Gloucestershire Minerals and Waste Development Framework: Sustainability Appraisal Scoping Report

➔Update 2 – April 2006←

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

www.gloucestershire.gov.uk

April 2006

Contents

List of Figures and Tables

Appendices

This report sets out the Sustainability Appraisal (SA) Framework for the purposes of testing the emerging Gloucestershire Minerals and Waste Development Plan Documents and related Supplementary Planning Documents under the new Planning Act and related Regulations.

The original Context & Scoping Reports, produced in August 2005 have been reviewed and updated following a period of consultation and subsequent representations from the four Authorities with environmental responsibility in relation to the SEA Directive, and other stakeholders. Minor amendments have also be made following the publication of the final version ODPM Guidance on SA (November 2005).[1] Amendments and additions to baseline data have also been incorportaed following a review of the process by Levett-Therivel Consultants in November 2005.

It should be noted that the updated Context Report, documenting the scoping of relevant plans and programmes and subsequent development of key messages, is to be read in conjunction with this report, detailing as it does Stage A1 of the ODPM Guidance, thus providing a clear audit trail and links to the initial stages of the SAs development.

For further information on the SA of Gloucestershire's Minerals & Waste Development Framework (MWDF) please contact:

David Ingleby
Minerals and Waste Policy Team
Environment Directorate
Gloucestershire County Council
Shire Hall
Gloucester
GL1 2TH

Email: david.ingleby@gloucestershire.gov.uk
Tel: 01452 426338

Further information and all SA updates are available at the following web address:
http://www.gloucestershire.gov.uk/index.cfm?articleid=11577

[1] Original reports were developed using: ODPM Guidance (September 2004) Sustainability Appraisal of Regional Spatial Strategies and Local Development Documents – Consultation Paper. Updates have been made in accordance with: ODPM Guidance (November 2005) Sustainability Appraisal of Regional Spatial Strategies and Local Development Documents.

1. Addressing the SEA Directive / Delivering Sustainable Development

1.1 The Gloucestershire Minerals Local Plan (MLP) balances the need for mineral products with the environmental, social and economic implications of extracting and transporting the product. The first Gloucestershire MLP was adopted in April 2003.

1.2 The Gloucestershire Waste Local Plan (WLP) was adopted in October 2004. The aim of the Plan is to develop a sustainable waste management industry, ultimately to divert waste from landfill towards recovery/recycling and to reduce the amount of waste generated in the County.

1.3 Strategic Environmental Assessments (SEA) have been carried out for both plans.

1.4 The Planning and Compulsory Purchase Act 2004 retains the pre-eminence of the Development Plan in the planning system, however it modernises the process of plan preparation, providing a statutory basis for delivering sustainable development, integrating sustainability appraisal (SA) in to the plan making process.

1.5 Statutory transitional arrangements apply to the Local Plans, which are considered "saved" for a period of three years. However the first Minerals and Waste Development Scheme (MWDS), adopted in April 2005, outlines the work programme for replacing the local plans with a Minerals and Waste Development Framework (MWDF) under the new Act. Figure 1. outlines the key areas of work subject to the SA process. (See also Appendix 1. and the M&WDS Timeframe). Table 1. summarises the contents and main objectives of these plans.

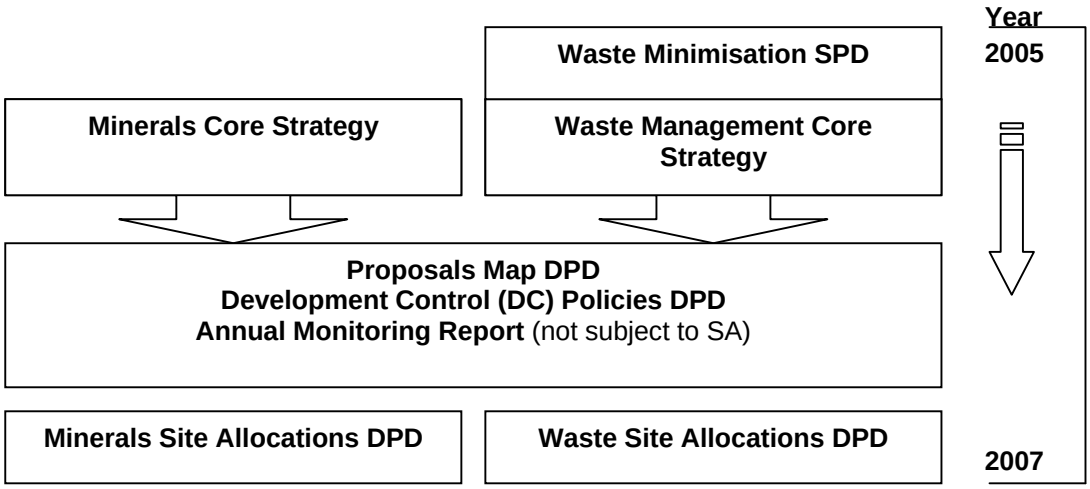


Figure 1. Components of the Minerals and Waste Development Framework subject to Sustainability Appraisal.

Table 1. Contents & Objectives of the Minerals and Waste Development Framework Documents subject to Sustainability Appraisal.

Document Title	Contents & Objectives
Supplementary Planning Document (SPD) on Waste Minimisation	This SPD covers the issue of waste minimisation and supplements saved Policy 36 (from the adopted WLP). It is a material consideration in determining planning applications but it does not have the statutory weight provided by Section 38(6) of the 2004 Planning Act.
Minerals Core Strategy (MCS)	This DPD sets out the spatial vision, spatial objectives and strategy for minerals development in the County. It sets the context for the mineral site allocations, and provides a framework for the development control policies DPD. This DPD deals with the implications for Gloucestershire of the sub-regional apportionment of sand and gravel (S&G) and crushed rock (C/R).
Waste Management Core Strategy (WCS)	This DPD sets out the spatial vision, spatial objectives and strategy for waste development in the County. It sets the context for the waste site allocations, and provides a framework for the development policies DPD. This DPD deals with the data aspects of managing waste in the County. This will comprise four main aspects; municipal solid waste (MSW); commercial and industrial waste (C&I); construction, demolition and excavation waste (CDE); and hazardous waste (HW).
Development Control (DC) Policies DPD	This DPD comprises the policies against which planning applications for minerals and waste development will be determined in order to meet the strategic vision. It will include topic related policies relating to environmental designations, amenity protection, and the safeguarding of interests of acknowledged importance. It will also contain details of the site requirements for each type of waste facility. In doing so it will contain policies for determining planning applications related to these facility types. This DPD also contains DC policies for assessing non-aggregate and energy mineral development. It will not contain any site specific policies or allocations, though Plan 3, Plan 4 and Plan 4a which are factually based may be updated.
Mineral Sites Allocations DPD	This detailed site-specific policies DPD will comprise those preferred areas saved in the current MLP. These will be reviewed as appropriate following adoption of the MCS DPD.
Waste Sites Allocations DPD	This detailed site-specific policies DPD will comprise those sites saved in the current WLP. These will be reviewed as appropriate following adoption of the WMCS DPD.

