<br><br>Understand and manage the risks that a changing climate will have on the delivery of Council services and ensure that this helps Gloucestershire's communities become more resilient to climate change, and reduce emissions of greenhouse gases, for example through transport and waste management.<br><br>Monitor and publicly report on our progress in delivering our climate change objectives on an annual basis, and review and revise our action plan accordingly.<br><br>Systematically build carbon reduction and climate change resilience into our organisational 'DNA' | To reduce our $CO_2$ emissions by 80% by 2050 against our 2005/06 baseline. | The WCS should reflect the aims and objectives of the Climate Change Strategy & Action Plan, particularly in terms of reducing waste and moving it way from landfill with associated methane and other greenhouse gas releases. Any waste that is produced should be regarded as a useful resource. | The SA Objectives should clearly seek to reduce contributions to climate change and look to mitigation measures. |

## 5. Key Messages

The following table (Table 3.) highlights the key messages that have emerged from the review of additional plans and strategies and a review of Gloucestershire's baseline. For an indication of how the review of other plans and strategies and the key messages link to the other 'A' stages in the ODPM Guidance, and specifically to the development of the SA Objectives, sub-questions and indicators please refer to Table 5.

**Table 3. Key Messages from the Review of Additional Relevant Plans, Programmes & Strategies.**

| Document | Social | Economic | Environmental |
|---|---|---|---|
| The World Summit on Sustainable Development, Johannesburg 2002 – Commitments arising from the Summit | Change consumer behavior – leading to more sustainable patterns of consumptions and the increased use of renewable energy. | Support business innovation and take up of best practice in technology and management.<br><br>Promote efficiency.<br><br>Promote the use of renewable energy.<br><br>Support sustainable consumer consumption. | Reduce biodiversity loss and loss of natural resources. |
| EU Air Quality Framework Directives | Clean air is vital for the health and wellbeing of communities. | Industrial / business sector to reduce and tighten control on emissions in order to improve air quality. | Maintain ambient air quality in areas where it is good and improve it in other cases with respect to sulphur dioxide, nitrogen and oxides of nitrogen, particulate matter and lead. |
| EU Sixth Environmental Action Plan | Encourage waste minimisation in society in general. | Encourage waste minimisation in the industrial and business sector. | Reduce the quantity of waste going to final disposal by around 20% of 2000 levels by 2010 and by 50% by 2050. |
| EU Drinking Water Directive | Safe and plentiful supplies of drinking water are a social necessity. | / | Maintain and improve the quality of drinking water. |
| PPS12: Local Spatial Planning & Plan-Making Manual | Produce a vision for places and translate this into priorities, programmes, policies and land allocations. | Produce a vision for places and translate this into priorities, programmes, policies and land allocations. | Produce a vision for places and translate this into priorities, programmes, policies and land allocations.<br><br>Contribute to the achievement of |

| | | | |
|---|---|---|---|
| | Contribute to the achievement of sustainable development. | Contribute to the achievement of sustainable development. | sustainable development.<br>Create a positive framework for action on climate change. |
| Waste Strategy for England 2007 | All parts of society will have to share responsibility and reduce their own waste, purchase products and services that generate less waste and reduce environmental impacts, and separate their waste for recycling. | The waste management industry will have to invest in facilities to recycle and recover waste, and provide convenient waste services to their customers to recycle and recover their waste. | Meet and exceed the landfill directive diversion targets.<br>Increase diversion from landfill of non-municipal waste.<br>Secure investment in infrastructure needed to divert waste from landfill.<br>Recycling and composting targets for household waste as follows:<br><br>40% by 2010<br>45% by 2015<br>50% by 2020<br><br>Recovery of municipal waste:<br><br>53% by 2010<br>67% by 2015<br>75% by 2020 |
| PPS25 Development and Flood Risk | Ensure that flood risk [e.g. for residential properties – people's homes] is taken into account at all stages in the planning process. | Ensure that flood risk [e.g. for commercial and business operations] is taken into account at all stages in the planning process. | Sustainable development should be developed through:<br><br>· Appraising risk.<br><br>· Managing risk.<br><br>· Reducing risk.<br><br>· A partnership approach. |
| PPS1 Climate Change Supplement | Addressing climate change is the Government's principal concern for sustainable development.<br><br>Changes are needed across society in order to reduce the impacts of climate change and conversely, climate | Economic growth should be focused on the support of efficient, competitive and innovative business, commercial and industrial sectors. | Recognise the need to enhance as well as protect biodiversity and the need to address the causes and impacts of climate change, pollution and waste management impacts. |

| | | | |
|---|---|---|---|
| | change impacts will lead to significant social changes. | | |
| Wessex Water Draft Resources Management Plan | Protect those in 'water poverty'.<br><br>Encourage more water metering. | Promote customer efficiency. | Protect the quality of water supply including ground water. |
| Thames Water Resources Management Plan | Continue with targeted programme of compulsory metering and enhanced water efficiency. | Continue with targeted programme of compulsory metering and enhanced water efficiency. | Conserve water resources through Demand Management and efficiency programmes. |
| Severn Trent Water Resources Management Plan | Reduce leakages and interruptions to flow.<br><br>Reduce the number of hose pipe bans.<br><br>Accelerate the installation of meters. | Reduce leakages and interruptions to flow.<br><br>Accelerate the installation of meters. | Comply with all environmental obligations and legislation. |
| Energy White Paper – Our Energy Future – Creating a Low Carbon Future | Ensure that every home is adequately and affordably heated. | Promote competitive markets in the UK and beyond, helping to raise the rate of sustainable economic growth and to improve productivity. | Reduce carbon dioxide emissions of some 60% from current levels by about 2005, with real progress by 2020. |
| Rural Strategy 2004 | Social regeneration should be supported in rural areas and social justice for all should be a priority – tacking rural social exclusion. | Economic and social regeneration should be supported in rural areas. | Enhance the value of the countryside: protecting the natural environment for this and future generations. |
| Working with the Grain of Nature: A Bio-diversity Strategy for England | Public attitudes to biodiversity need to be assessed and addressed. | Biodiversity in urban areas needs become part of the development of policy on sustainable communities, urban green space and the built environment. | <u>Agriculture:</u><br>Conserve and enhance biodiversity as part of the Government's Sustainable food and Farming Strategy.<br><br><u>Water:</u><br>Aiming for a whole catchment approach to the wise, sustainable use of water and wetlands.<br><br><u>Woodland:</u><br>Management and extension of woodland so as to promote enhanced biodiversity and quality of life.<br><br><u>Marine and Coastal:</u> |

| | | | |
|---|---|---|---|
| | | | Achieving the sustainable use and management of our coasts and seas, using natural processes and the ecosystem based approach. |
| Draft Guidance on Health in Strategic Environmental Assessment | SEA is a major opportunity to prevent ill health and tackle health inequalities. | SEA is a major opportunity to prevent ill health and tackle health inequalities. | SEA as a component of SA is a major opportunity to prevent ill health and tackle health inequalities. |
| Gloucestershire Sustainable Community Strategy | Residents and society in general should manage waste in a sustainable way. | Businesses should manage waste in a sustainable way. | Environmental benefits (including reducing climate change impacts) will result from the sustainable management of waste. |
| Gloucestershire County Council's Draft Corporate Climate Change Strategy & Action Plan | Prepare the citizens of the County for the effects of climate change, encouraging people to change their behavior. | Consider the implications climate change will have on the delivery of Council services. | Reduce emissions. The long term target is an 80% reduction on 2005/6 baseline by 2050. |

## 6. Key Messages and Sustainability Issues in Gloucestershire

In terms of the additional Key Messages in Table 3, many of these are covered by Key Messages and Sustainability Issues detailed below from the existing SA Framework or the work that has been undertaken for the SEA of the JMWMS. Some examples: a key message from the Rural Strategy 2004 is that rural areas need to be supported through regeneration, but also that there is the need for the protection of the countryside. This issue is covered by 6. 'Rural economy – certain areas in need of support' as well as 15, 16 & 19 below in terms of the need for environmental protection. One of the key messages from the Energy White Paper – Our Energy Future – Creating a Low Carbon Future was the real need to reduce carbon dioxide emissions of some 60% from current levels by about 2005, with real progress by 2020. This issue is reflected in 14 below and in 'The need to reduce green house gas emissions' in the JMWMS list. Clearly an additional key message from the new PPS12 is that it may now be appropriate to include strategic sites for development in Core Strategies. This SA Context and Scoping Report is part of the process leading to the achievement of this.

■ The following are the Key Messages and Sustainability Issues as detailed in the latest (Update 2) SA Scoping Report (April 2006) and in the Waste Core Strategy Preferred Options SA Report (January 2008):

| | |
|---|---|
| 1. High house prices. | 10. Growing levels of waste in Gloucestershire. |
| 2. Low average income. | 11. Recycling / composting rates (Poor in comparison with some areas / authorities). |
| 3. Crime levels (High in certain areas). | 12. Minerals restoration (A potential lack of inert materials). |
| 4. Health (Poor for certain segments of the population). | 13. Protecting Gloucestershire's environment whilst providing minerals needed by society (Potential conflicts of interest). |
| 5. Traffic impacts and congestion. | 14. Renewable energy (A relatively low proportion of renewable energy generated in Gloucestershire). |
| 6. Rural economy (Certain areas in need of support). | 15. The general state of Gloucestershire's biodiversity, the condition of SSSIs, sites protected under the Habitat's Directive and locally designated sites |
| 7. Areas of deprivation and social exclusion. | 16. Decline in species biodiversity (in particular of certain bird species in Gloucestershire). |
| 8. Potential for flooding (High in certain areas of the County). | 17. Increases in serious pollution incidents. |
| 9. Waste to landfill (Increasing levels). | 18. Possible damage to the historic environment. |
| | 19. Detrimental changes to landscape character. |

■ The following are the Key Messages and Sustainability Issues as detailed in the Final Environmental Report for the Gloucestershire JMWMS (September 2007):

| **Environmental Issues** |
|---|
| Protection of the countryside and landscape in Gloucestershire. |
| Need for more efficient use of resources and increased recycling and composting. |
| The need to reduce greenhouse gas emissions. |
| Improving the transport network, in particular by promoting alternatives to transport by private car and goods vehicles. |
| Protection and enhancement of air, water and soil quality. |

| **Social Issues** |
|---|
| Improving access to services for everyone. |
| Improving access to education and information. |
| Creating vibrant communities with greater community involvement. |
| Reducing poverty and social exclusion. |
| Helping to create healthier communities. |

| Economic Issues |
|---|
| Creating and maintaining a strong, healthy and dynamic economy. |
| A competitive, innovative knowledge-based business sector. |
| Obtaining value for money in the provision of services and improving access to jobs. |

■ The following is an explanation of the Landfill Allowance Trading Scheme LATS issue which is a key Sustainability Issue in Gloucestershire linked to:
- Increasing levels of waste going to landfill.
- Growing levels of waste being produced.
- Relatively low, but improving recycling rates in Gloucestershire in comparison with the best performing areas / authorities.
- The need for more efficient use of resources and increased recycling and composting.
- Obtaining value for money in the provision of services and improving access to jobs.
- The need to reduce green house gas emissions.

**LANDFILL ALLOWANCE TRADING SCHEME (LATS)**

This is a scheme implemented by the Waste and Emissions Trading (WET) Act 2003. It is designed so that waste disposal authorities are allocated annual allowances of Biodegradable Municipal Waste (BMW) that can be sent to landfill. Authorities can meet their allowance through diversion of BMW or by banking, borrowing or trading allowances. Authorities that exceed their allowance are currently liable to a penalty of £150 per for every tonne over the allowance.

The County Council is aiming to minimise municipal waste arisings, and improve source-segregation of waste at the kerbside to increase recycling and composting to 70% by 2020. However, modelling has indicated that there will still be a LATS deficit in 2009/10. Waste costs are rising rapidly. The Waste Unit budget is currently about £16m and it has been forecast that if the County Council carries on with a business as usual approach, landfilling on current trends, this will escalate to over £80m by 2020. (This calculation is based on in-house modelling and assumes that recycling and composting rates remain the same, waste growth continues to rise at 3% per annum, and that the County Council must pay £150 per tonne of biodegradable waste going to landfill).

Clearly the financial implications of LATS penalties for the County Council and consequently for Council Tax payers in Gloucestershire are very serious, with major implications for other crucial Council services. As has been explained in the Section 3 of this report, this is one of the reasons why GOSW responded to the WCS Preferred Options recommending that strategic sites for the management of Municipal Solid Waste be included in the WCS.

**For more information on this issue see:**

- Section 6 of this report on Municipal Solid Waste.

- Waste Core Strategy Technical Evidence Paper WCS-A Waste Data. Click here to view a copy.

- The JMWMS and the SEA documentation. Click here to view a copy.

- The County Council's Outline Business Case for Application for Private Finance Initiative credits. Click here to view a copy.

## 7. General Summary of Baseline Data and Indicators

**Character of Gloucestershire**
The heritage, culture and environment of the County helps support its quality of life and economy. Gloucestershire is substantially a rural county with the main urban focus in Gloucester and Cheltenham. It supports a wealth of international, national and locally important environmental assets, which need the appropriate level of protection from various forms of development, including waste development.

**Population**
There are approximately 575,000 people living in Gloucestershire. The County's population grew by 29,000 between 1991 and 2001 and is expected to continue to increase. This will have an impact on the need for housing and services. The following table (based on Table 4.1 in the Draft RSS) details the housing totals and phasing for the Districts within Gloucestershire.

| | 2006-2026 Overall Annual Average Net Dwelling Requirement | 2026-2016 Annual Average Net Dwelling Requirement | 2016-2026 Annual Average Net Dwelling Requirement |
|---|---|---|---|
| Cheltenham | 425 | 425 | 425 |
| Gloucester | 575 | 575 | 575 |
| Tewkesbury | 525 | 525 | 525 |
| Cotswold | 300 | 340 | 260 |
| Forest of Dean | 270 | 300 | 240 |
| Stroud | 335 | 435 | 235 |
| Gloucester & Cheltenham Housing Market Area | 2,430 | 2,600 | 2,260 |

The Examination in Public (EiP) of selected matters arising from representations on the Draft RSS for the South West was held before an independent panel appointed by the First Secretary of State between 16th January 2007 and 6th July 2007. The Panel Report was published in January 2008 and Proposed Modifications will follow in Spring / Summer 2008. The RSS is likely to be adopted in the Autumn of 2008.

Population projections are used to estimate how many residential units might be required in future years. Figures will be influenced by planning policy in the Regional Spatial Strategy and Local Development Frameworks. Under a system of 'plan, manage and monitor', an identification of need may require plans to be reviewed in light of new projections. The purpose of modernising the planning system is to move away from the limitations of the land-use remit and to develop policy spatially. Therefore minerals and waste planning policy will need to support the sustainable development aims of emerging spatial strategies.

**Economy and Labour Supply**
Key economic indicators show Gloucestershire in a favourable light. The County has historically low levels of unemployment, and gross value added per head similar to the national average. However, according to Government Indices of Deprivation (2004) there are pockets of deprivation mainly in the urban areas of Gloucester and Cheltenham. The County's Rural Economy Advisory Panel has highlighted significant problems of isolation and low household incomes in some rural communities, particularly in some parts of the Forest of Dean. Gloucestershire's Gross Domestic Product per head is above average for the South West. In the five years leading up to 2001 the demand for labour in Gloucestershire was consistently greater than the supply of labour in the County. However supply is likely to outstrip demand due to a rise in working population. Over the period 1991 – 2015 the County is likely to see a 10.7% increase in the size of its workforce to just below 297,000 with an 11% increase in jobs.

At a sectoral level the growth in the service sector and the decline in manufacturing over the last 10 years will continue up to 2015. Unemployment in Gloucestershire is low at 1.8% in August 2003, well below the national average at 2.3%. The average County income was £19,857 in 2003 almost £1000 lower than the national average. However the average income in Tewkesbury and Cheltenham are well above the national average with the Forest of Dean well below. While average earnings in the County rose by 18.6% between 1999 and 2003, average property prices rose by 81.5% in the same period.

**Health**
In 2001, 91,164 people in Gloucestershire (16% of the total population) suffered from a Limiting Long-Term Illness (up from a 1991 figure of 59,895). 38,000 of the 2001 figure were of working age. 42,743 of the County's population also noted that their health was 'Not Good' over the 12 months leading up to the 2001

Census night. Life expectancy in the County is slightly higher than the national average for both men and women.

UK and County Life Expectancy (2001)

| Life Expectancy | UK – National Average | Gloucestershire |
|---|---|---|
| Men | 75.9 | 77.3 |
| Women | 80.6 | 81.6 |

**Transport Links**
Gloucestershire is well served by the motorway network. The M5 acts as the main north - south route through the County, running roughly parallel to the River Severn. It links with east-west routes and key crossing points over the Severn. The M50 is on the County's northern boundary and the M4 and M48 pass just below the southern boundary.

The rail network in Gloucestershire was reduced significantly during the Beeching era and there are now just four trunk lines. The mainline bisects Gloucestershire north to south with tracks from Gloucester running to South Wales and from Stonehouse towards the South East. A line passes through Moreton-in-Marsh in the north east of the County. In the last decade however, the County Council and district/parish councils have supported the building and re-opening of stations at Ashchurch (Tewkesbury) and at Cam/Dursley and (with Avon County Council) at Charfield.

In recent years Gloucester station has been under threat and serious consideration is being given to a new mainline station and multi-modal transport interchange at Elmbridge court between Cheltenham and Gloucester. This has taken the form of a Major Scheme bid, supported by Gloucestershire County Council, Gloucester City Council, Tewkesbury Borough Council and the Strategic Rail Authority.

In terms of waterborne transport potential, at present the majority of traffic on the river Severn consists of privately owned small craft, although in early 2005 movement of sand and gravel has taken place from Ryall Quarry in Worcestershire to Gloucester. The river and canals (including the Gloucester and Sharpness canal) provide Gloucestershire with the possibility to develop sustainable waterborne freight transport.

**Public Rights of Way**
Gloucestershire has almost 3,500 miles of footpaths, bridleways and green lanes that make up its public rights of way network. They are an important landscape element in both rural and urban areas of the County, playing an important part in the daily lives of many people who use them for leisure, exercise and the up-keep of health, or as part of their daily routine.

Nationally 15 per cent of all visitors to the countryside go walking, which brings many benefits from supporting the rural economy to improving the health and well being of participants. Three national routes run through Gloucestershire namely; the Thames Path, the Gloucestershire Way and Offa's Dyke Path.

The public right of way network is managed by the County Council who maintain a definitive map of all paths and rights of way in the County. Volunteers and local conservation groups assist in the maintenance of the network.

**Landscape, Biodiversity and the Natural Environment**
Gloucestershire's landscape is characterised by three distinct areas. From west to east these are: the Forest of Dean, the Severn Vale and the upland limestone areas of the Cotswolds and Stroud. In terms of a more detailed landscape character assessment, the County is divided into 33 distinct areas (See the SA Scoping Report Appendix 3).

The different geological formations and soils of each area have determined the nature of the vegetation within the County as well as its building styles and settlement patterns. Many local industries have also left their particular mark on the landscape.

The Forest of Dean is situated on an upland trough of old red sandstone that has been overlaid twice by carboniferous limestone, and then by millstone grit containing iron ores and coal measures. It lies in a hilly area between the Rivers Wye and Severn and is still heavily forested with constrained access.

The Wye Valley, on the Forest of Dean's western boundary, is a designated Area of Outstanding Natural Beauty and contains some of the most important semi-natural woodland in Britain and some of the scarcest

trees. The River Wye itself is also important as a largely natural system of high water quality and conservation interest. Settlement in the Forest has tended to be linear, following the watercourses and coal measures and villages are built of the grey-brown and red stone local to the area.

The Forest of Dean is one of England's largest ancient forests containing over 11,000 hectares of woodland. This area forms the largest single area of public access in the County, attracting over 1.5 million visits per year. The area of the Royal Forest still contains extensive areas of old oak woods with abundant flora and fauna in a variety of different habitats.

The area also has a range of habitats on the coal measures and sandstone, which are scarce in the County as a whole. The historic industries of tin mining and coal mining have left local features such as abandoned spoil heaps and dismantled railways that, now regenerated, give distinctive character. 'Free miners' continue to operate very small coal mines in the area and there are many kilometres of old underground mine workings and extensive natural cave systems which have contributed to a nationally important population of rare lesser and greater horseshoe bats.

The Severn Vale is an area created by the floodplain of the River Severn between the foot of the Cotswold escarpment and the hilly area of the Forest of Dean. It is this area of the County that is most urbanised with Cheltenham and Gloucester and major transport routes concentrated through it. The designated Green Belt between Gloucester and Cheltenham has been successful in defining limits to urban areas, but in recent years it has come under increasing pressure in terms of the need for sustainable communities and efficient transport networks.

The Severn Vale is of particular significance for bird life, with several sites in the floodplain of the River Severn seasonally providing ideal conditions for wintering wildfowl. As an estuarine system the Severn Estuary is an internationally important site.

The area known as 'The Cotswolds' contains a number of different landscape character areas. The dramatic edge landscape of the main escarpment runs south west to north east and is very steep in places, resulting in a strong visual impact. The many indentations within the escarpment run into the Cotswolds. On the north west side of the escarpment are five hills known as outliers. Around Stroud and Winchcombe the landscape is more incised. In the northern part of the Cotswolds there is an area of high wold where the topography is softer with smaller and narrower valleys and broad plateau tops, which merge into a dip slope in the middle of the Cotswolds.

The Oolitic limestone belt from which the Cotswolds are formed has also resulted in unimproved limestone grassland habitat of great wildlife value. The grassland of commons, valleys and scarp contain ancient turf formed by grazing over many centuries and now support an abundance of attractive wild flowers and butterflies. They are also home to one of the prime areas of beech woodland in Britain. Beech woods are habitats for many scarce species.

In addition, the unmistakable vernacular of Cotswold villages and towns has made it an international target for recreation and tourism.

The Upper Thames Valley, to the south / south east of the Cotswolds is dominated by the physical impacts of sand and gravel extraction. The development of recreation and natural areas in the Cotswold Water Park provide an excellent example of sensitive restoration of mineral workings. The lakes and wetland areas are gaining in wildlife importance, and increasing in national and international recognition.

**Statutory Designations**

Gloucestershire has a wide array of nature conservation designations ranging from the International level to the Local. International nature conservation designations include Ramsar sites, Special Protection Areas and Special Areas of Conservation. Note: In accordance with the the Conservation (Natural Habitats, & c.) Regulations 1994 which transposes Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive) into UK law, Gloucestershire County Council Minerals & Waste Planning Policy has produced:

- An AA, or Habitat Regulations Assessment (HRA) Baseline Report for Gloucestershire.
- An AA, or Habitat Regulations Assessment (HRA) Report on the Waste Core Strategy Issues & Options Paper.
- An AA, or Habitat Regulations Assessment (HRA) Report on the Waste Core Strategy Preferred Options Paper.

Ramsar sites are wetland areas of international importance while Special Protection Areas are designated under the European Union Birds Directive (79/409/EEC) in order to conserve the habitats of vulnerable species (listed in Annex I of the Directive) and of migratory birds. Gloucestershire has 2 Special Protection Areas / Ramsar sites: Walmore Common and the Severn Estuary - a collective area of almost 5,000 hectares.

All Special Protection Areas and Special Areas of Conservations are also designated Sites of Special Scientific Interest. They are designated by English Nature (now Natural England) to provide statutory protection for the best examples of the UK's flora, fauna, or geological or physiographical features. Consultation is required if they are threatened in any way. There are over 100 Sites of Special Scientific Interest in Gloucestershire. Three of these have been additionally designated National Nature Reserves.

The largest designation in terms of extent are the three Areas of Outstanding Natural Beauty in the County: the Cotswolds, part of the Wye Valley and a very small section of the Malvern Hills. Areas of Outstanding Natural Beauty cover 136,400 hectares or 51.4% of the County area. Their primary purpose is to conserve and enhance natural beauty while taking into account the economic and social needs of the area.

In addition to the above designation a large area of the Cotswolds Area of Outstanding Natural Beauty has been designated as an Environmentally Sensitive Area. This designation is intended to protect landscapes that are at risk due to changing farming practices.

In addition to the International and National designations listed above there are a range of local designations including Key Wildlife Sites, Local Nature Reserves, Private Nature Reserves (for example those managed by the Wildlife Trust, Woodland Trust and Royal Society for the Protection of Birds), Regionally Important Geological Sites, Special Landscape Areas, Ancient Woodland Sites, and Registered Commons.

**Flora and Fauna**
Despite the large number of statutory and local designations, Gloucestershire has suffered from large-scale habitat and species loss over the last 50 years. This has largely been due to changes in farming practices. Among the species that have suffered from decline are farmland birds. At present approximately 100 species identified in the UK Biodiversity Action Plan are thought to occur in Gloucestershire. The Gloucestershire Biodiversity Action Plan provides a framework for the conservation of biodiversity based on targeting resources towards protecting priority habitats. It contains individual action plans for 17 identified habitats and a total of 38 species of invertebrates, vertebrates, plants, fungi and lichens.

Many of these species are also listed for protection under the European Union Habitats Directive including: the European Otter, the Dormouse, the Lesser Horseshoe and Greater Horseshoe Bat and the Pipistrelle Bat.

Over 60 bird species listed under the EU Birds Directive have been recorded in Gloucestershire. Wetlands areas such as the Severn Estuary, Slimbridge Wildfowl Centre and the Cotswolds Water Park centre provide important habitats for over-wintering and migratory birds.

**Soil, Air and Water**
Soil erosion is an increasing problem throughout the UK. About 50% of all land in the South West is thought to be at risk and about 6% of agricultural soils already suffer from erosion. Certain soils found in the far south west of the County, straddling the boundary with South Gloucestershire are listed as having an inherent vulnerability to high or severe structural problems. Such soils are easily sealed by heavy rain increasing the likelihood of local flooding and mud on roads. The increased sediment in rivers caused by soil runoff also poses a threat to aquatic ecosystems.

Air quality is a less significant issue in Gloucestershire than in some counties as a result of the largely rural nature of the County. However, road transport is a major source of local air pollution and both Gloucester City and Cheltenham Borough both exhibit significantly higher concentrations of pollutants associated with road traffic than the more rural districts.

The issue of air quality has been considered within the Gloucestershire Local Transport Plan. The six district authorities in conjunction with Gloucestershire County Council have undertaken individual air quality reviews and assessments. These have examined the extent of any potential exceedances of national air quality objectives for nitrogen dioxide and particulate matter. The results from local authority air quality review and assessment work indicate that the contribution of road traffic emissions to local air quality is

potentially significant within the County. However, an overall reduction of between 20 to 30%, and in some cases even greater, in the annual mean nitrogen dioxide was predicted between 1998 and 2005 across the County. For particulate matter concentrations, the predicted reduction in the annual mean between 1998 and 2004 was even greater, with a reduction of almost 50% predicted. Results from Stage 2 of this assessment work, indicate that exceedances are envisaged along the M5 motorway corridor, at receptors within 50 meters of the carriageway. A small number of road links have also been identified as having the potential to cause future exceedances of the air quality objectives.

The table below lists the Local Air Quality Management Areas that have been declared in the County. An Air Quality Management Area is defined where members of the public are likely to be exposed to exceedances in the levels of pollutant. The higher the number of Air Quality Management Areas in a District would indicate generally higher levels of air pollution.

Local Air Quality Management Areas in Gloucestershire.

| | |
|---|---|
| Gloucester City | Barton Street Air Quality Management Area |
| Gloucester City | Priory Road Air Quality Management Area |
| Tewkesbury | Withy Bridge Air Quality Management Area |
| Forest of Dean | None |
| Cheltenham | None |
| Stroud | None |
| Cotswold | None |

River water quality in the South West is good. The latest survey of river water quality in 2003 revealed that the South West had the highest proportion of 'very good' quality rivers and the lowest proportion of 'bad' quality rivers in England.