1.6 Guidance on the implementation of the new Act, (specifically Planning Policy Statement 12) states that Development Plan Documents (DPDs) and supplementary planning documents (SPDs) should be subject to SA. The SA process as outlined in Guidance (See Section 3 below) addresses the requirements of the European Directive 2001/42/EC: that certain plans and programmes are subject to a SEA to test the possible environmental effects of proposals. SA aims to extend the remit of SEA to consider socio-economic issues. Although there are two separate requirements, only one appraisal will be required in the development of DPDs. Table 1. below indicates how the requirements of the SEA Directive have been addressed in this process.

Table 2. Addressing the SEA Directive.

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 and the Context 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 – Baseline Data
"the environmental characteristics of areas likely to be significantly affected" - **Annex 1 (c)**	✓	Sections 5 and 6 and Appendix 3 - Baseline Data
"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
"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 and the Context 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 this Report

1.7 The SA Framework as identified in this document has been developed in liaison with the six local planning authorities in Gloucestershire, principally to avoid duplication of effort, to ensure consistency in aims and objectives and wherever possible pool resources.

2. Approach to Consultation

2.1 A key part of the modernised process of plan preparation is to frontload consultation ensuring more meaningful community involvement. The Statement of Community Involvement (SCI) adopted December 2005 sets out how interested parties will be involved in the process of preparing the M&WDPDs as well as consultation on planning applications. The vision for community involvement as stated in the SCI is:

"Enabling people to make a difference by providing them with an opportunity to actively participate in the development of options and proposals for mineral and waste planning"

2.2 SA is now considered to be an integral part of the plan making process, that is, the objectives of the SA should provide the basis for policy development and site allocation. Therefore it is appropriate to seek stakeholders' views to ensure that the SA Framework includes all relevant social, economic and environmental objectives from the outset.

2.3 Informal views from a representative group of organisations, government agencies and relevant local authorities have been sought to assist in the development of the SA Framework to ensure the scope of the framework embraces appropriate social, economic and environmental issues. As indicated in Table 1 in order to address the requirements of the SEA Directive, authorities with environmental responsibilities,

that is, the Countyside Agency, English Heritage, English Nature and the Environment Agency have been consulted.

2.4 Information relating to the SA process and the Scoping Report has been, and will be, included in Minerals and Waste Newsletters. This report, the Context Report and other information related to SA is available at the following web address: http://www.gloucestershire.gov.uk/index.cfm?articleid=1405

2.5 The MWDS identifies the formal process of consultation on SA Reports with a wider range of stakeholders. SA Reports will be produced for the Minerals and Waste Core Strategies at issues and options stage and at submission stage. An SA Report will also accompany the Waste Minimisation Supplementary Planning Document (SPD) when it it consulted on in the Spring of 2006.

3. Sustainability Appraisal Process – Methodology

3.1 In September 2004 the ODPM published draft Guidance on carrying out SA of DPDs. Both the Context Report and the Scoping Report were initially developed following this draft Guidance. Both of these reports are consistent with the final version Guidance which was published in November 2005. The MWDS identifies a timeframe for the preparation of the MWDD, of which the SA is an integral part of the process (See Appendix 1). There are 5 key stages outlined in the (final version) ODPM Guidance:

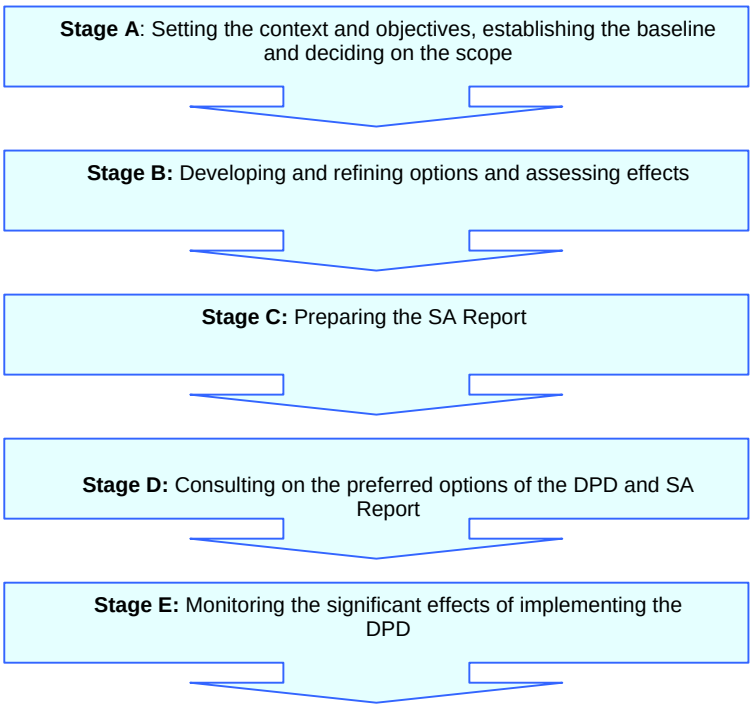


Figure 2. Key Stages of the Sustainability Appraisal Process.

3.2 The Minerals and Waste Policy Team has developed the SA Framework guided by ODPM Guidance and a review of good practice in the public and private sector.

3.3 This report summarises the conclusion of **Stage A** of this Guidance, providing a basis for the SA Framework against which all aspects of the MWDF subject to SA will be tested.

Table 3. Action Taken in Relation to ODPM Guidance Stage A.

Stage A	Description	Action
1	Identify other relevant plans and programmes and sustainability objectives	An approach was agreed for identifying relevant plans and programmes (A1 - See section 4). Relevant plans and programmes were scoped to identify social, environmental and economic issues relevant to the development of minerals and waste policy, (A1 – See Section 4) Detailed information on Stage A1 is provided in the Annex to this report i.e. the Context Report.
2	Collect baseline information	Contextual and output indicators were devised relating to the objectives, key messages and sustainability issues. These indicators have provided the basis for collecting baseline data. Gaps in data have been identified during this process as well as a programme for addressing this weakness in the process. (See Section 6 and Appendix 3).
3	Identify sustainability issues and problems	The scoping process has assisting in identifying key messages and highlighted sustainability issues and problems. (A3 - See section 5 and Appendix 4).
4	Developing the SA Framework	Headline objectives were devised on the basis of the scoping exercise. The development of which is charted in Appendix 5. These objectives were tested for internal consistency (See Appendix 6).
5	Consulting on the scope of the SA	Consultation has taken place (Between 25th August and 29th September) and the changes are reflected in this report.

3.4 It is important to note that this is an iterative process with each of the above tasks of this stage informing the other.

Limitations:

■ **Potential Impartiality Problem:** There is concern that the process may not be impartial if carried out by members of the Minerals & Waste Policy Team - who will be drafting the M&WDPDs.
Action: Targeted consultation at this stage in the process will assist in ensuring that competing interests are incorporated into the Framework. Consultant peer review has been undertaken of the process to date, and it is envisaged that as SA Reports are produced further peer review will be undertaken.
■ **Gaps in Baseline and Indicator Data Problems:** The process of drawing up at list of appropriate indicators is a relatively straightforward exercise. However the collection of relevant and sound historic data for the purposes of setting the context/baseline and subsequently monitoring the effect of policies is more problematic.
Action: An audit of relevant data has been carried out as part of the scoping exercise. Gaps in data have been identified and a schedule compiled which attempts to prioritise addressing the gaps. However it has to be accepted that some trend-based data will not be available and SA Reports and the Minerals and Waste Annual Monitoring Report (AMR) provide an opportunity to commence the collection of relevant data.
■ **List of Gaps:**
- Data relating to the impact on local amenity of communities affected by minerals and waste development.
- Changes to the character of the countryside in Gloucestershire.
- Level 1 & 2 pollution incidents in Gloucestershire.
- Various transport data sets relating to the transportation of minerals and waste.
- Data on the extent and quality of minerals site restoration.
- The specifics of flood risk in the County.