In 2004, almost all of the region's rivers were of good or fair quality, 96.7% being of good or fair chemical quality (compared to 97.02% in 2003) and 98.81% being of good or fair biological quality (compared to 98.87% in 2003). A high percentage of the region's rivers were classed in the 'good' category - 77.92% for chemical and 87.74% for biological (compared with 79.77% and 96.99% respectively in 2003).

Gloucestershire has around 690 km of rivers (11% of the total in the South West), which are monitored by the Environment Agency for river quality. This is done using a system known as the General Quality Assessment which measures four aspects of river quality, namely: biology, chemistry, nutrient content and aesthetic quality. The biological quality of rivers in Gloucestershire has declined in recent years. In 1990 68.53% of rivers were of ‘good’ biological quality, but in 2004 the figure had declined to 66.62%.

The chemical quality of rivers in Gloucestershire has fluctuated between 1999 and 2004. In 1990 56.59% of rivers were of good quality, in 2001 this figure had improved to 84.02. However in 2004 only 68.33% of rivers in the County were of ‘good’ chemical quality. (Source: All river water quality data: Environment Agency 2005).

Much of Gloucestershire is underlain by major aquifers and groundwater is an important source of public water supply. The vulnerability of groundwater reserves to pollution can be assessed according to various factors such as the water level, soil type, the thickness of overlying deposits, aquifer productivity and chemical analyses from boreholes. Much of Gloucestershire is underlain by a major aquifer with high to intermediate vulnerability. Groundwater is particularly susceptible to nitrate pollution caused by agricultural fertilizer. In order to protect groundwater against nitrate pollution certain areas of the County have been identified as groundwater nitrate vulnerable zones.

As a result of the European Union Water Framework Directive the system for managing water resources in England and Wales is currently undergoing a process of change. Catchment Abstraction Management Strategies make more information on water resource allocation publicly available and allow a balance between the needs of abstractors and those of the aquatic environment to be determined in consultation with local interested parties. The Severn Corridor Catchment Abstraction Management Strategy is currently being prepared and will cover the entire length of the River Severn down to the Severn Estuary. It will also include the Gloucestershire and Sharpness Canal.

**Climactic Factors in Gloucestershire**

Climate change is recognised as one of the greatest threats facing the world today. It is now widely accepted that man-made emissions of greenhouse gases are responsibly for the increase in temperatures and that

temperatures are rising faster than previously thought (UK Climate Impacts Programme, 2002). In the South West, 8 of the 10 warmest years have occurred since 1990, with the 1990s being the warmest decade on record. As shown in the below table, the changes resulting from global warming are likely to result in warmer, drier summers and milder, wetter winters.

The following table summarises likely / potential changes to the climate of the South West by the 2050s:

Potential Changes to the Climate in the South West by the 2050s.

| | |
|---|---|
| Temperature | • Annual warming of 1.0 to 2.5°C (annual warming of 1.5 to 4.5°C in the 2080s)<br>• Greater night-time than day-time warming in winter<br>• Years as warm as 1999 (+1.2°C hotter than average) more common<br>• Greater warming in summer and autumn than in winter and spring<br>• Greater day-time than night-time warming in summer |
| Precipitation | • Winters 5 to 15% wetter (winters 10 to 30% wetter by the 2080s)<br>• Heavy rainfall in winter becomes more common<br>• Summers as dry as 1995 (37% drier than average) become more common<br>• Snowfall totals decrease significantly<br>• Summers 15 to 30% drier (summers 25 to 50% drier by the 2080s)<br>• Greater contrast between summer (drier) and winter (wetter) seasons<br>• Winter and spring precipitation becomes more variable |
| Cloud cover | • Reduction in summer and autumn cloud and increase in radiation<br>• Small increase in winter cloud cover |
| Humidity | • Relative humidity decreases in summer<br>• Specific humidity increases throughout the year |
| Soil moisture | • Decreases in summer<br>• Slight increase in winter soil moisture |
| Storm tracks | • Winter depressions become more frequent including deepest ones |
| North Atlantic Oscillation | • North Atlantic Oscillation may become more positive in the future, bringing more wet, windy and mild winters |

Source: UK Climate Impacts Programme (2002).

It is likely that such changes will have significant and far-reaching effects on the man-made and natural environment. Changes in temperature are likely to alter habitats and it is likely that many species will not be able to adapt quickly enough to survive. Recent published research indicates that there has been a decline in over-wintering birds from Arctic areas. Increasing sea temperatures are likely to alter the balance in marine species and alter the marine food chain.

Rising sea levels and wetter winters will also increase the likelihood of flooding in low-lying areas. This issue is of particular relevance in Gloucestershire with significant numbers of people living close to, or in, the floodplain of the River Severn. Increased soil compaction arising as a result of drier summers could result in increased runoff and consequently greater flood risk. But there is also the increased risk of flooding as a result of extreme summer rainfall as demonstrated by the severe flooding events in Gloucestershire in June and July 2007. In early 2008, Gloucestershire County Council in conjunction with District Councils commissioned specialist consultants to undertake a Strategic Flood Risk Assessment (SFRA) to inform Local Development Frameworks (including the MWDF) in the County.

**Material Assets in the County**

Motorways and major roads

The M5 runs through the County linking, northbound, to Birmingham and the West Midlands and, to the south, to Bristol, the South West and Wales. A dual-carriageway (A417/419) provides access to Swindon and the M4 with a two-hour drive time to Heathrow, three hours to the South East and channel ports.

Airports

Gloucestershire Airport is centrally located between Gloucester and Cheltenham providing facilities for air transport, executive jets, helicopters, charter flights, flying schools, aero engineering and maintenance. RAF Fairford is also a significant asset, being designated as a TransOceanic Abort Landing site for NASA's Space Shuttle with its 3 km long runway and NASA-trained fire and medical crews stationed on the base.

Docks

Gloucester Docks in the heart of the city is now a focal point for residential development and water-based leisure activities. Two working dry docks continue to provide ship repair and refit facilities with access to the sea through the Gloucester and Sharpness Canal. Sharpness Docks on the Bristol Channel provides extensive cargo-handling facilities and port-related services accommodating vessels up to 6,000 Tonnes.

Tourist assetts

The landscape and historic villages and towns of Gloucestershire are clearly a major material asset. Tourism accounts for about £500 million spending per year in the County and an estimated 11% of County employment is dependent on tourism.

Minerals resources, minerals working and geology

Gloucestershire has a diverse geological base with significant deposits of economic value. The County may be conveniently subdivided into the following resources areas:

| Resource Area | Mineral Type |
|---|---|
| Forest of Dean | Limestone (Carboniferous), Sandstone, Clay, Iron Ore, Coal |
| Cotswolds | Limestone (Jurassic) |
| Upper Thames Valley | Sand and Gravel, Clay, Cornbrash (Jurassic Limestone) |
| Vale of Moreton | Sand and Gravel |
| Severn Vale | Sand and Gravel, Clay |

The county's mineral resources are of local, regional and national importance. They include – limestone used as crushed rock and sand & gravel aggregates; limestone and sandstone for building stone; coal for energy generation; and clay used in brick making and civil engineering. Potential resources of gas and oil have also been surveyed in parts of the County. Historically, iron ore has also been worked, however this has not taken place since the Second World War. There are also records of working other metaliferous resources but this has been on a very historic basis.

During 2005, just over 3 million tonnes of minerals were worked in Gloucestershire. The majority of this total *(98%)* was made up of aggregate minerals – limestone used as a crushed rock and sand & gravel. The average annual production *(between 2001-2005)* of crushed rock supplies from Gloucestershire is calculated at 1.97 million tonnes per annum. For sand & gravel over the same period, average annual production is calculated at 1.03 million tonnes per annum. During 2005, nearly 70% of the county's crushed rock working occurred from quarries located within the Forest of Dean. The remainder was sourced from Cotswolds. Over the same year, almost all of Gloucestershire's sand & gravel working *(95%)* took place within the Upper Thames Valley. The remainder occurred across a small number of sites along the Severn Vale Corridor. There are two main concentrations of mineral workings for building & roofing stone – the Forest of Dean and the northern Cotswolds. During 2005, the Cotswold supplied most of the County's *(91%)* building & roofing stone. In terms of mineral reserves the figures are as follows:

- Crushed rock (limestone): 28.85 million tonnes. (as of 31st December 2005).
- Non-aggregate limestone: (principally for building stone and agricultural lime) 4.41million tonnes. (as of 31st December 2004).
- Sand & gravel: 7.85 million tonnes. (as of 31st December 2005).
- Non-aggregate sandstone: 0.50 million tonnes (as of 31st December 2004).
- Clay reserves: 1 million tonnes (as of 31st December 2004).

**The Historic Environment**
The historic environment of the County has been formed as a result of the activities of human communities over many thousands of years in clearing, farming and settling the landscape. There is extensive evidence of the past in the form of prehistoric settlement and burial sites, Roman towns and villas, medieval churches and other features of more local importance. The historic legacy of agriculture, industry, architecture and social organisation makes a significant contribution to the distinctive landscapes found in Gloucestershire.

There are around 18,000 archaeological sites recorded in the Gloucestershire Sites and Monuments Record. Approximately 400 of these are Scheduled Ancient Monuments of national importance. Archaeological investigations continue to reveal many sites of historical importance in all areas of the County. These range from Neolithic and Iron Age sites, through extensive Roman and Romano British Settlements, important medieval sites, Regency and Georgian buildings, and the legacy of past industrial activities.

Conservation areas and the register of listed buildings held by district councils affords protection to areas of particular architectural or historic interest. The Cotswold district has by far the highest number of conservation areas of any district local authority in Great Britain at 144.

Gloucestershire's natural and historic environment makes an important contribution to the local economy in terms of its tourism value. Both minerals and waste development can have major impacts on their surroundings. Great care must be taken to ensure that such development does not intrude on the archaeological legacy of the County and does not result in damage to their wider settings, or alter their relationship with the wider rural area around them.

**The Inter-relationship between Various Issues / Factors**
There are obviously numerous and complex inter-relationships between all the baseline issues and factors that have been considered (above) in this report. For instance the protection, preservation and enhancement of Gloucestershire's natural environment – its biodiversity, landscape, flora, fauna, soil, air and water quality has a direct relationship with people's quality of life and the benefit to the local economy in terms of the numbers of tourists who visit the County. Population increases will have a significant impact in coming years. Gloucestershire may see pressure for houses, infrastructure and services having an impact on the environment. More people will produce more waste and this has to be managed, and there are numerous inter-linkages with other factors and issues. Waste management facilities can have a detrimental impact on the environment and communities, but everyone in Gloucestershire produces waste and it needs to be managed. The landfilling of waste is becoming increasingly expensive through e.g. both the Landfill tax regime and LATS. It is also becoming socially and environmentally more unacceptable. Moving waste up the waste hierarchy, focusing on reduction, reuse and recycling should be the focus in coming years. However there needs to be a realistic attitude to the disposal of residual waste. In terms of mineral development a balance has to be struck between protecting Gloucestershire's environment, the amenity of its residents and visitors and providing minerals which are needed by society and from which we all derive benefit. Progress needs to be made in reducing the levels of primary minerals that are extracted, through the reduction, reuse and recycling of appropriate materials.

Arguably, of all the issues dealt with in this review of baseline, climate change has the greatest potential to have wide-spread and long lasting social, economic and environmental impacts.

In relation to the summary of baseline in Gloucestershire, the following table indicates some potential effects on the environment of waste development and also the likely future environmental status in the absence of the Waste Core Strategy. This information is also contained against the indicators in the baseline table in Appendix 3 of the SA Scoping Report (Update 2).

| SEA Topic (SEA Directive 2001/42/EC Annex 1 (f)) | Potential effects of waste development & likely future environmental (or other) status in the absence of the Waste Core Strategy |
|---|---|
| **Biodiversity** (covered in this document & in the SA Scoping Report paragraphs 6.36 to 6.54 & in Appendix 3 – Baseline table)<br><br>**Flora** (covered in this document & in the SA Scoping Report paragraphs 6.55 to 6.57 & in Appendix 3 – Baseline table)<br><br>**Fauna** (covered in this document & in the SA | ▪ Gloucestershire is a highly diverse County with a great variety of wildlife reflected in the large number of sites that are protected via international, national or local designations. Biodiversity outside these areas should also not be neglected, as habitats that have a linking function are very important.<br>Potential negative effects are:<br>▪ Potential loss of species / habitats.<br>▪ Habitat loss and fragmentation due to land take. |

| | |
|---|---|
| Scoping Report paragraphs 6.55 to 6.57 & in Appendix 3 – Baseline table)<br><br>**Soil** (covered in this document & in the SA Scoping Report paragraph 6.58 & in Appendix 3 – Baseline table) | ▪ Changes in soil conditions and or quality.<br>▪ Changes in the quality of air and water. Pollution potential in terms of noise, vibration, light, dust.<br>▪ Creation of barriers or obstacles affecting wildlife.<br>▪ Changes in methods of habitat management.<br>▪ Introduction of new species / habitats.<br>▪ Changes in ecological balances of prey and predators.<br>▪ Changes in patterns of human activity.<br>■ Comment on the likely future environmental status in the absence of the Waste Core Strategy:<br>Waste plans aim to reduce waste and effectively manage that which is produced in the most sustainable way. But there may be damage to the natural environment, even when plans contain policies which aim to protect it. Without these plans it is more likely that biodiversity, flora, fauna and soils would be damaged by un-planned and un-regulated development. |
| **Water** (covered in this document & in the SA Scoping Report paragraphs 6.64 to 6.69 & in Appendix 3 – Baseline table) | ▪ Waste facilities, if not properly managed, have the potential to pollute water. In terms of landfill sites – most modern sites have engineered cells with an appropriate lining system that will seal waste from the surrounding rock, soil strata and water table. The landfill sites in Gloucestershire are located in areas of extremely thick and impermeable clay.<br>■ Comment on the likely future environmental status in the absence of the Waste Core Strategy:<br>In the absence of the Waste Core Strategy and policies aimed at the protection of the water environment, rivers, streams, lakes as well as subterranean hydrological regimes are more likely to be damaged as a result of un-regulated and environmentally insensitive development. |
| **Air** (covered in this document & in the SA Scoping Report paragraphs 6.59 to 6.63, Table 12. & in Appendix 3 – Baseline table) | ▪ Traffic associated with waste collection / management facilities can increase emissions, dust and odour. Incineration, recycling and waste transfer can also lead to harmful impacts on air quality, requiring stringent pollution control and regulation. Communities situated close to landfill sites / composting facilities may experience a loss of amenity due to dust and odour.<br>■ Comment on the likely future environmental status in the absence of the Minerals Core Strategy & the Waste Core Strategy:<br>Air quality may deteriorate in the County in the absence of policies which aim at the control and mitigation of the problem. |
| **Climatic factors** (covered in this document & in the SA Scoping Report paragraphs 6.70 to 6.73, Table 13 & in Appendix 3 – Baseline table) | ▪ Landfill sites release damaging greenhouse gases to the atmosphere, in particular Methane which is about 20 times more damaging than Carbon Dioxide. In the UK, about 2% of total greenhouse gas emissions are from landfill sites.<br>▪ Waste products are, to a large extent, carried by road transport – emissions from which have negative impacts on the climate.<br>■ Comment on the likely future environmental status in the absence of the Minerals Core Strategy & the Waste Core Strategy:<br>In the absence of the Waste Core Strategy and |

| | |
|---|---|
| | specific policies aimed at combating climate change and reducing the impacts, it is likely that contributions to climate change from waste development will not be appropriately controlled and mitigated. |
| **Material assets** (covered in this document & in the SA Scoping Report paragraphs 6.74 to 6.79 & in Appendix 3 – Baseline table) | ▪ Waste development may affect the value of nearby land and property. This may also apply to land and property that lies on a busy lorry route.<br>■ Comment on the likely future environmental status in the absence of the Minerals Core Strategy & the Waste Core Strategy:<br>In the absence of the Core Strategies there may be negative impacts on material assets as a result of un-regulated, un-mitigated or poorly planned development. |
| **Population** (covered in this document & in the SA Scoping Report paragraphs 6.24 to 6.25 & in Appendix 3 – Baseline table) | ▪ Populations (i.e. people!) are affected by waste management activities. Communities can be very sensitive to increases in noise, traffic levels, odour, visual impacts and other negative impacts on amenity. Certain facilities e.g. those handling hazardous wastes may pose a threat to human heath if conditions and controls are not rigorous.<br>▪ Population increases, either natural increase or through migration may lead to increased levels of waste resulting in the rate at which landfill void space is depleted, and the need for more waste management facilities.<br>■ Comment on the likely future environmental status in the absence of the Minerals Core Strategy & the Waste Core Strategy:<br>In the absence of the Waste Core Strategy and appropriate policies there may be negative impacts on populations and communities as a result of un-regulated, un-mitigated or poorly planned development. |
| **Human health** (covered in this document & in the SA Scoping Report paragraph 6.28 & in Appendix 3 – Baseline table) | ▪ Waste development can have various negative impacts. In physical terms waste management facilities can cause congestion, noise, odours, visual impact which may lead to psychological / stress effects on individuals and communities. Noise from facilities or associated traffic could in certain instances disturb individuals sleep patterns – causing stress. Communities may feel that the fundamental nature of their community has changed as a result of a nearby waste disposal facility.<br>■ Comment on the likely future environmental status in the absence of the Minerals Core Strategy & the Waste Core Strategy:<br>In the absence of the Core Strategies there may be negative impacts on human health as a result of un-regulated, un-mitigated or poorly planned development. |
| **Cultural heritage including architectural & archaeological heritage** (covered in this document & in the SA Scoping Report paragraphs 6.80 to 6.83 & in Appendix 3 – Baseline table) | ▪ Waste management facilities along with ancillary development such as road construction, soil bunds and screening, processing and storage areas can potentially damage or destroy artefacts / sites of cultural and archaeological heritage. Indirect effects may include:<br>▪ A reduction in the legibility of archaeological landscapes as a result of the interruption of features.<br>▪ Dewatering and potential disruption to drainage regimes may damage waterlogged archaeological deposits and destroy a sites environmental potential. |

| | |
|---|---|
| | ▪ Subsidence or ground settlement on upstanding monuments and historic buildings.<br>▪ Dust from workings can have a detrimental impact on historic buildings and monuments – especially if the dust particles are chemically active.<br>▪ In the long term the setting and character of a historic monument / archaeological landscape / listed building might be affected. Apart from visual aspects, there may be a detraction of amenity resulting from the disruption of rights of way and access and increased noise and heavy traffic.<br>■ Comment on the likely future environmental status in the absence of the Minerals Core Strategy & the Waste Core Strategy:<br>In the absence of the Waste Core Strategy and appropriate policies there may be damage to Gloucestershire's cultural heritage (including architecture and archaeology) as a result of un-regulated, un-mitigated or poorly planned development. |
| **Landscape** (covered in this document & in the SA Scoping Report paragraphs 6.36 to 6.54 & in Appendix 3 – Baseline table) | ▪ Landscapes may be damaged where a development changes the physical character of a particular area. Changes to, or the physical removal of landscape elements e.g. trees, slopes, hedges, field boundaries may change the character of the landscape and how it is experienced. Views may be damaged, both in terms of composition and extent. Potential landscape / visual effects as a result of landraise / landfill development may include:<br>▪ Natural topography being permanently damaged.<br>▪ Geological exposures in old disused quarries may be lost if they are backfilled.<br>▪ Loss of hedgerows and hedgerow trees.<br>▪ Rural character eroded as a result of operational areas, litter trapping fences, stockpiles and mounds, plant and buildings.<br>▪ Insensitive restoration may weaken the local distinctiveness of a landscape.<br>▪ On the positive side, there may be enhancement opportunities linked to conditions.<br>■ Comment on the likely future environmental status in the absence of the Minerals Core Strategy & the Waste Core Strategy:<br>In the absence of the Waste Core Strategy and appropriate policies there may be damage to valued landscapes within Gloucestershire as a result of un-regulated, un-mitigated or poorly planned development. |
| The **inter-relationship** between the issues referred to above (covered in this document & in the SA Scoping Report paragraphs 6.84 to 6.86 & in Appendix 3 – Baseline table) | ▪ There are numerous, complex inter-relationships between all the aspects of the natural and built environment and all the other social and economic factors that have been considered.<br>■ Comment on the likely future environmental status in the absence of the Minerals Core Strategy & the Waste Core Strategy:<br>In the absence of the Waste Core Strategy and appropriate policies, development may cause unforeseen damage or produce knock-on negative impacts as a result of un-regulated, un-mitigated or poorly planned development. |

## 8. General Waste Data and Indicators

Note: This information is the latest waste data available. It is taken from: *Technical Evidence Paper (WCS-A) Data*. See this paper for more details. Note: as this is updated data it will differ from the figures in the SA Scoping Report (April 2006 Update 2). This Scoping Report, along with the Context Report will be fully updated in mid 2008.

A large percentage of waste produced in Gloucestershire is still disposed of in landfill or landraising sites. The amount of waste managed in Gloucestershire in 2005 was around 1.26 million tonnes. The tonnage split between waste streams is set out below:

| Licensed Waste Management in Gloucestershire ('000 tonnes) | | |
|---|---|---|
| **Waste Stream** | **Base Year** | **Total** |
| MSW | 2006/07* | 324 |
| C&I (including metals) | 2005 | 462 |
| C&D | 2005 | 403 |
| Hazardous | 2004 | 72 |
| **Total** | | **1,261** |

**Environment Agency data combines MSW and C&I biodegradable waste therefore to compare similar years the 2004/05 MSW figure was 309kt.*

**Commercial and Industrial (C&I) Waste**
C&I waste is made up of waste generated by businesses, shops, offices, manufacturers etc. It is predominantly biodegradable material or metal wastes. The data in this section is based on WPA analysis of Environment Agency (EA) license returns for the calendar year 2005.

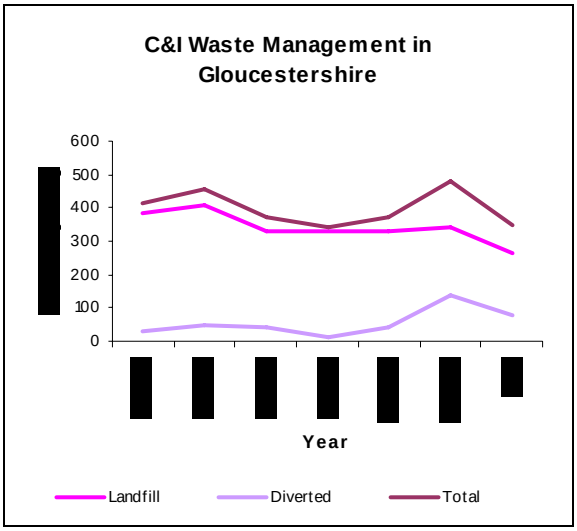
In 2005 there was around 348,000 tonnes of biodegradable non-metal C&I waste managed in Gloucestershire. 267,000 tonnes of this went to landfill, 81,000 tonnes was diverted from landfill and 114,000 tonnes of metal went to metal recycling sites.

It is difficult to distinguish a trend in C&I waste management from the figures and the graph below.

**C&I Waste Management in Gloucestershire**
[not including metals] (000's tonnes)

| | Landfill | Diverted | Total |
|---|---|---|---|
| **1998/99** | 382 | 32 | 414 |
| **1999/00** | 407 | 50 | 457 |
| **2000/01** | 330 | 41 | 371 |
| **2001/02** | 333 | 11 | 344 |
| **2002/03** | 330 | 40 | 370 |
| **2003/04*** | 343 | 136 | 479 |
| **2005** | 267 | 81 | 348 |

**The data for this year has been provided by the EA in a non-aggregated format (from their response to the WCS I&O papers) and the 'diverted' figure has been calculated by combining the treated biodegradable waste + 25% of the transferred figure.*



**Construction and Demolition (C&D) Waste**
Construction and demolition (C&D) waste comprises mainly inert materials (brick, concrete, sub-soils etc.). Whilst biodegradable elements (timber, metal and plastic) will also be present these are in comparatively small quantities. This counter-balances the approach taken with C&I waste, which is largely biodegradable but with small amounts of inert material.

Data on construction & demolition (C&D) waste management has been provided by the Environment Agency (EA). The EA figures split the data into four broad categories: landfill; treated; transferred; and inert material from metal recycling sites.

During 2005 there was around 403,000 tonnes of C&D waste managed by licensed facilities in the County of which 222,000 tonnes was landfilled, 62,000 tonnes was recycled* and 238,000 tonnes went through transfer facilities of which a proportion will have been double counted (i.e. it will have been sent on for further management or disposal).

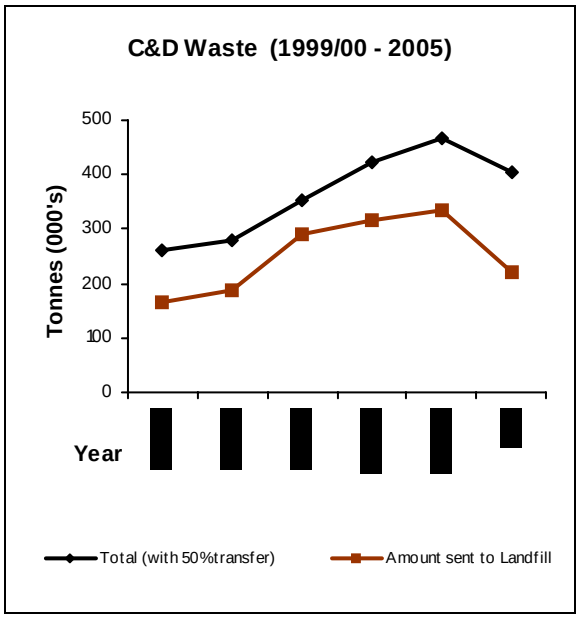
**EA advice on the transferred element is that some will have been sent on to landfill sites (and thus double-counted as part of the 'landfill' returns) and the remainder will have been recycled (and thus not included in other figures as the EA do not have a C&D 'recycled' category).*

In addition to waste that passes through licensed facilities there is also material that is managed on sites that have an EA waste management license exemption. In Gloucestershire there are 2,139 such 'exemptions' of which there are two types: *simple* and *complex.*

A *'simple exemption'* is one that the EA considers is a relatively low risk waste handling activity. Examples include: burning waste oil as a fuel in an engine; treatment of waste at place of production; and deposit of mineral exploration waste.

*'Complex exemptions'*, whilst being exempt from licensing, still need to be checked to ensure that they will not harm the environment. The information required as part of this assessment must demonstrate that the proposals will meet the objectives of the exemption and will not cause pollution. The type and quality of information may well require advice from a technical specialist.

The graph below illustrates a six year period of C&D waste management in Gloucestershire. The amount being managed over the latest three years indicates considerable instability in levels.




Data for the South West indicates that regionally C&D waste arisings have fluctuated. For the purposes of planning, the Regional Waste Management Strategy (RWMS) and the adopted Gloucestershire Waste Local Plan (WLP) both assume future C&D waste growth to be zero. However, the figures in the graph indicate that for Gloucestershire this is not necessarily the case.

**Hazardous Waste**

The hazardous waste managed in Gloucestershire is primarily at one site: Wingmoor Farm East, Bishops Cleeve, Cheltenham. The County's landfill voidspace for disposing of hazardous is contained at this one site, the current planning permission for which expires in 2009.

Hazardous waste data for Gloucestershire, provided by the EA. The latest data is set out in the table below.