4. Relevant Plans and Programmes

4.1 In order to achieve sustainable development objectives and joined up spatial planning in the context of the new planning regime, it is essential to take account of national, regional and local Guidance, plans and strategies. Government Guidance and regulations relating to plan making indicate that development frameworks should reflect the spatial objectives of other relevant plans and strategies.

4.2 A number of relevant documents have been identified to ensure that all relevant strategies and objectives have been considered in developing the SA Framework for the Minerals and Waste Development Framework (MWDF).

4.3 Building on the emerging Regional Spatial Strategy SSA Framework, further scoping of relevant documents has been required to ensure that not only local matters, but also specific waste and minerals planning issues are fully considered in the development of this Framework.

4.4 ODPM Guidance on SA highlights the scoping of other relevant plans and documents as an important part of developing a SA framework for the following reasons:

- Identification of the social, environmental and economic objectives that should be reflected in the development Framework,
- Identification of external factors, for example sustainability issues, and
- To determine whether policies in other plans and programmes might lead to cumulative effects when combined with policies in the plan subject to SA.

4.5 Consideration has been given to which documents constitute “relevant” in the context of this Framework. In the compilation of this list of relevant documents the following points have been recognised:

a) It is important to adopt a clear and consistent approach to what constitutes a relevant document.

b) The list is not, and cannot be exhaustive. The review has only sought to identify key documents which reflect local, regional, national and international social, economic and environmental issues. These documents primarily emanate from central government, the South West Regional Assembly (SWRA), Authorities with environmental responsibility in relation to the SEA Directive or have a statutory basis e.g. Local Plans and Community Strategies.

c) Relevant Local Plans have been scoped to ensure synergy between emerging development documents in the County. There are no up-to-date adopted Local Plans covering the County other than the Minerals and Waste Local Plans. However each of the 6 district councils have well progressed local plans, close to adoption, which are material planning considerations for development control purposes.

d) It should be considered that new or revised documents are emerging regularly e.g. from the Office of the Deputy Prime Minister (ODPM), notably replacements of Planning Policy Guidance Notes (PPGs) with Planning Policy Statements (PPSs). Therefore it is important to ensure that the list identified in Table 4. is kept under review and that the SA Framework is amended accordingly.

4.6 Table 4. below lists relevant plans, programmes and strategies. Table 5. provides a summarised justification as to the non-inclusion of certain plans and programmes. The Context Report provides additional, and more detailed information on the review of these documents.

Table 4. Relevant Plans and Programmes.

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: Planning for Sustainable Waste Management Companion Guide
PPS11: Regional Spatial Strategies
PPS12: Local Development Frameworks Also including: ▪ A Companion Guide to PPS12 ▪ Sustainability Appraisal of Regional Spatial Strategies and Local Development Frameworks (Consultation Paper) ▪ 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
National Trails Publication
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 –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)
Cheltenham and Gloucester Joint Study Area (Submission Document) – To be added
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 NHS Trust Annual Report 2003/04 + 'Excellence Through Partnerships'
Gloucestershire NHS Trust Service Delivery Strategy 2005 - 2008
Gloucestershire Education Development Plan Submission 2002 – 2007- Gloucestershire: A Learning

County
Gloucestershire Landscape Character Assessment
Gloucestershire Renewable Energy Action Plan
The Community Strategy for Gloucestershire
Local Agenda 21 Strategy for a Sustainable Gloucestershire
Gloucestershire NHS Trust Annual Report 2003/04 / Service Development Strategy
Gloucestershire Education Development Plan Submission
Gloucestershire Structure Plan Second Review (Adopted Plan)
Gloucestershire Local Transport Plan
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

Table 5. Justification as to the Non-Inclusion of Certain Plans and Programmes.

PPG / MPG	Justification for non-inclusion
PPG 5: Simplified Planning Zones	Not relevant to minerals and waste plans.
PPG 17: Sport and Recreation	Not relevant to minerals and waste plans.
PPG 19: Outdoor Advertisement Control	Not relevant to minerals and waste plans.
PPG 20: Coastal Planning	Not relevant to Gloucestershire.
PPG 22: Renewable Energy	Superseded by PPS 22.
PPG 23: Planning and Pollution Control	Superseded by PPS 23.
MPG 11: Noise	Superseded by MPS 2.
MPG 13: Peat	No significant peat workings in Gloucestershire.
MPG 15: Silica Sand	No significant silica sand workings in Gloucestershire.

4.7 It is noted that new and revised documents are regularly emerging e.g. from ODPM, notably replacements of Planning Policy Guidance Notes (PPGs) with Planning Policy Statements (PPSs). The above list (Stage A1) will be amended on a regular basis to reflect this.

5. Gloucestershire Context: Key Messages & Sustainability Issues

5.1 A number of key messages emerged through the scoping of relevant plans and programmes (See SA Context Report). These messages have been consolidated into headline objectives and provide the basis for developing indicators.

5.2 The following are considered to be the key sustainable issues/problems for Gloucestershire. In keeping with the principles of SEA and SA; social, economic and environmental issues are taken into account. It is a general list and certain issues are likely to have greater significance to the development of minerals and waste policy in Gloucestershire. (See Appendix 4 - an expanded version of Table 6. below, and Appendix 5. for an indication of how these issues and problems link with key messages and objectives).

Table 6. Sustainability Issues and Problems.

No.	Sustainability Issues and Problems
1.	**High house prices** The disproportionate growth in house prices is making homes increasingly unaffordable. In 2003 the average house cost 8.7 times the average salary. The continued supply of minerals is critical to the delivery of future housing development. The extraction and transport of minerals can have a negative environmental impact and it is important to ensure that this finite resource is used carefully. The Government initiative to provide more affordable homes must be linked with a sustainable waste management strategy.
2.	**Low average income** In 2003 the average income in Gloucestershire was almost £840 per annum lower than the national average, but it was higher in Cheltenham and Tewkesbury. Minerals and Waste industies can and do contribute to the local economy.
3.	**Crime levels** Rates for key crimes of violent offences, vehicle crime and robbery in Gloucestershire are below national levels, although they are higher in Cheltenham and Gloucester.
4.	**Health** In 2001, 91,164 people in Gloucestershire (16% of the total population) suffered from a Limiting Long-Term Illness (up from 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. Waste management facilities and mineral workings can potentially have a negative impact on local amenity.
5.	**Traffic impacts and congestion** There are high levels of traffic congestion particularly in Cheltenham and Gloucester at peak hours. Car ownership in Gloucestershire amounts to just over one car per household, one of the highest figures nationally. Since 1985 (to 2003) traffic in the County has grown by 42%, and the County Council's household surveys of 1999 revealed that 72% of all journeys are made by car (65% car driver, 7% car passenger), 10% on foot, 3% on public transport and 5% by bicycle. Minerals and Waste sites generate lorry movements, which can create additional congestion often on local road networks. All minerals extracted in Gloucestershire and waste generated and disposed of in the County is transported by road. (See Appendix 7.)
6.	**Rural economy** There is a need for diversification and initiatives to boost and support the rural economy in Gloucestershire. Due to the location of mineral resources this is potentially important in the rural economy.
7.	**Areas of deprivation and social exclusion** There are significant areas of deprivation and social exclusion in the County, particularly in parts of Gloucester and Cheltenham. Although Gloucestershire is ranked as one of the least deprived counties in England, there are marked differences in deprivation scores for the six districts. Gloucester is the most deprived district in the County, ranking 139th most deprived English district according to the Rank of Average Score measure out of 354 English districts. The Forest of Dean is next most deprived at 195th. The least most deprived is the Cotswolds at 314th. (UK Indices of Deprivation 2004, issued by ODPM).

No.	Sustainability Issues and Problems
8.	**Potential for flooding** In the western part of the County lies the floodplain of the River Severn, which is a significant constraint on development. The Upper Thames floodplain also affects the existing workings within the Cotswolds Water Park area. There is a potential for the pollution of water resources from minerals and waste operations should they be subject to flooding. Flooding is not solely restricted to the floodplain and can also occur as a result of increased surface water run-off from new development.
9.	**Waste to landfill** Approximately 1.37 million tonnes of controlled waste is handled in Gloucestershire each year, the majority still going to landfill and land raising. In 2002/03 73.8% of waste was disposed of through landfill and land raising.
10.	**Growing levels of waste in Gloucestershire** The quantity of Household Waste (HW) per head of the population has grown steadily over the last few years. In 2003/04 it was 51kg per head of population higher than the national average. Assuming the same rate of growth as last year of approximately 7kg per head per year, related to the projected population growth, household waste would grow to just under 234,000 tonnes in 2005/06. This is approximately 27,600 tonnes more waste than in 2003/04. In recent years there have also been steady increases in Municipal Solid Waste (MSW). Construction and Demolition waste (C&D) and Commercial and Industrial waste (C&I) figures have fluctuated.
11.	**Recycling / composting rates** Gloucestershire's recycling / composting rate in 2002/ 2003 was 16.7 %. In 2004 / 2005 it was 26%. The target for 2005 / 2006 is 36%* (*revised to 30%).
12.	**Minerals restoration** Increasingly within the County, there is a lack of inert material that could be used for appropriate restoration schemes following mineral extraction. There are issues over the general quality of minerals restoration. There are also problematic issues in the Cotswold Water Park regarding wet restoration and 'bird strike' issues related to RAF Fairford.
13.	**Protecting Gloucestershire's environment whilst providing minerals needed by society** Minerals can only be worked where they occur and this is often in what is considered to be sensitive environments, for example the two principle limestone resource areas in the County: Forest of Dean and Cotswold are designated Areas of Outstanding Beauty or special landscape areas due to the landscape value. However building stone particularly for the Cotswold AONB is essential for maintaining the vernacular.
14.	**Renewable energy** The current total renewable energy capacity in Gloucestershire is 8.873MW – almost all of this is from landfill and sewage gas. There is a target for Gloucestershire of the production of 40-50MW by 2010 (enough electricity to supply 45,750 – 52,250)
15.	**The general state of Gloucestershire's biodiversity, the condition of SSSIs, sites protected under the Habitat's Directive and locally designated sites** Detailed information on the general state of Gloucestershire's biodiversity, in particular relating to various habitats are contained in the Gloucestershire BAP. The South West: The region has 965 Sites of Special Scientific Interest (SSSI), representing nearly a quarter of the total for England (4,113), a little over a fifth (47) of the country's 214 National Nature Reserves and 66 of the country's 230 Special Areas of Conservation (2003 figures). Of the region's SSSI habitats in 2003, only 52.9% were in a 'favourable' condition although this indicates an upward trend when compared to the 51.0% recorded in 2002 and the 44% recorded in 2001. In addition, a further 14.8% of SSSI habitats were classed as 'unfavourable recovering' and so taken together, two-thirds of the region's sites were favourable or recovering, a proportion some 10% higher than the 57.3% recorded for the country as a whole. Nonetheless, 14.2% of the region's SSSI habitats were recorded as 'unfavourable declining'. SSSIs in Gloucestershire: There are currently 121 SSSIs in the County (September 2005) and the following statistics apply: % area favourable = 79.27 % area unfavourable but recovering = 2.85 % area unfavourable - no change = 13.94 % area unfavourable declining = 3.94 % area destroyed / part destroyed = 0.00 These figures indicate that Gloucestershire has a good record in the protection of its SSSIs but that more needs to be done. English Nature state (Sept 2005) that "This does not represent an

No.	Sustainability Issues and Problems
	increase from the 1999 figure but it is anticipated that there will be a decline in the area in favourable condition as a result of more stringent assessment guidelines." Certain SSSIs designated in the County are a product of mineral working. Sites protected under the Habitats Directive: There are a number of SPA / SAC / Ramsar sites in the County, including: Cotswolds Beachwoods, Dixton Wood, Rodborough Common, River Wye Sites, Wye Valley and Forest of Dean Bat Sites, Wye Valley Woodland, North Meadow & Clattinger Farm (Wilts site), Walmore Common and the Severn Estuary. A number of candidate SAC sites (included in the above list) have recently gained full SAC status. These sites may potentially be affected by minerals and waste development, although they are protected by law. Locally designated sites: There are 0.4138 Ha (2003) of local nature reserves per 1000 of population in Gloucestershire and 696 (12,845 Ha) Key Wildlife Sites. Again, these sites may potentially be affected by minerals and waste development, although there are policies and mechanisms in place to protect them.
16.	**Decline in species biodiversity - in particular of certain bird species in Gloucestershire** Biodiversity decline: The specifics of various species are contained in the Gloucestershire BAP. Bird populations: In the South West between 1994 and 2002: Farmland birds = down 9%, Woodland birds = little change. In the South West from 1979-2005: Starlings declined by 71%, House sparrow declined by 52% Song thrush declined by 34%, Blackbirds declined by 31%. Farmland birds in Gloucestershire: Skylark, Grey Partridge, Corn Bunting, Linnet, Reed Bunting, Tree Sparrow, Bullfinch, Turtle Dove, Song Thrush and Lapwing have all declined in Gloucestershire, reflecting a national decline in numbers. (The specifics are contained in the Gloucestershire BAP) Other species of birds that have suffered dramatic declines include: Bittern, Nightjar, Woodlark and Spotted flycatcher. ("Birds are generally good indicators of the broad state of wildlife and the countryside, because they are wide-ranging in habitat distribution and tend to be at or near to the top of the food chain") Source: Government's indicators of sustainable development.
17.	**Increases in serious pollution incidents** The South West: There were 3,538 substantiated pollution incidents in the South West in the South West during 2004, a reduction of over 30% since 2000. The number of Category 1 incidents (the most serious) increased from 3 in 2003 to 11 in 2004. Gloucestershire: [*No figures as yet – under investigation]*
18.	**Possible damage to the historic environment** There are 496 Scheduled Monuments in the County, covering roughly 0.57% of the County. There are 23920 Locally Important Sites registered on the SMR. –an estimated 2% of the County. There are 12860 Listed buildings in the County. There are 264 Conservation areas covering c.2.3% of the County. There are 2 Registered battlefields covering 277.57ha (0.1% of the County). There are 99 Registered parks and gardens, in total these cover 6109ha (c.2.26% of the County). *[More figures regarding damage to SAMs etc – A study is currently being carried out to provide a clearer assessment of damage occurring as a result of minerals and waste development]*
19.	**Detrimental changes to landscape character** There are three Areas of Outstanding Natural Beauty in the County and a number of areas designated in Local Plans as Special Landscape Areas. In October 2004 Gloucestershire County Council in association with the 6 Districts appointed consultants to undertake a Landscape Character Assessment (LCA) of: ❑ The Severn Vale ❑ The Upper Thames Valley ❑ The Vale of Moreton ❑ The Vale of Evesham Fringe Sections of the County for which a detailed LCA have already been completed include: ❑ The Forest of Dean District ❑ The Cotswold's AONB *[Further information required – under investigation]*