**Table 14: Hazardous Waste Managed in Gloucestershire (000's tonnes)**

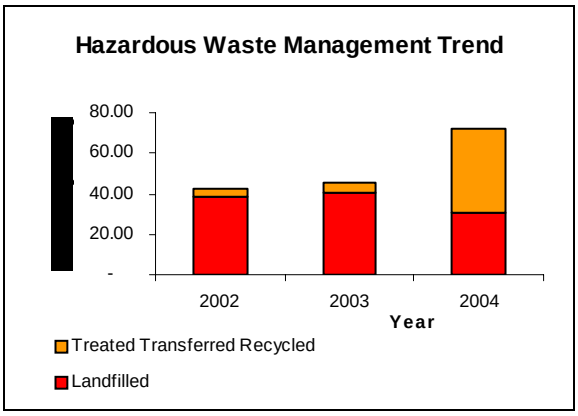
| | 2000 | 2001 | 2002 | 2003 | 2004 |
|---|---|---|---|---|---|
| Arose in Gloucestershire | 53 | 37 | 25 | 28 | 39 |
| Exported from Gloucestershire | 36 | 23 | 22 | 27 | 38 |
| Imported into Gloucestershire | 69 | 49 | 39 | 44 | 71 |
| **Total Managed in Gloucestershire** | **86** | **63** | **42** | **46** | **72** |

* These figures have been rounded, hence 2003 not adding up to 46.

The data for 2004 (the most recent available) indicates that there are variations year to year in the amount being managed. The method of management (indicated in Table 15) similarly varies, with the amount being landfilled decreasing but that the treated figure rising markedly (see below).

**Table 15: Comparative Hazardous Waste Management Methods in Gloucestershire (000's tonnes) – EA figures**

| | 2002 | 2003 | 2004 |
|---|---|---|---|
| Landfilled | 38.94 | 40.44 | 31.09 |
| Treated | 0.02 | 2.58 | 38.18 |
| Transferred | 3.16 | 2.75 | 2.85 |
| Recycled | 0.13 | 0.09 | 0.06 |
| **Total** | **42.25** | **45.86** | **72.18** |



## 9. Municipal Waste Data and Indicators

**Municipal Solid Waste (MSW)**
Municipal solid waste (MSW) comes from households (96%) together with a small amount of 'trade' waste collected by local authorities from shops and businesses. Gloucestershire's Waste Collection Authorities (WCA) (the Districts) are responsible for its collection and the collection of recyclable materials. The WCAs also provide recycling facilities for segregated materials in the form of bring banks. One WCA – Cheltenham Borough Council manages its own Household Recycling Centre (HRC).

There is some commonality in the way that dry recyclables are collected by WCAs in the County. Each WCA provides a kerbside recycling service for paper, glass and cans, which are manually sorted at the kerbside. Some collect additional materials such as plastic bottles, textiles and batteries. Five WCAs have introduced kerbside garden waste collection schemes, although the service varies; three schemes offer a free service and the remaining two charge for the service.

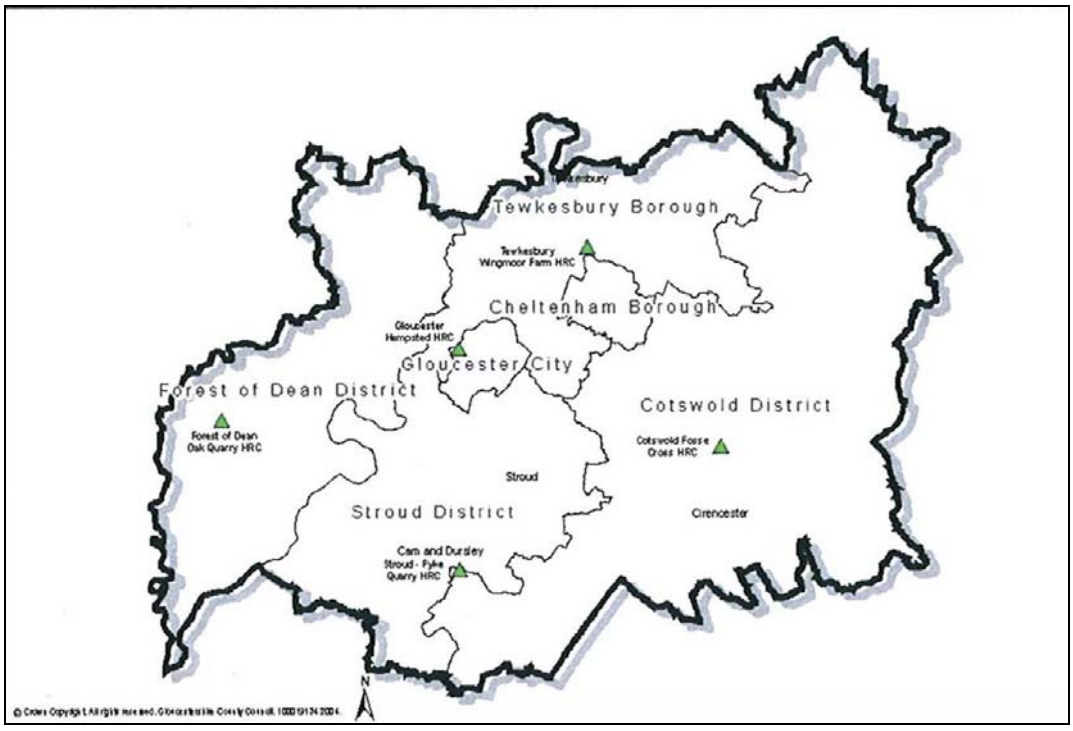
Each WCA provides a weekly collection of residual waste in black bags or in wheeled bins but moves towards a fortnightly collection of residual waste are being considered by some of the WCAs. In parallel, some of the WCAs are introducing kerbside food waste (compostable food) collections in 2008.

To manage the current waste MSW waste arisings within the county, the Council's contractors use a number of existing facilities throughout Gloucestershire. The waste disposal service currently comprises:

- Five Household Recycling Centres

- Oak Quarry HRC, Broadwell, Coleford (Forest of Dean)
- Fosse Cross HRC, Calmsden (Cotswold)
- Hempsted HRC, Gloucester (Gloucester)
- Pyke Quarry HRC, Horsley, Nailsworth (Cotswold)
- Wingmoor Farm HRC, Stoke Orchard (Tewkesbury)

See map below:




Additional to the HRC provision, the County Council also offers a mechanism for the acceptance of asbestos; this is an arrangement through contracts with both Cory Environmental and May Gurney, where members of the public and WCAs can deliver asbestos to Smiths facility at Moreton Valence (Stroud).

- Four windrow composting sites.

- Rosehill Farm, Dymock (Forest of Dean)
- Wingmoor Composting Plant (Tewkesbury)
- Sunhill Composting Plant (Cotswold)
- Hempsted Garden Waste Composting Facility (Gloucester)

▪ Two transfer stations.

- Waste collected by Cotswold District Council is bulked at Cirencester transfer station and taken on to Wingmoor Farm Landfill site.
- Waste collected by the Forest of Dean District Council is bulked at Lydney transfer station and taken to Hempsted landfill site.

▪ Two landfill sites.

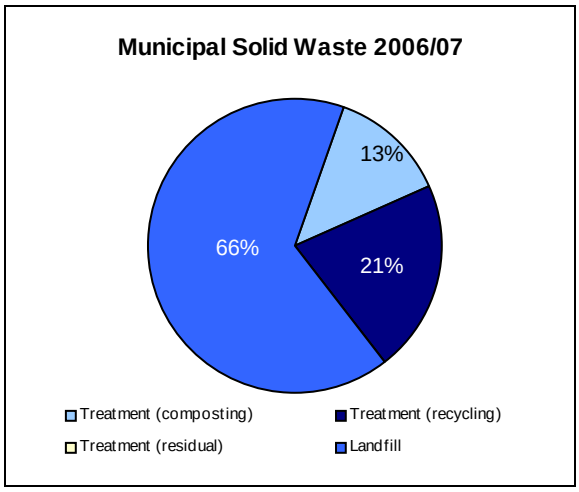
- Hempsted (Gloucester)
- Wingmoor Farm West (Tewkesbury)

▪ Waste Electrical and Electronic Equipment (WEEE) and End of Life Fridges and Freezers (ELFF) storage and recycling.

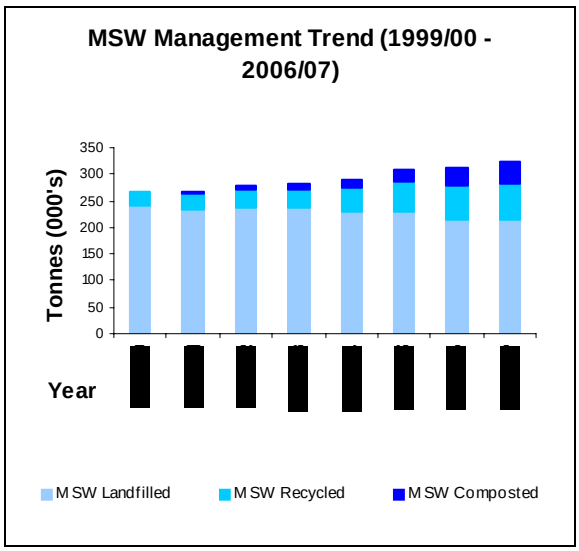
▪ A number of other ancillary facilities.

MSW data is provided by the County Council's Waste Management Team - also referred to as the Waste Disposal Authority (WDA). In the year 2004/05 Gloucestershire's households produced 301kt of waste, and there was around 8kt of trade waste (309kt total MSW). The total rose in 2005/06 to around 312kt and to 324kt in 2006/07.

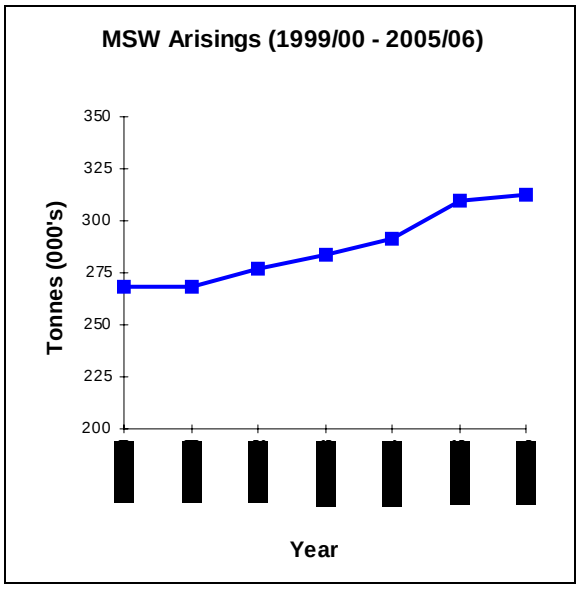
Around 1,220kg of household waste is generated per household each year. The District Councils collected 11kt of commercial waste and the County Council received just over 11kt of DIY waste through its Household Recycling Centres (HRCs).




In 2004/05 the County had a household recycling and composting rate of 26%. This rose to around 30% in 2005/06 and around 32% in 2006/07. The combined composting and recycling rate for 2007/08 is 36%. The graph (below) shows that although the quantity of MSW is increasing, the amount going to landfill is steadily decreasing. In 2006/07, 215kt was landfilled compared with 228kt in 2004/05.




Over the last 5 years, the amount of municipal waste collected has increased on average by over 3% each year. The continued growth in population and number of households will directly impact on the quantity of waste generated year on year. If waste continues to grow at 3% we would double the amount of waste produced in the next 25 years.




Total MSW arisings are predicted to grow from 324,000 tonnes per year in 2006/07 to some 457,000 tonnes by 2030/31. This is equivalent to an annual growth rate of 1.6%. It is based on recent and future waste growth and analysis of whether increases can be attributed to events such as, the recent introduction of kerbside collection of green waste, changes and improvements at HRCs, the possible future introduction of reduced residual waste collection by all authorities by 2010/11, new recycling and composting schemes, household/population growth.

The table below sets out the projected indicative tonnages of MSW that are likely to require managing up to 2026. The bold figures represent the final Landfill Allowance Trading Scheme (LATS) target year 2020. The County Council is aiming to minimise waste arisings, and improve source-segregation of waste at the kerbside to increase recycling and composting to 60% (recently raised to 70%) by 2020. However, modelling has indicated that there will still be a LATS deficit in 2009/10. Waste costs are rising rapidly. The Waste Unit budget is currently about £16m and it has been forecast that if the County Council carries on landfilling on current trends, this will escalate to over £80m by 2020. (This is based on in-house modelling and assumes that recycling and composting rates remain the same, waste growth continues to rise at 3% per annum, and the County Council must pay £150 per tonne of biodegradable waste going to landfill.).