6. Summary of Baseline Data and Indicators

6.1 Collecting baseline data is an essential component of the SA process. It helps provide the basis for predicting and monitoring the effects of policies and in the identification of sustainability problems. The choice of baseline data has been informed by the previous stages in the SA process. As indicated previously, potentially a key limitation of the SA process to date are the gaps in baseline data (see Section 3). ODPM Guidance takes a pragmatic view of this situation, advising that it is acceptable to have data gaps, but that the resulting risks should be documented. The SA process and the Minerals & Waste AMRs provide an opportunity over a period of time to resolve this problem. However, it is important to identify the critical areas of information required to make a sound assessment of DPDs.

6.2 Indicators can be useful in identifying sustainability problems and when monitored over a period of time they can indicate trends which are useful when assessing the impact of policies. Indicators can be roughly subdivided into contextual and output indicators. These can be used to guage the impact of adopted minerals and waste policy through the development of targets and objectives. Contextual indicators measure change in the wider social, economic and environmental background within which the M&W DPD policies will operate. Output indicators will help monitor the direct effect of any policy or strategy adopted (see Appendix 3 - Baseline Data for a list of indicators).

6.3 The new planning Act places a duty on planning authorities to prepare Annual Monitoring Reports (AMR). The first mandatory Minerals and Waste AMR has been produced in December 2005 and relates to the adopted Minerals and Waste Local Plans as well as indicating progress on key milestones required under the new Act. Subsequent AMRs will be well related to the SA Framework monitoring progress on both contextual and output indicators.

6.4 Table 6 – Sustainability Issues and Problems provides some baseline data related to specific issues. Further detailed data relating to Gloucestershire is provided below and in Appendix 3 – Baseline Data.

6.5 The following paragraphs (6.6 to 6.87) provide an overview of minerals and waste planning in Gloucestershire as well as other relevant and related aspects of baseline data for the County.

6.6 **Minerals Planning in Gloucestershire**

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

Table 7. Mineral Resource Areas in Gloucestershire.

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

6.7 The Minerals Planning Authority (MPA) collects annual sales and reserve figures for mineral sites in Gloucestershire. The site-specific information is commercially confidential however the collective data is published in the Annual Monitoring Report.

6.8 There are 36 operational minerals sites in the County (2003 figures). 18 are within the Cotswolds and the Forest of Dean, extracting limestone both for aggregate and non-aggregate purposes. 10 sites, primarily located in the Upper Thames Valley, are extracting sand and gravel. There are a further 8 sites in the County extracting either sandstone or clay. Additionally there are a number of inactive and dormant sites where minerals may potentially be worked in the future.

6.9 Gloucestershire makes an important contribution to the regional supply of aggregate minerals. Much of the County's output is used within the region. Roughly 78% of the crushed rock and 49% of the sand and gravel is used in the South West. The destination of sand and gravel won from the Upper Thames Valley is more difficult to quantify as some sites straddle the border with Wiltshire. A significant proportion of aggregate goes to construction in the South East and 15% of crushed rock goes to the Midlands.

6.10 Although mineral working can have an impact on the environment, mineral products are used to improve our quality of life. For example the continued extraction of building stone in the Cotswolds maintains the local vernacular. It must also be acknowledged that mineral workings are considered to be a temporary land-use and when properly restored, the after use can enhance the environment. For example the Cotswold Water Park, one of the largest man-made inland water areas in the UK is a product of sand and gravel extraction. The area is popular for various leisure activities (water sports etc) and is also an area of rich and improving biodiversity. According to the naturalist David Bellamy it is now an area "…*of national importance, and heading for international recognition for its wetlands*". (http://www.waterpark.org/)

6.11 Finally, primary minerals are a finite natural resource, which must be used prudently. Up-to-date minerals plans ensure that all new planning applications for mineral working have a clear policy context with the objective of ensuring sustainable development.

6.12 **Waste Planning in Gloucestershire**

We all generate waste, but a large percentage of the waste produced in Gloucestershire, whether at home or at work, is still disposed of in a landfill site or through landraising. Approximately 1.37m tonnes of controlled waste is handled in the County each year. In 2002/3 73.8% of waste was disposed of by landfilling / landraising. The following table shows a breakdown of waste streams:

Table 8. Summary of Waste Management in Gloucestershire.

Waste Stream	Base Year	Total
Municipal Solid Waste	2004/05	309,000 t
Commercial & Industrial (including metals)	2002/03	599,000 t
Construction & Demolition	2002/03	418,000 t
Hazardous	2003	46,000 t
Total	/	1,372,000 t
Agricultural*	1998	1,116,000 t

*Untill 2006 agricultural wastes were not a 'controlled waste'.
N.b. Figures are rounded up/down and therefore will not necessarily equate to the overall total.

6.13 Recycling / Composting rates in the County

In 1993/04 Gloucestershire's household recycling rate (not including composting) was 10.2%. In 2004/05 it was 24.2% - (this is a combined figure for composting and recycling). Currently Gloucestershire has a household recycling/composting rate of 26% (The County recycling figure for the purposes of meeting the Best Value Performance Indicator – (BVPI) was 24.3%). The 26% figure includes recycled DIY/hardcore. Initial indications from the Waste Management Unit are that the Best Value recycling target of 30% for 2005/06 will be met. The amount of household waste in the County that has been recycled/composted has increased year on year at an average of 15%.

6.14 In terms of the specific figures for recycling at Gloucestershire's six Household Recycling Centres (HRCs) the total capacity tonnage in 2004/05 was 81,000 tonnes whilst the total throughput was 65,000 tonnes. This indicates that much more can be done to improve recycling / composting rates through greater use of the HRCs by the general public.

6.15 Biodegradable Municipal Waste (BMW)

In recent years there have been increasingly effective efforts to divert BMW from landfill and the trends are fairly encouraging. However as levels of municipal waste continue to rise by about 3% per year, more needs to be done if Gloucestershire is to meet Best Value (BV) targets and Landfill Allowance Trading Scheme (LATS) requirements. In 2005 the tonnage of MSW arising in Gloucestershire was 309,403. The biodegradable component was 210,394 tonnes, that is 68%. In order to meet the 2010 target, 131,763 tonnes of BMW will have to be diverted from landfill including through composting and recycling. More needs to be done in terms of the source segregated collection of biodegradable waste (e.g. garden waste, kitchen waste, paper, textiles and cardboard as well as dry recyclables through kerbside collections, household recycling centres (HRCs) and bring banks.

6.16 Municipal Solid Waste (MSW)

In 2004/05 the people of Gloucestershire produced 309,500 tonnes of Municipal Solid Waste (this includes 8,500 tonnes of trade waste collected by local authorities from shops and businesses). Roughly 74% of this waste went to landfill, 7% was composted and 19% was recycled. Over recent years levels of MSW have increased by around 3% per year.

6.17 Household Waste

In 2003/4 household waste produced per head in Gloucestershire was 490kg. The following figures show the increase since 1998: 1998/99 = 445kg / 1999/00 = 464kg / 2000/01 = 458kg / 2001/02 = 473kg / 2002/03 = 483kg. In terms of household waste, in 2003/04 the production of household waste in the County was 51kg per head of population higher than the national average.

6.18 Commercial and Industrial Waste (C&I)
During 2002/3 around 359,000 tonnes of C&I waste and 240,000 tonnes of Metal waste was managed in Gloucestershire. The amount of C&I waste managed (not including metals) has reduced slightly over the last five years. There has been a big reduction in the amount of C&I going to landfill, most probably attributable to the introduction of the landfill tax. The levels of C&I waste managed in the County has fluctuated in recent years as the following figures demonstrate:

6.19 Total C&I Waste Managed: 1998/99 = 414,000 tonnes / 1999/00 = 457,000 tonnes / 2000/01 = 371,000 tonnes / 2001/02 = 344,000 tonnes / 2002/03 = 359,000 tonnes. Unlike Municipal waste, which is dealt with by local authorities, C&I waste is dealt with by private contractors. The majority of C&I waste is still landfilled, although in tonnage terms the amount going to landfill is decreasing. The situation with regards recycling is better in relation to metals due to the economic value of scrap metals.

6.20 Construction and Demolition Waste (C&D)
In 2002/03 the split between landfill and recycling for Construction and Demolition waste was 312,000: 95:000 tonnes. Most C&D waste is assumed to be inert materials such as brick, concrete, subsoils etc. In Gloucestershire the 5 year trend for this waste stream is up and down, as with C&I waste. Data for the South West indicates that regionally C&D waste arisings have similarly fluctuated.

6.21 Total Inert & C&D Managed: 1999/00 = 262,000 tonnes / 2000/01 = 217,000 tonnes / 2001/02 = 353,000 tonnes / 2002/03 = 418,000 tonnes.

6.22 Waste Facilities in Gloucestershire
The WLP has identified twenty-one preferred sites for future waste management facilities throughout Gloucestershire. These are ‘Strategic Sites’ and ‘Local Sites’. The following table gives an indication of the range and number of waste management facilities within the County. It should be noted that there are also over 400 ‘exempt’ waste sites throughout the County.

Table 9. Waste Management Operations by Facility Type as of February 2003.

Materials Recycling / Recovery and Treatment Facilities = 5
Composting Facilities = 4
End-of Life Vehicle Dismantling & Metal Facility = 27
Household Recycling Centre = 6
Waste Transfer Stations = 31
Sewage Treatments Works / Operations = 87
Hazardous Waste Treatment Facilities = 1
Thermal treatment / pet cremation = 2
Landfill/Landraise Operations Hazardous = 1, Non-Haz - Bio-degradable = 4, Non-Haz – Inert = 12
Source: Gloucestershire Waste Local Plan – plus updates from County Council DC

6.23 **Character of the County**

The heritage, culture and environment of the County helps support the County's 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 minerals and waste development.

6.24 **Population**

There are approximately 565,000 people living in Gloucestershire. The County's population grew by 29,000 between 1991 and 2001 and is expected to continue to increase. Work undertaken as part of the emerging Regional Spatial Strategy (RSS) for the South West suggests an increase in population of approximately 69,000 in Gloucestershire between 2006 – 2026, most of which is from net-migration. Population projections at district level will be influenced by planning policy, particularly through the emerging RSS, which seeks to locate the majority of development at Gloucester and Cheltenham. The County Council has recently submitted its 'First Detailed Advice' to the South West Regional Assembly (SWRA) with regard to the Cheltenham and Gloucester Joint Study Area element of the RSS. This advice proposes the following levels of dwelling development in each District to accommodate population growth in the period 2006 – 2026:

Table 10. Proposed Levels of Dwelling Development per District 2006 – 2026.

District	**Overall Policy Provision Range**	
Cheltenham	7,068	8,237
Cotswold	7,054	7,243
Forest of Dean	6,122	5,828
Gloucester	11,089	10,965
Stroud	8,201	7,164
Tewkesbury	8,753	9,347
County	48,287	48,784

The SWRA propose to undertake public consultation on the emerging RSS in the Spring / Summer of 2006.

6.25 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 RSS and LDFs. 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 more particularly waste planning policy, will need to support the sustainable development aims of emerging spatial strategies.

6.26 **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 GDP 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 likley to see a 10.7% increase in the size of its workforce to just below 297,000 with an 11% increase in jobs.

6.27 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.

6.28 **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.

Table 11. UK and County Life Expectancy (2001).

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

6.29 **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.

6.30 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.

6.31 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.

6.32 In terms of waterbourne 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 the Gloucester and Sharpness canal provide

Gloucestershire with the possibility to develop sustainable waterborne freight transport.

6.33 **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 (PROW). 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.

6.34 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.

6.35 The PROW 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 PROW.

6.36 **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 Appendix 3).

6.37 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.

6.38 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.

6.39 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.

6.40 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.

6.41 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.

6.42 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.

6.43 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.

6.44 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.

6.45 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.

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

6.47 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.

6.48 **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 (SPAs) and Special Areas of Conservation.

6.49 Ramsar sites are wetland areas of international importance while SPAs are designated under the EU 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 SPA / Ramsar sites: Walmore Common and the Severn Estuary - a collective area of almost 5,000 hectares.

6.50 Special Areas of Conservation (SAC) are designated under the EU Habitats Directive (92/43/EEC). There are 6 SACs in Gloucestershire including the Cotswolds Beechwoods and the Wye Valley Woodlands. Each SAC is made up of a series of component sites.

6.51 All SPAs and SACs are also designated Sites of Special Scientific Interest (SSSI). SSSI are designated by English Nature 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 SSSIs in Gloucestershire. Three of these have been additionally designated National Nature Reserves (NNRs).

6.52 The largest designation in terms of extent are the three Areas of Outstanding Natural Beauty (AONB) in the County: the Cotswolds, part of the Wye Valley and a very small section of the Malvern Hills. AONBs 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.

6.53 In addition to the above designation a large area of the Cotswolds AONB has been designated as an Environmentally Sensitive Area (ESA). The ESA designation is intended to protect landscapes that are at risk due to changing farming practices.

6.54 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 RSPB), Regionally Important Geological Sites (RIGS), Special Landscape Areas, Ancient Woodland Sites, and Registered Commons.

6.55 **Flora and Forna**

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 Gloucester. 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.

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

6.57 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.

6.58 **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.

6.59 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.

6.60 The issue of air quality has been considered within the Gloucestershire Local Transport Plan (LTP). 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 (NO_2) and particulate matter (PM_{10}).

6.61 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 NO_2 was predicted between 1998 and 2005 across the County. For PM_{10} concentrations, the predicted reduction in the annual mean between 1998 and 2004 was even greater, with a reduction of almost 50% predicted.