| Yearly MSW Facility Requirements<br><br>(Figures provided by Gloucestershire County Council's Waste Management team) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Year** | **Arising Estimate** | **Average Annual Growth rate** | **Composting** | | **Recycling** | **Residual Treatment** | **Transfer (see Section 8)** | **Landfill** | | |
| | | **%** | **Windrow** | **IVC** | | **Range (000s tonnes)** | | **Residual after treatment** | **LATS targets** | **Possible Capacity needed** |
| 2005/06 | 312,118 | - | 32,276 | - | 66,590 | | 48,154 | 213,252 | | |
| 2006/07 | 324,143 | 3.85 | 41,602 | - | 67,572 | | 47,057 | 214,969 | 158,634 | 262,360 |
| 2007/08 | 332,000 | 2.42 | 42,000 | 50 | 77,142 | | 46,000 | 212,808 | 150,100 | 256,340 |
| 2008/09 | 337,312 | 1.6 | 41,260 | 3,500 | 79,456 | | 49,040 | 213,096 | 138,721 | 246,661 |
| 2009/10 | 342,709 | 1.6 | 13,000 | 51,260 | 107,265 | | 64,418 | 171,184 | 124,497 | 234,164 |
| 2010/11 | 348,192 | 1.6 | 13,390 | 52,798 | 110,483 | | 64,879 | 171,521 | 107,428 | 218,849 |
| 2011/12 | 353,763 | 1.6 | 13,792 | 54,382 | 113,798 | | 65,355 | 171,792 | 95,471 | 208,675 |
| 2012/13 | 359,424 | 1.6 | 14,205 | 56,013 | 117,212 | | 65,844 | 171,993 | 83,513 | 198,529 |
| 2013/14 | 365,174 | 1.6 | 14,632 | 57,694 | 120,728 | | 66,348 | 172,121 | 71,555 | 188,411 |
| 2014/15 | 371,017 | 1.6 | 15,071 | 59,424 | 124,350 | 150-270 | 66,867 | 12,172 | 68,486 | 187,211 |
| 2015/16 | 376,953 | 1.6 | 15,523 | 61,207 | 128,080 | 150-270 | 67,402 | 12,143 | 65,416 | 186,041 |
| 2016/17 | 382,985 | 1.6 | 15,988 | 63,043 | 131,923 | 150-270 | 67,953 | 12,030 | 62,347 | 184,902 |
| 2017/18 | 389,112 | 1.6 | 16,468 | 64,935 | 135,881 | 150-270 | 68,520 | 11,829 | 59,277 | 183,793 |
| 2018/19 | 395,338 | 1.6 | 16,962 | 66,883 | 139,957 | 150-270 | 69,105 | 11,537 | 56,208 | 182,716 |
| 2019/20 | 401,664 | 1.6 | 17,471 | 68,889 | 144,156 | 150-270 | 69,707 | 11,148 | 53,139 | 181,671 |
| **2020/21** | **408,090** | **1.6** | **17,995** | **70,956** | **148,480** | **150-270** | **70,327** | **10,659** | **50,069** | **180,658** |
| 2021/22 | 414,620 | 1.6 | 18,535 | 73,085 | 152,935 | 150-270 | 70,965 | 10,066 | | 132,678 |
| 2022/23 | 421,254 | 1.6 | 19,091 | 75,277 | 157,523 | 150-270 | 71,623 | 9,363 | | 134,801 |
| 2023/24 | 427,994 | 1.6 | 19,664 | 77,535 | 162,248 | 150-270 | 72,301 | 8,546 | | 136,958 |
| 2024/25 | 434,842 | 1.6 | 20,254 | 79,861 | 167,116 | 150-270 | 72,998 | 7,611 | | 139,149 |
| 2025/26 | 441,799 | 1.6 | 20,861 | 82,257 | 172,129 | 150-270 | 73,717 | 6,551 | | 141,376 |
| 2026/27 | 448,868 | 1.6 | 21,487 | 84,725 | 177,293 | 150-270 | 74,457 | 5,363 | | 143,638 |
| 2027/28 | 456,050 | 1.6 | 22,132 | 87,267 | 182,612 | 150-270 | 75,220 | 4,039 | | 145,936 |

The WDA figures presented in the above table indicate that by 2020/21 Gloucestershire will require, as a minimum, the following capacity to manage its MSW arisings:

- 18kt windrow composting capacity
- 71kt in-vessel composting capacity
- 149kt recycling capacity
- 150kt – 270kt residual treatment capacity
- 71kt transfer capacity
- 3.1 million m³ landfill capacity (over the period 2006/07-2020/21)

In terms of the sites needed to manage this waste and to provide the necessary capacity, the SEA Directive states in Annex 1 (c) that for such development there should be a description *of "the environmental characteristics of areas likely to be significantly affected."* This is provided in broad terms in Sections 5 and 6 and Appendix 3 of Scoping Report Update 2 and Sections 5 to 10 of this Report. But in specific terms, looking at individual sites, this information will be provided in detail in the SA Reports that will be issued for consultation alongside the Waste Core Strategy Strategic Sites document at Issues & Options, Preferred Options and Submission stages. However for the purposes of this SA Framework document the following broad information is available on the environmental characteristics of the sort of areas likely to be significantly affected. An initial 'long list' of potential waste sites will be sourced from:

Land within 16km of the key urban areas of Gloucestershire which:
- has been permitted for industrial use or has been allocated as employment land in District Local Plans under the Use Classes B1 (Business), B2 (General Industrial), B8 (Storage or Distribution);
- is derelict, redundant or has previously been developed, including former farm buildings;

- has previously be allocated for waste use in the Gloucestershire Waste Local Plan;
- is an extension to an existing waste site or an intensification of existing waste operations;
- is land that will support sustainable transport options other than road haulage.

## 10. Limitations of the Data and Assumptions Made etc

The availability and quality of baseline data for Gloucestershire is generally good and this has been comprehensively detailed in the SA Scoping Report, in particular in Section 6 and Appendix 3. As has already been mentioned in this report, this data is due to be fully updated in 2008. In terms of waste data, the County Council's Minerals & Waste Planning Policy team works closely with the Municipal Waste Management Unit and consequently data on the municipal waste stream is current and generally very robust. Complete data sets for Municipal Solid Waste are available for 2006/07. The data on other (non-municipal) waste streams, provided by the Environment Agency, is less comprehensive and less up to date. Data is compiled from waste management licensing returns sent by operators of waste management facilities. Information provided includes waste category types, input/output details and details on process mode and location. Returns allow an 'unknown' option to be entered for these latter categories. As a result, Environment Agency advice is that where 'unknown' is given in the return as a final destination this should be assumed to be Gloucestershire, and where the mode is 'unknown' this should be taken as being disposed of to landfill. The Environment Agency also have to trust that the returns are accurate.

Information on facility capacity is derived from a Waste Planning Authority assessment of planning permissions and waste management license data. Where the planning permission has not placed a limit on the tonnages of material that can be handled (usually those sites with older planning permissions), Environment Agency license returns were used to give an indicative capacity. In addition a survey of waste operators was undertaken to provide an industry perspective on the current situation.

Data has been prepared by the Waste Planning Authority following liaison with both Waste Disposal Authority and Environment Agency officers. It is considered by these three parties to represent the most up to date and accurate picture of waste management in Gloucestershire that is currently available and is consequently a robust basis for land-use planning purposes in the County.

## 11. SA Framework: Additional SA Objectives Appropriate to the Assessment of Waste Sites

As stated in Section 1 of this report, following the recent consultation on Gloucestershire's WCS Preferred Options, GOSW recommended that strategic sites for the management of MSW should be included in the WCS. Thus, given the need to include waste sites in the WCS, there is a need to 'scope in' SA Objectives that are site focused and there is a need to scope out the Objectives that are higher level and not appropriate for site assessment work. It is proposed to 'scope in' and 'scope out' Objectives using the 15 existing SA Objectives as the base. The reasoning being that these objectives have all been through the correct processes as per ODPM Guidance and they have been scoped and refined reflecting Gloucestershire issues. These new waste site focused Objectives will be tested against **A** to **G** below.

**An easy to read basic list of these new SA Objectives and Sub-questions (without the tests and justification text) can be found in Appendix 3.**

| | |
|---|---|
| **A.** Securing the Future – UK Government Sustainable Development Strategy – Key Objectives<br><br>Living Within Environmental Limits<br><br>Ensuring a Strong, Healthy and Just Society<br><br>Achieving a Sustainable Economy<br><br>Promoting Good Governance<br><br>Using Sound Science Responsibly | **Reasoning:** This is the Government's overarching strategy for delivering Sustainable Development. |
| **B.** PPS10 – Appendix E (and the Objectives should also be in accordance with the Key Planning Objectives of PPS10 (quote companion guide and cite Appendix 2.) | **Reasoning:** This is key Government guidance on testing the suitability of sites and areas for waste management facilities. |
| **C.** SEA Directive Article 5 (1) Annex 1 (f) | **Reasoning:** Conformity with the SEA Directive is a key requirement to meet. |
| **D.** Key Messages / Sustainability Issues in Gloucestershire / Baseline. | **Reasoning:** According to Government guidance on SA, key messages, sustainability issues & problems and baseline evidence should be reflected in deciding what SA Objectives are appropriate. |
| **E.** The recent SEA of Gloucestershire's JMWMS. | **Reasoning:** This is recent and up to date. It has been through a process with Gloucestershire stakeholders. Directly relevant as the WPA's sites work is focused on strategic sites for MSW. The PPS10 Companion Guide, SA Guidance and Defra Guidance on producing JMWMSs all point to the desirability of some level of integration on SA / SEA work. |
| **F.** Strategic Flood Risk Assessment for the Minerals & Waste Development Framework Level 1. | **Reasoning:** PPS25 states that SFRAs should be freestanding assessments that contribute to the Sustainability Appraisal of plans. |
| **G.** The views of the statutory environmental consultation bodies designated in the SEA Regulations and other stakeholders who have the opportunity to comment on this Scoping report. | **Reasoning:** Incorporating the views of statutory consultees and other stakeholders is clearly important and required in guidance. |

| **Table 4. Existing SA Objectives and the Scoping In / Out Process to Produce Waste Site Focused Objectives.** | |
|---|---|
| **Existing SA Objectives** | **Scoping In / Out Commentary** |
| **1.** To promote sustainable development and sustainable communities in Gloucestershire in particular giving people the opportunity to live in an affordable and sustainably designed and constructed home. ➔ | This Objective should be 'scoped out' for the purposes of assessing waste sites, as this is too broad and relates more to minerals development (i.e. the materials that buildings and infrastructure are constructed from) and waste minimization in development. |
| **2.** To safeguard sites suitable for the location of waste management facilities, or future mineral development from other proposed development. ➔ | This Objective should be 'scoped out' for the purposes of assessing waste sites as this is really a matter of deliverability. If a site is deliverable then it is capable of being successfully safeguarded. |
| **3.** To protect and improve the health and well-being of people living and working in Gloucestershire as well as visitors to the County. ➔ | Keep this Objective but add a number of Sub-questions that will sharpen the focus of any assessment of site options:<br><br>**1. To protect and improve the health and well-being of people living and working in Gloucestershire as well as visitors to the County.**<br><br><u>Sub-questions:</u><br><br>▪ Will hazardous waste be reduced?<br><br>▪ What are the potential health impacts on communities?<br><br>▪ What are the potential health impacts on the employees at the site or facility? |
| **4.** To promote education and economic development in Gloucestershire giving opportunities to people from all social and ethnic backgrounds. ➔ | Add three related Objectives and add Sub-questions for each:<br><br>**2. To educate the public about waste issues and to maximise community participation and access to waste services and facilities in Gloucestershire.**<br><br><u>Sub-questions:</u><br><br>▪ Are there any groups who are particularly disadvantaged in terms of participation and access to waste services?<br><br>▪ Does the site option cater for future demographic changes and waste growth? |

| | |
|---|---|
| | **3. To promote sustainable economic development in Gloucestershire giving opportunities to people from all social and ethnic backgrounds.**<br><br>Sub-questions:<br><br>▪ Does the site present opportunities for spin off employment or other opportunities?<br><br>▪ Will the number of waste based Community or Social enterprises change as a result of the site option?<br><br>**4. To manage waste in an economically sustainable way through means that represent good value for tax payers in Gloucestershire.**<br><br>Sub-questions:<br><br>▪ What are the costs?<br><br>▪ Are there costs in the longer term that may not be obvious at the present time? |
| **5.** To safeguard the amenity of local communities from the potential adverse impacts of minerals and waste development. ➔ | Keep this Objective but add Sub-questions:<br><br>**5. To safeguard the amenity of local communities from the adverse impacts of waste development.**<br><br>Sub-questions:<br><br>▪ What are the impacts in terms of noise and vibration? (From PPS10 Annex E).<br><br>▪ What is the potential for significant problems with litter? (From PPS10 Annex E).<br><br>▪ To what extent are there potential landuse conflict issues? (From PPS10 Annex E).<br><br>▪ What is the potential for significant problems with vermin and birds? (From PPS10 Annex E).<br><br>▪ Are there any cumulative effects in terms of adverse impacts on environmental quality, social cohesion and inclusion or economic potential? (from PPS10 Para |

| | |
|---|---|
| | 21).<br><br>▪ Does the site provide opportunities for the co-location of complementary activities?<br><br>▪ Will fly tipping in the County increase. |
| **6.** To conserve minerals resources from inappropriate development whilst providing for the supply of aggregates and other minerals sufficient for the needs of society. ➔ | This Objective should be 'scoped out' for the purposes of assessing waste sites, as it is primarily minerals related, provided any sites don't sterilize viable mineral resource – which could be looked at in the site selection process. |
| **7.** To provide employment opportunities in both rural and urban areas of the County, promoting diversification in the economy. ➔ | Retain this Objective and add Sub-questions:<br><br>**6. To provide employment opportunities in both rural and urban areas of the County, promoting diversification in the economy.**<br><br><u>Sub-questions:</u><br><br>▪ How many new jobs are likely to be created?<br><br>▪ How far will employees have to travel to work?<br><br>▪ Are there opportunities for employees to use sustainable transport? |
| **8.** To protect, conserve and enhance Gloucestershire's wildlife and natural environment – its landscape and biodiversity. ➔ | For the sake of clarity, split this Objective in to two and add Sub-questions:<br><br>**7. To protect, conserve and enhance biodiversity in Gloucestershire.**<br><br><u>Sub-questions:</u><br><br>▪ What are the potential impacts on sites which are Internationally and Nationally designated? (From PPS10 Annex E).<br><br>▪ Are there any other potential significant impacts over and above the effects on designated sites - including on local sites, protected species and habitats and species of principle importance for biodiversity?<br><br>▪ What potential is there for achieving biodiversity targets?<br><br>**8. To protect, conserve and enhance the landscape in Gloucestershire.** |