6.62 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.

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

Table 12. Local Air Quality Management Areas in Gloucestershire.

Gloucester City	Barton Street AQMA
Gloucester City	Priory Road AQMA
Tewkwsbury	Withy Bridge AQMA
Forest of Dean	None
Cheltenham	None
Stroud	None
Cotswold	None

6.64 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.

6.65 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).

6.66 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 (GQA) 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%.

6.67 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).

6.68 Much of Gloucestershire is underlain by major aquifiers 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.

6.69 As a result of the EU Water Framework Directive the system for managing water resources in England and Wales is currently undergoing a process of change. Catchment Abstraction Management Strategies (CAMS) 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 CAMS 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.

6.70 **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 Table 13. below, the changes resulting from global warming are likely to result in warmer, drier summers and milder, wetter winters.

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

Table 13. 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) • Greater night-time than day-time warming in winter • Years as warm as 1999 (+1.2°C hotter than average) more common • Greater warming in summer and autumn than in winter and spring • Greater day-time than night-time warming in summer
Precipitation	• Winters 5 to 15% wetter (winters 10 to 30% wetter by the 2080s) • Heavy rainfall in winter becomes more common • Summers as dry as 1995 (37% drier than average) become more common • Snowfall totals decrease significantly • Summers 15 to 30% drier (summers 25 to 50% drier by the 2080s) • Greater contrast between summer (drier) and winter (wetter) seasons • Winter and spring precipitation becomes more variable
Cloud cover	• Reduction in summer and autumn cloud and increase in radiation • Small increase in winter cloud cover
Humidity	• Relative humidity decreases in summer • Specific humidity increases throughout the year
Soil moisture	• Decreases in summer • 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).

6.72 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.

6.73 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 will result in increased runoff and consequently greater flood risk.

6.74 **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.

6.75 Rail links

High-speed rail services bring London Paddington and Heathrow within two hours reach. The regional network provides access to Birmingham, Bristol, Cardiff, Oxford

and Swindon. Gloucestershire has railway stations at Ashchurch (Tewkesbury), Cam and Dursley, Cheltenham, Gloucester, Kemble (near Cirencester), Lydney, Moreton-in-Marsh, Stonehouse and Stroud.

6.76 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.

6.77 Docks
Gloucester Docks in the heart of the city is now a focal point for 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 dwt.

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

6.79 Minerals resources
In terms of mineral reserves the reserves as of 31st December 2003 are as follows:
- Crushed rock (limestone) 27.85mt.
- Non-aggregate limestone (principally for building stone and agricultural lime) 9.41mt.
- Sand & gravel (4.12mt gravel and 5.29mt of sand).
- Non-aggregate sandstone 0.58mt.
- Clay reserve 1mt.

6.80 **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.

6.81 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.

6.82 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.

6.83 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.

6.84 **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 in Section 6 of this report. For instance the protection, preservation and enhancement of Gloucestershire's natural environment – its biodiversity, landscape, flora, fauna, soil /air /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 and services having an impact on the environment. More people 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 as well as socially and environmentally unacceptable. Moving waste up the waste hierarchy, focusing on reduction, reuse and recycling is likely to be (and certainly should be) the focus in coming years. However there needs to be a realistic attitude to the disposal of residual waste.

6.85 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.

6.86 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.

6.87 In relation to the above summary of baseline in Gloucestershire, the following table indicates some potential effects on the environment of minerals and waste development and also the likely future environmental status in the absence of the MWDF. This information is also contained against indicators in the baseline table in Appendix 3.

Table 14. Potential Environmental Effects of Minerals & Waste Development and Likely Future Environmental Status in the Absence of the MWDF.

SEA Topic (SEA Directive 2001/42/EC Annex 1 (f))	Potential effects of minerals and waste development & likely future environmental (or other) status in the absence of the MWDF
Biodiversity (covered in paragraphs 6.36 to 6.54 & in Appendix 3 – Baseline table) **Flora** (covered in paragraphs 6.55 to 6.57 & in Appendix 3 – Baseline table) **Fauna** (covered in paragraphs 6.55 to 6.57 & in Appendix 3 – Baseline table)	Gloucestershire is a highly diverse County with a great variety of wildlife reflected in the large number of sites that have international, national or local designations. Biodiversity outside these areas should also not be neglected as habitats that have a linking function are very important. Potential negative effects are: ▪ Potential loss of species / habitats.

Soil (covered in paragraph 6.58 & in Appendix 3 – Baseline table)	▪ Habitat loss and fragmentation due to land take. ▪ Changes in soil conditions and or quality. ▪ Changes in the quality of air and water. Pollution potential in terms of noise, vibration, light, dust. ▪ Creation of barriers or obstacles affecting wildlife. ▪ Changes in methods of habitat management. ▪ Introduction of new species / habitats. ▪ Changes in ecological balances of prey and predators. ▪ Changes in patterns of human activity. ■ Comment on the likely future environmental status in the absence of the MWDF: Minerals and waste plans aim to provide for the needs of society (i.e. minerals which we all use, and facilities for handling waste that we all produce). But in the process there may be damage to the natural environment. However plans contain policies which aim to protect the environment. Without these plans it is more likely that environmental designations would be damaged by un-regulated development.
Water (covered in paragraphs 6.64 to 6.69 & in Appendix 3 – Baseline table)	▪ Quarrying may have significant negative impacts on the water table and on surface water regimes. This is a particularly pertinent issue in Gloucestershire in relation to sand and gravel extraction in the Upper Thames Valley. ▪ 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. ■ Comment on the likely future environmental status in the absence of the MWDF: In the absence of the MWDF 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 paragraphs 6.59 to 6.63, Table 12. & in Appendix 3 – Baseline table)	▪ Traffic associated with mineral sites or waste collection / management facilities can increase dust and odour. Incineration, recycling and waste transfer can also lead to harmful impacts on air quality. Communities situated close to landfill sites / composting facilities may experience a loss of amenity due to dust and odour. ■ Comment on the likely future environmental status in the absence of the MWDF: 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 paragraphs 6.70 to 6.73, Table 13 & in Appendix 3 – Baseline table)	▪ Landfill sites release greenhouse gases to the atmosphere. In the UK, about 2% of total greenhouse gas emissions are from landfill sites.