| | |
|---|---|
| | Sub-questions:<br><br>▪ What are the impacts on AONB?<br><br>▪ What is the likely impact on specific landscape character as detailed in Gloucestershire's Landscape Character Assessment?<br><br>▪ What is the scope for landscape improvement / enhancement?<br><br>**9. To ensure that waste sites have the potential for adequate screening and/or innovative design to be incorporated.**<br><br>Sub-questions:<br><br>▪ Does the topography and setting naturally screen the site? (From PPS10 Annex E).<br><br>▪ What is the potential for design-led solutions? (From PPS10 Annex E). |
| **9.** To protect conserve and enhance Gloucestershire's material, cultural and recreational assets including its architectural and archaeological heritage. ➔ | For the sake of clarity, split this Objective in to four and add Sub-questions:<br><br>**10. To protect conserve and enhance Gloucestershire's material, cultural and recreational assets.**<br><br>Sub-questions:<br><br>▪ What are the likely impacts on material, cultural and recreational assets?<br><br>▪ Have any material assets been overlooked?<br><br>**11. To protect conserve and enhance geodiversity in Gloucestershire.**<br><br>Sub-questions:<br><br>▪ What if any are the likely impacts on geodiversity?<br><br>**12. To protect conserve and enhance townscapes and Gloucestershire's architectural and archaeological heritage.** |

| | |
|---|---|
| | Sub-questions:<br><br>▪ What are the potential adverse effects on heritage sites of International importance and / or sites or buildings with a nationally recognised designation. (From PPS10 Annex E).<br><br>**13. To ensure that waste sites do not compromise the safety of commercial or military aerodromes.**<br><br>Sub-questions:<br><br>▪ Is the site close to an aerodrome or low flying area?<br><br>▪ Will the site attract large numbers of scavenging birds / gulls etc? |
| **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. ➔ | Retain this Objective and add Sub-questions related directly to the Flood Risk Objectives in the SFRA.<br><br>**14. 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.**<br><br>Sub-questions:<br><br>▪ Can the risk of flooding be minimised through site design? (From SFRA: Flood Risk Objective 1: To Seek Flood Risk Reduction through Spatial Planning and Site Design).<br><br>▪ Will surface water runoff be reduced? (From SFRA: Flood Risk Objective 2: To Reduce Surface Water Runoff from New Developments and Agricultural Land).<br><br>▪ Is there the potential to enhance and restore the river corridor? (From SFRA Flood Risk Objective 3: To enhance and Restore the River Corridor).<br><br>▪ Is there the potential to protect and promote areas for future flood alleviation schemes? (From SFRA: Flood Risk Objective 4: To Protect and Promote Areas for Future Flood Alleviation Schemes).<br><br>▪ Do proposals improve flood awareness and emergency planning? (From SFRA: |

| | |
|---|---|
| | Flood Risk Objective 5: To Improve Flood Awareness and Emergency Planning.<br><br>*(SFRA References: Para 8.1)* |
| **11.** To prevent the pollution of land, air and water in Gloucestershire and to apply the precautionary principle. ➔ | For the sake of clarity, split this Objective in to four and add Sub-questions:<br><br>**15. To prevent pollution and to apply the precautionary principle in consultation with waste regulation authorities.**<br><br><u>Sub-Questions:</u><br><br>▪ Is there a level of scientific uncertainty about risk such that the best available scientific advice cannot assess the risk with sufficient confidence to inform decision-making. (From PPS23, Planning and Pollution Control, Para 6).<br><br>**16. To protect and enhance soil / land quality in Gloucestershire.**<br><br><u>Sub-Questions:</u><br><br>▪ What is the landtake?<br><br>▪ Does the site suffer from potential land instability (From PPS10 Annex E).<br><br>▪ Is the site previously developed?<br><br>▪ If the site is or was previously contaminated – is there the potential for effective remedial clean up?<br><br>**17. To protect and enhance air quality in Gloucestershire.**<br><br><u>Sub-Questions:</u><br><br>▪ What is the proximity of sensitive receptors and to what extent can air emissions, including dust be controlled? (From PPS10 Annex E).<br><br>▪ What is the proximity of receptors sensitive to odours, and to what extent can odours be controlled. (From PPS10 Annex E).<br><br>**18. To protect and enhance water quality in Gloucestershire.** |

| | |
|---|---|
| | Sub-Questions:<br><br>▪ What is the proximity of vulnerable surface or groundwater? (From PPS10 Annex E).<br><br>▪ What are the impacts on water consumption? |
| **12.** To reduce the adverse impacts of lorry traffic on communities through means such as:<br><br>a) reducing the need to travel<br>b) promoting more sustainable means of transport<br>c) sensitive lorry routing<br>d) the use of sustainable alternative fuels<br>e) promoting the management of waste in one of the nearest appropriate installations. ➔ | Keep this Objective but add a number of Sub-questions that will sharpen the focus of any assessment of site options:<br><br>**19. To reduce the adverse impacts of lorry traffic on the environment and communities through means such as:**<br><br>**a) reducing the need to travel**<br>**b) promoting more sustainable means of transport**<br>**c) sensitive lorry routing**<br>**d) the use of sustainable alternative fuels**<br>**e) promoting the management of waste in one of the nearest appropriate installations.**<br><br>Sub-Questions:<br><br>▪ What is the capacity of the site and transport infrastructure to support the sustainable movement of waste and products arising from resource recovery?. (From PPS10, Para 21).<br><br>▪ Will access be reliant on local roads? (From PPS10 Annex E). |
| **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. ➔ | This Objective should be 'scoped out' for the purposes of assessing waste sites, as it is primarily minerals related. |
| **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. ➔ | Retain this Objective and add Sub-questions.<br><br>**20. 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.**<br><br>Sub-Questions: |

| | |
|---|---|
| | ▪ What is the impact of any waste prevention and waste reduction activities?<br><br>▪ What are the levels of reuse, recycling (including composting) and recovery achieved by each site option? |
| **15.** To reduce contributions to and to adapt to Climate Change. ➔ | Add a new Objective drawn from the JMWMS Objectives ENV1 & ENV7and retain the original Climate Change Objective:<br><br>**21. To reduce the global use of primary materials and minimise net energy balance requirements.**<br><br><u>Sub-Questions:</u><br><br>▪ What is the impact on total material requirement?<br><br>▪ What are the energy balance impacts?<br><br>**22. To reduce contributions to and to adapt to Climate Change.**<br><br><u>Sub-Questions:</u><br><br>▪ To what extent does the site or facility offer the capacity for net electricity generation, community heating / combined heat and power or the production of waste derived biofuels / biogas.<br><br>▪ How flexible or adaptable is the site or facility in terms of a) adapting to Climate Change and b) using new technology as it develops. |

**Table 5. New site focused SA Objectives and a test of their appropriateness against a number of factors.**

| New Site Focused SA Objectives (Ordered under broad Social / Economic / Environmental categories) | UK Government Sustainable Development Strategy – Key Objectives | PPS10 Annex E | SEA Directive Article 5 (1) Annex 1 (f) | Reflects Key Messages / Sustainability Issues in Gloucestershire / Baseline | The SEA / Environmental Report of the JMWMS | Reflects SFRA | The Views of Stakeholders through Consultation |
|---|---|---|---|---|---|---|---|
| **Social** | | | | | | | |
| 1. To protect and improve the health and well-being of people living and working in Gloucestershire as well as visitors to the County. | Yes, accords with 2. Ensuring a Strong, Healthy and Just Society. | Health is not listed in PPS10 Annex E. | Human health, population. | Yes, as this is an unchanged objective – as detailed in Appendix 5 of SA Scoping Report Update 2. | Identical to Objective SOC1. | Na. | To add for all Objectives following the 5 week consultation. |
| 2. To educate the public about waste issues and to maximise community participation and access to waste services and facilities in Gloucestershire. | Yes, accords with 2. Ensuring a Strong, Healthy and Just Society. | Na. | Population. | Seen as an important issue in the County through evidence gathering and consultation on the JMWMS. | Similar to Objective SOC4. | Na. | |
| 3. To safeguard the amenity of local communities from the adverse impacts of waste development. | Yes, accords with 2. Ensuring a Strong, Healthy and Just Society. | Yes, in terms of air emissions including dust, odours, vermin and birds, noise and vibration, litter & land use conflict. | Human health, population. | Yes, as this is an unchanged objective (apart from the deletion of 'minerals' – as detailed in Appendix 5 of SA Scoping Report Update 2. | Linked to ENV10. | Na. | |
| **Economic** | | | | | | | |
| 4. To promote sustainable economic development in Gloucestershire giving opportunities to people from all social and ethnic backgrounds. | Yes, accords with 3. Achieving a Sustainable Economy. | Na. | Population and inter-relationships. | Yes, as this is a very similar objective to original SA Objective 4. – as detailed in Appendix 5 of SA Scoping Report Update 2. | Closely linked to ECON1. | Na. | |
| 5. To manage waste in an economically sustainable way through means that represent good value for tax payers in | Yes, accords with 3. Achieving a Sustainable Economy. | Na. | Population, material assets and inter-relationships. | This objective reflects priorities in the JMWMS. Addresses the LATS issue. | Closely linked to ECON2. | Na. | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gloucestershire. | | | | | | | |
| 6. To provide employment opportunities in both rural and urban areas of the County, promoting diversification in the economy. | Yes, accords with 3. Achieving a Sustainable Economy. | Na. | Population, material assets and inter-relationships. | Yes, as this is an unchanged objective – as detailed in Appendix 5 of SA Scoping Report Update 2. | Linked to ECON1. | Na. | |
| 7. To ensure that waste sites do not compromise the safety of commercial or military aerodromes. | Yes, accords with 3. Achieving a Sustainable Economy. | Yes, covers vermin and birds. | Population, material assets. | This new objective reflects baseline in Gloucestershire and representations from the MoD on the WCS Preferred Options. | Tentative link to ENV10. | Na. | |
| **Environmental** | | | | | | | |
| 8. To protect, conserve and enhance biodiversity in Gloucestershire. | Yes, accords with 3. Achieving a Sustainable Economy. | Yes, covers nature conservation. | Biodiversity. | Yes, reflects key issues and baseline in the County. | Link to ENV2. | Na. | |
| 9. To protect, conserve and enhance the landscape in Gloucestershire. | Yes, accords with 1. Living Within Environmental Limits. | Yes, covers nature conservation. | Landscape. | Yes, reflects key issues and baseline in the County. | Link to ENV9. | Na. | |
| 10. To ensure that waste sites have the potential for adequate screening and / or innovative design to be incorporated. | Yes, accords with 1. Living Within Environmental Limits. | Yes, covers visual intrusion. | Population, landscape. | Yes, reflects key issues and baseline in the County related to landscape and also PPS10 requirements for good design. | Link to ENV9. | Na. | |
| 11. To protect conserve and enhance Gloucestershire's material, cultural and recreational assets. | Yes, accords with 1. Living Within Environmental Limits & 4. Promoting Good Governance. | Yes, covers historic environment and built heritage. | Material assets. | Yes, as this is a similar objective to original SA Objective 9. – as detailed in Appendix 5 of SA Scoping Report Update 2. | Link to ENV9. | Na. | |
| 12. To protect conserve and enhance geodiversity in Gloucestershire. | Yes, accords with 1. Living Within Environmental Limits. | Yes, covers historic environment and built heritage. | Cultural heritage, including architectural and archaeological heritage, landscape. | Gloucestershire has significant geodiversity that need protecting. A separate objective is added for completeness sake. | Link to ENV9. | Na. | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | Stakeholders may be able to advise further through the consultation process. | | | |
| 13. To protect conserve and enhance townscapes and Gloucestershire's architectural and archaeological heritage. | Yes, accords with 1. Living Within Environmental Limits. | Yes, covers historic environment and built heritage. | Cultural heritage, including architectural and archaeological heritage, landscape. | Reflects baseline and is a similar objective to original SA Objective 9. – as detailed in Appendix 5 of SA Scoping Report Update 2. | Link to ENV9. | Na. | |
| 14. 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. | Yes, accords with 1. Living Within Environmental Limits & 4. Promoting Good Governance. | Yes, covers protection of water resources. | Population, water, material assets, inter-relationships. | Yes, as this is an unchanged objective – as detailed in Appendix 5 of SA Scoping Report Update 2. | Tentative link to ENV8. | Yes – directly related to the SFRA. | |
| 15. To prevent pollution and to apply the precautionary principle in consultation with waste regulation authorities. | Yes, accords with 1. Living Within Environmental Limits, 2. Ensuring a Strong. Healthy and Just Society & 4. Promoting Good Governance. | Yes, covers protection of water resources, nature conservation, air emissions, odours, noise and vibration, litter. | Population, human health, fauna, flora, soil, water, air, climatic factors, inter-relationships. | Reflects baseline and is a similar objective to original SA Objective 11. – as detailed in Appendix 5 of SA Scoping Report Update 2. | Relates to a number of objectives e.g. ENV4, 5, 6, 8. | Na. | |
| 16. To protect and enhance soil / land quality in Gloucestershire. | Yes, accords with 1. Living Within Environmental Limits. | Soils are not listed in PPS10 Annex E. | Soil. | Reflects baseline and is a similar objective to original SA Objective 11. – as detailed in Appendix 5 of SA Scoping Report Update 2. | Relates to ENV4. | Na. | |
| 17. To protect and enhance air quality in Gloucestershire. | Yes, accords with 1. Living Within Environmental Limits. | Yes, covers air emissions, including dust. | Air, climatic factors. | Reflects baseline and is a similar objective to original SA Objective 11. – as detailed in Appendix 5 of SA Scoping Report Update 2. | Identical to ENV6. | Na. | |
| 18. To protect and enhance water | Yes, accords with 1. Living Within | Yes, covers protection of | Water. | Reflects baseline and is a similar | Relates to ENV8. | Yes. | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| quality in Gloucestershire. | Environmental Limits. | water resources. | | objective to original SA Objective 11. – as detailed in Appendix 5 of SA Scoping Report Update 2. | | | |
| 19. To reduce the adverse impacts of lorry traffic on the environment and communities through means such as:<br><br>a) reducing the need to travel<br>b) promoting more sustainable means of transport<br>c) sensitive lorry routing<br>d) the use of sustainable alternative fuels<br>e) promoting the management of waste in one of the nearest appropriate installations. | Yes, accords with 1. Living Within Environmental Limits, 2. Ensuring a Strong, Healthy and Just Society & 5. Using Sound Science Responsibly. | Yes, covers traffic and access. | Population, human health, | Yes, as this is an unchanged objective. | Relates to SOC5. | Na. | |
| 20. 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. | Yes, accords with 1. Living Within Environmental Limits, 2. Ensuring a Strong, Healthy and Just Society & 5. Using Sound Science Responsibly. | Na. | Population, human health, fauna, flora, soil, water, air, climatic factors, inter-relationships. | Yes, as this is an unchanged objective – as detailed in Appendix 5 of SA Scoping Report Update 2. | Relates to Objective ENV3. | Na. | |
| 21. To reduce the global use of primary materials and minimise net energy balance requirements. | Yes, accords with 1. Living Within Environmental Limits & Using Sound Science Responsibly. | Na. | Climatic factors, material assets. | Added, reflecting JMWMS and PPS1 Supplement on Climate Change & GCC's Climate Change Strategy. | Combines ENV1 and ENV7. | Na. | |
| 22. To reduce contributions to and to adapt to Climate Change. | Yes, potentially accords with all Objectives: 1. Living Within Environmental Limits, 2. Ensuring a Strong, Healthy and Just Society, | Na. | Climatic factors, inter-relationships. | Yes, as this is an unchanged objective – as detailed in Appendix 5 of SA Scoping Report Update 2. | Relates to Objective ENV5. | Na. | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | 3. Achieving a sustainable Economy, 4. Promoting Good Governance & 5. Using Sound Science Responsibly. | | | | | | |

*Note: See Appendix 3. for an easy uncluttered view of these Objectives and Sub-Questions.

## 12. Proposed Assessment Methodology

The proposed assessment methodology is likely to be the same as in previous SA Reports but if work is undertaken by consultants on behalf of Gloucestershire County Council, they may consider it appropriate to use a different or modified system of scoring. The SA is an important part of the assessment of site options but it is clearly not the only form of assessment that will take place. It will be supported by other detailed technical work, and conversely the SA will provide a broader evidence based view of sustainability that other technical work may not necessarily address.

1, 2 and 3 below show the system for scoring site options against the SA Objectives, definitions of "short", "medium" and "long term" effects and definitions of "significant" and "cumulative" effects, "secondary" or "indirect" effects and "indirect" effects.

# 1.

| Key | |
|---|---|
| ++ | Major positive effect |
| + | Positive effect |
| 0 | Neutral effect |
| - | Negative effect |
| -- | Major negative effect |
| ? | Uncertain |

# 2.

| | | |
|---|---|---|
| **S = Short term effects**<br>Broadly up to 5 years | **M = Medium term effects**<br>Broadly 5 to 10 years | **L = Long term effects**<br>Broadly 10 years or more |

# 3.

- **Significant** - "extensive or important enough to merit attention."

Reference: http://www.askoxford.com/concise_oed/significant?view=uk
Guidance given in Government Guidance on EIA, a significant effect may be broadly defined as one that should be brought to the attention of those affected and those in the decision making process.

- **Cumulative effects** arise, for instance, where several developments each have insignificant effects but together have a significant effect; or where several individual effects (e.g. noise, dust and visual) have a combined effect.

- **Secondary or indirect effects** are effects that are not a direct result, but occur away from the original effect or as a result of a complex pathway. Examples of secondary effects are a development that changes a water table and thus affects the ecology of a nearby wetland; and construction of one project that facilitates or attracts other developments.

- **Synergistic effects** interact to produce a total effect greater than the sum of the individual effects. Significant synergistic effects often occur as habitats, resources or human communities get close to capacity. For example, a wildlife habitat can become progressively fragmented with limited effects on a particular species until the last fragmentation makes the areas too small to support the species at all. On the other hand, beneficial synergistic effects may occur when a series of major transport, housing and employment developments in a sub-region, each with their own effects, collectively reach a critical threshold so that both the developments as a whole and the community benefiting from them become more sustainable.

Reference: (Office of the Deputy Prime Minister 2005) Sustainability Appraisal of Regional Spatial Strategies and Local Development Documents.

## 13. Next Steps

This report is the Sustainability Appraisal combined Context and Scoping Report for Strategic Waste Sites. It is an integral part of Gloucestershire's existing Minerals and Waste Development Framework Sustainability Appraisal Framework.

The comments on this report received during the 5 week consultation will be duly considered and will be reflected in a combined SA Framework Context and Scoping Report (Update 3). The appropriate SA Objectives will then be used to assess strategic options and site focused options within the Waste Core Strategy in each SA Report at Issues & Options, Preferred Options & Submission.

## Appendix 1. Internal Consistency of the SA Objectives

| | 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. | 9. | 10. | 11. | 12. | 13. | 14. | 15. | 16. | 17. | 18. | 19. | 20. | 21. | 22. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | | B | A | B | B | A | B | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A |
| 2. | | | B | B | B | A | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C | C |
| 3. | | | | B | B | B | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A | A |
| 4. | | | | | B | A | C | B | B | B | B | B | B | B | B | B | B | B | B | B | B | B |
| 5. | | | | | | B | C | B | B | B | B | B | B | B | B | B | B | B | B | B | B | B |
| 6. | | | | | | | B | B | B | B | B | B | B | B | B | B | B | B | B | B | B | B |
| 7. | | | | | | | | C | C | C | C | C | C | C | C | C | C | C | C | A | C | C |
| 8. | | | | | | | | | A | C | A | B | C | A | A | A | A | A | A | A | A | A |
| 9. | | | | | | | | | | A | A | A | A | A | A | | C | A | A | A | A | A |
| 10. | | | | | | | | | | | A | A | A | C | C | C | C | C | C | C | C | C |
| 11. | | | | | | | | | | | | A | A | A | A | A | A | A | A | A | A | A |
| 12. | | | | | | | | | | | | | C | C | C | C | C | C | C | C | C | C |
| 13. | | | | | | | | | | | | | | A | C | C | C | C | A | C | C | C |
| 14. | | | | | | | | | | | | | | | A | A | C | A | B | B | C | A |
| 15. | | | | | | | | | | | | | | | | A | A | A | A | A | A | A |
| 16. | | | | | | | | | | | | | | | | | A | A | A | A | A | A |
| 17. | | | | | | | | | | | | | | | | | | A | A | A | A | A |
| 18. | | | | | | | | | | | | | | | | | | | A | A | A | A |
| 19. | | | | | | | | | | | | | | | | | | | | B | A | A |
| 20. | | | | | | | | | | | | | | | | | | | | | A | A |
| 21. | | | | | | | | | | | | | | | | | | | | | | A |
| 22. | | | | | | | | | | | | | | | | | | | | | | |

| | |
|---|---|
| A | Consistent |
| B | Consistent but with areas of potential conflict |
| C | No direct link |
| D | Inconsistent or potentially inconsistent |

Comments and Recommendations: There are no clear inconsistencies identified although it should be recognised that there will always be some conflicts of interest particularly in terms of economic drivers and environmental concerns.

## Appendix 2. Minerals & Waste Development Framework – Waste Core Strategy Proposed Timeframe

*Note: This proposed timeframe has yet to be agreed with GOSW and formalised as part of Gloucestershire's MWDF Development Scheme.

| Jan **2008** | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | Start Issues & Options – Sites Consultation | |

| Jan **2009** | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Start consideration of Responses --- Start work on Preferred Options [combining Strategy and Sites] | | | | Finish Consideration of Responses | Cabinet / County Council Approval of WCS Preferred Options | | Consultation on WCS Preferred Options | | Start to prepare WCS Submission papers | | |

| Jan **2010** | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Finish WCS Submission papers | | Cabinet / County Council Approval of WCS Submission | | Consultation on WCS Submission | | Formal Submission to GOSW | | |

| Jan **2011** | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | WCS Independent Examination | | | | | Receipt of Inspector's Binding Report | Adoption | | |

## Appendix 3. Easy View: Site Focused SA Objectives & Sub-Questions

| SA Objective: | Sub-Questions: |
|---|---|
| **Social** | |
| **1. To protect and improve the health and well-being of people living and working in Gloucestershire as well as visitors to the County.** | ▪ Will hazardous waste be reduced?<br>▪ What are the potential health impacts on communities?<br>▪ What are the potential health impacts on the employees at the site or facility? |
| **2. To educate the public about waste issues and to maximise community participation and access to waste services and facilities in Gloucestershire.** | ▪ Are there any groups who are particularly disadvantaged in terms of participation and access to waste services?<br>▪ Does the site option cater for future demographic changes and waste growth? |
| **3. To safeguard the amenity of local communities from the adverse impacts of waste development.** | ▪ What are the impacts in terms of noise and vibration?<br>▪ What is the potential for significant problems with litter?<br>▪ To what extent are there potential landuse conflict issues?<br>▪ What is the potential for significant problems with vermin and birds?<br>▪ Are there any cumulative effects in terms of adverse impacts on environmental quality, social cohesion and inclusion or economic potential?<br>▪ Does the site provide opportunities for the co-location of complementary activities?<br>▪ Will fly tipping in the County increase? |
| **Economic** | |
| **4. To promote sustainable economic development in Gloucestershire giving opportunities to people from all social and ethnic backgrounds.** | ▪ Does the site present opportunities for spin off employment or other opportunities?<br>▪ Will the number of waste based Community or Social enterprises change as a result of the site option? |
| **5. To manage waste in an economically sustainable way through means that represent good value for tax payers in Gloucestershire.** | ▪ What are the costs?<br>▪ Are there costs in the longer term that may not be obvious at the present time? |

| | |
|---|---|
| **6. To provide employment opportunities in both rural and urban areas of the County, promoting diversification in the economy.** | ▪ How many new jobs are likely to be created?<br>▪ How far will employees have to travel to work?<br>▪ Are there opportunities for employees to use sustainable transport? |
| **7. To ensure that waste sites do not compromise the safety of commercial or military aerodromes.** | ▪ Is the site close to an aerodrome or low flying area?<br>▪ Will the site attract large numbers of scavenging birds / gulls etc? |
| **Environmental** | |
| **8. To protect, conserve and enhance biodiversity in Gloucestershire.** | ▪ What are the potential impacts on sites which are Internationally and Nationally designated?<br>▪ Are there any other potential significant impacts over and above the effects on designated sites - including on local sites, protected species and habitats and species of principle importance for biodiversity?<br>▪ What are the potential impacts on the Strategic Nature Areas as indicated on the Gloucestershire Nature Map?<br>▪ What potential is there for achieving biodiversity targets? |
| **9. To protect, conserve and enhance the landscape in Gloucestershire.** | ▪ What are the impacts on AONB?<br>▪ What is the likely impact on specific landscape character as detailed in Gloucestershire's Landscape Character Assessment?<br>▪ What is the scope for landscape improvement / enhancement? |
| **10. To ensure that waste sites have the potential for adequate screening and / or innovative design to be incorporated.** | ▪ Does the topography and setting naturally screen the site?<br>▪ What is the potential for design-led solutions? |
| **11. To protect conserve and enhance Gloucestershire's material, cultural and recreational assets.** | ▪ What are the likely impacts on material, cultural and recreational assets?<br>▪ Have any material assets been overlooked? |
| **12. To protect conserve and enhance geodiversity in Gloucestershire.** | ▪ What if any are the likely impacts on geodiversity? |
| | |

| | |
|---|---|
| **13. To protect conserve and enhance townscapes and Gloucestershire's architectural and archaeological heritage.** | ▪ What are the potential adverse effects on heritage sites of International importance and / or sites or buildings with a nationally recognised designation? |
| **14. 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.** | ▪ Can the risk of flooding be minimised through site design?<br><br>▪ Will surface water runoff be reduced?<br><br>▪ Is there the potential to enhance and restore the river corridor?<br><br>▪ Is there the potential to protect and promote areas for future flood alleviation schemes?<br><br>▪ Do proposals improve flood awareness and emergency planning? |
| **15. To prevent pollution and to apply the precautionary principle in consultation with waste regulation authorities.** | ▪ Is there a level of scientific uncertainty about risk such that the best available scientific advice cannot assess the risk with sufficient confidence to inform decision-making. |
| **16. To protect and enhance soil / land quality in Gloucestershire.** | ▪ What is the landtake?<br><br>▪ Does the site suffer from potential land instability?<br><br>▪ Is the site previously developed?<br><br>▪ If the site is or was previously contaminated – is there the potential for effective remedial clean up? |
| **17. To protect and enhance air quality in Gloucestershire.** | ▪ What is the proximity of sensitive receptors and to what extent can air emissions, including dust be controlled?<br><br>▪ What is the proximity of receptors sensitive to odours, and to what extent can odours be controlled. |
| **18. To protect and enhance water quality in Gloucestershire.** | ▪ What is the proximity of vulnerable surface or groundwater?<br><br>▪ What are the impacts on water consumption? |
| **19. To reduce the adverse impacts of lorry traffic on the environment and communities through means such as:**<br><br>**a) reducing the need to travel**<br>**b) promoting more sustainable means of transport**<br>**c) sensitive lorry routing**<br>**d) the use of sustainable alternative fuels**<br>**e) promoting the management of waste in one of** | ▪ What is the capacity of the site and transport infrastructure to support the sustainable movement of waste and products arising from resource recovery?<br><br>▪ Will access be reliant on local roads? |

| | |
|---|---|
| **the nearest appropriate installations.** | |
| **20. 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.** | ▪ What is the impact of any waste prevention and waste reduction activities?<br><br>▪ What are the levels of reuse, recycling (including composting) and recovery achieved by each site option? |
| **21. To reduce the global use of primary materials and minimise net energy balance requirements.** | ▪ What is the impact on total material requirement?<br><br>▪ What are the energy balance impacts? |
| **22. To reduce contributions to and to adapt to Climate Change.** | ▪ To what extent does the site or facility offer the capacity for net electricity generation, community heating / combined heat and power or the production of waste derived biofuels / biogas?<br><br>▪ How flexible or adaptable is the site or facility in terms of a) adapting to Climate Change and b) using new technology as it develops? |

Minerals & Waste Planning Policy
Environment Directorate
Gloucestershire County Council
Shire Hall
Gloucester
GL1 2TH

www.gloucestershire.gov.uk