	▪ Both minerals and waste products are, to a large extent, carried by road transport – emissions from which have negative impacts on the climate. ■ Comment on the likely future environmental status in the absence of the MWDF: In the absence of the MWDF and specific policies aimed at combating climate change and reducing the impacts, it is likely that contributions to climate change from minerals and waste development will not be appropriately controlled and mitigated.
Material assets (covered in paragraphs 6.74 to 6.79 & in Appendix 3 – Baseline table)	▪ Minerals and waste development may affect the value of nearby land and property. This may also apply to land and property that lies on a lorry route. ■ Comment on the likely future status in the absence of the MWDF: In the absence of the MWDF there may be negative impacts on material assets as a result of un-regulated, un-mitigated or poorly planned development.
Population (covered in paragraphs 6.24 to 6.25 & in Appendix 3 – Baseline table)	▪ Populations may potentially be affected by both mineral workings and associated transportation and 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. ▪ 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. ■ Comment on the likely future status in the absence of the MWDF: In the absence of the MWDF 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 paragraph 6.28 & in Appendix 3 – Baseline table)	Minerals and 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 quarry working or associated traffic may 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. ■ Comment on the likely future status in the absence of the MWDF: In the absence of the MWDF there may be negative impacts on human health as a result of un-regulated, un-mitigated or poorly planned development.
Cultural heritage including architectural &	Waste management facilities and minerals

archaeological heritage (covered in paragraphs 6.80 to 6.83 & in Appendix 3 – Baseline table)	sites 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: ▪ A reduction in the legibility of archaeological landscapes as a result of the interruption of features extending beyond the extraction area. ▪ Dewatering and potential disruption to drainage regimes may damage waterlogged archaeological deposits and destroy a sites palaeo-environmental potential. ▪ Subsidence or ground settlement on upstanding monuments and historic buildings. ▪ Dust from workings can have a detrimental impact on historic buildings and monuments – especially if the dust particles are chemically active. ▪ In the long term the setting and character of a historic monument / archaeological landscape / listed building might be affected by extraction. 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. ■ Comment on the likely future status in the absence of the MWDF: In the absence of the MWDF 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 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 quarrying / landraise / landfill development may include: ▪ Natural topography being permanently damaged. ▪ Geological exposures in old disused quarries may be lost if they are backfilled. ▪ Loss of hedgerows and hedgerow trees. ▪ Rural character eroded as a result of operational areas, litter trapping fences, stockpiles and mounds, plant and buildings. ▪ Insensitive restoration may weaken the local distinctiveness of a landscape. ▪ On the positive side, mineral operations can create new landscape features such as lakes, ponds and wetlands. A good example being the Cotswold Water Park. ■ Comment on the likely future status in the absence of the MWDF: In the absence of the MWDF 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 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. ■ Comment on the likely future status in the absence of the MWDF: In the absence of the MWDF 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.

7. SA Framework – Objectives

7.1 The SA process as advocated in ODPM Guidance is 'Objectives-led'. Once developed they provide the framework for testing strategy and policy formulation of relevant aspects of the MWDF. The Objectives derived from this process are the basis for identifying appropriate indicators and targets against which the success of adopted strategies and policies may be judged.

7.2 Devising SA Objectives - The SA Objectives have been developed on the basis of:
• The objectives/ priorities for action contained in the Government's national sustainability strategies – 1999 and 2005.
• The objectives in "Just Connect" the Integrated Regional Strategy for the South West 2004 –2026.
• Identifying other relevant plans and programmes, resulting key messages and the identification of sustainability issues.
• ODPM Guidance.

7.3 The process of arriving at the SA Headline Objectives is provided in Appendix 5. and for a consideration of the internal consistency of the SA Objectives see Appendix 6.

Table 15. Sustainability Appraisal Headline Objectives.

GENERAL
1. To promote development that is socially, economically and environmentally sustainable.
2. To give the opportunity to everyone to live in an affordable and sustainably designed and constructed home.
3. To safeguard sites suitable for the location of waste management facilities, or future mineral development from other proposed development.
SOCIAL
4. To protect and improve the health and well-being of people living and working in Gloucestershire as well as visitors to the County.
5. To contribute to a sustainable Gloucestershire which provides excellent opportunities for education,

economic development, employment and recreation to people from all social and ethnic backgrounds.
6. To safeguard the amenity of local communities from the potential adverse impacts of minerals and waste development.
ECONOMIC
7. To conserve minerals resources from inappropriate development whilst providing for the supply of aggregates and other minerals sufficient for the needs of society.
8. To provide employment opportunities in both rural and urban areas of the County, promoting diversification in the economy.
ENVIRONMENTAL
9. To protect, conserve and enhance Gloucestershire's biodiversity, natural environment, landscape and tourist assets including the historic environment.
10. To prevent flooding, in particular preventing inappropriate development in the floodplain and to ensure that development does not compromise sustainable sources of water supply.
11. To protect and enhance Gloucestershire's environment – (the land, the air and water) from pollution and to apply the precautionary principle.
12. To reduce the adverse impacts of lorry traffic on communities, through reducing the need to travel, promoting more sustainable means of transport (including through sensitive routing and the use of sustainable alternative fuels) and to promote the management of waste in one of the nearest appropriate installations.
13. To restore mineral sites to a high standard in order to achieve the maximum environmental and nature conservation benefits.
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, Dispose) to achieve the sustainable management of waste.
15. To reduce contributions to and to adapt to Climate Change.

8. Next Steps

8.1 A key part of the SA process is the testing of plan objectives against those of the SA Framework (Stage B of ODPM Guidance). As plan objectives are developed they will be tested and this will inform and influence the development of options.

8.2 The purpose of the emerging MWDF is to facilitate the adequate supply of minerals for local and national need in a sustainable way, and to ensure the sustainable management of waste. The SA Objectives in Table 15 (above) will help to assess the implications of emerging plan objectives.

8.3 The original SA Context and Scoping Reports went out for consultation for 5 weeks (25th August to 29th September 2005) and have been amended to reflect the views of stakeholders and the latest ODPM Guidance on SA. The baseline element of this report has also been amended following consultants peer review. Allied with the revised Context Report it now provides the basis for undertaking the SA of the MWDF DPDs and SPD.

8.4 The Minerals and Waste Core Strategies and the Waste Minimisation SPD have been identified in the Development Scheme as the first part of the Development Framework that is subject to SA. (See Appendix 1).

8.5 A range of strategies, scenarios and policies will need to be tested through the SA Framework. These may include:

- Existing strategy and policies continued over the next plan period;
- A 'without the plan' scenario;
- Considering a range of alternatives in light of emerging regional and national policy.

8.6 SA Reports will be made available when parts of the M&WDF subject to SA are made available for consultation during pre-submission and submission stages of the plan making process. The Minerals and Waste Local Development Scheme (M&WLDS) timeframe is appended which indicates at which stages SA reports will be made available (See Appendix 1).

8.7 The appraisal process will offer mitigation measures based on the following hierarchy: avoid, mitigate, enhance and compensate. The SA process is likely to raise a number of questions, areas of risk and uncertainties, which will require action and resolution.

8.8 SA is not considered to be a one-off process and the Framework will need to be kept under review to inform plan making and guide the monitoring and implementation of polices. It should be noted that the SA Framework will be adapted accordingly, to consider strategic policy implications as well as site specific matters, particularly at the site allocation stage of the Framework. (The Minerals Site Allocation DPD is scheduled for commencement in the Summer of 2008 and the Waste Site Allocation DPD for the Summer / Autumn of 2010). In particular the level of baseline data required to assess sites comprehensively will need to be revisited. There is the need for a rolling programme to up-date data sets to address gaps in knowledge identified from the outset.

9. Further Information

1. Gloucestershire Minerals and Waste Development Framework

Please contact:
Kevin Phillips
Minerals and Waste Policy Team Leader

Telephone: 01452 427979
Email: Kevin.Phillips@gloucestershire.gov.uk

Information relating to adopted Minerals and Waste Local Plans and the emerging M&WDF can be found at the following website:
http://www.gloucestershire.gov.uk/index.cfm?articleid=1405

2. Sustainability Appraisal

For further information relating to the development and implementation of the SA Framework please contact:
David Ingleby
Planning Officer

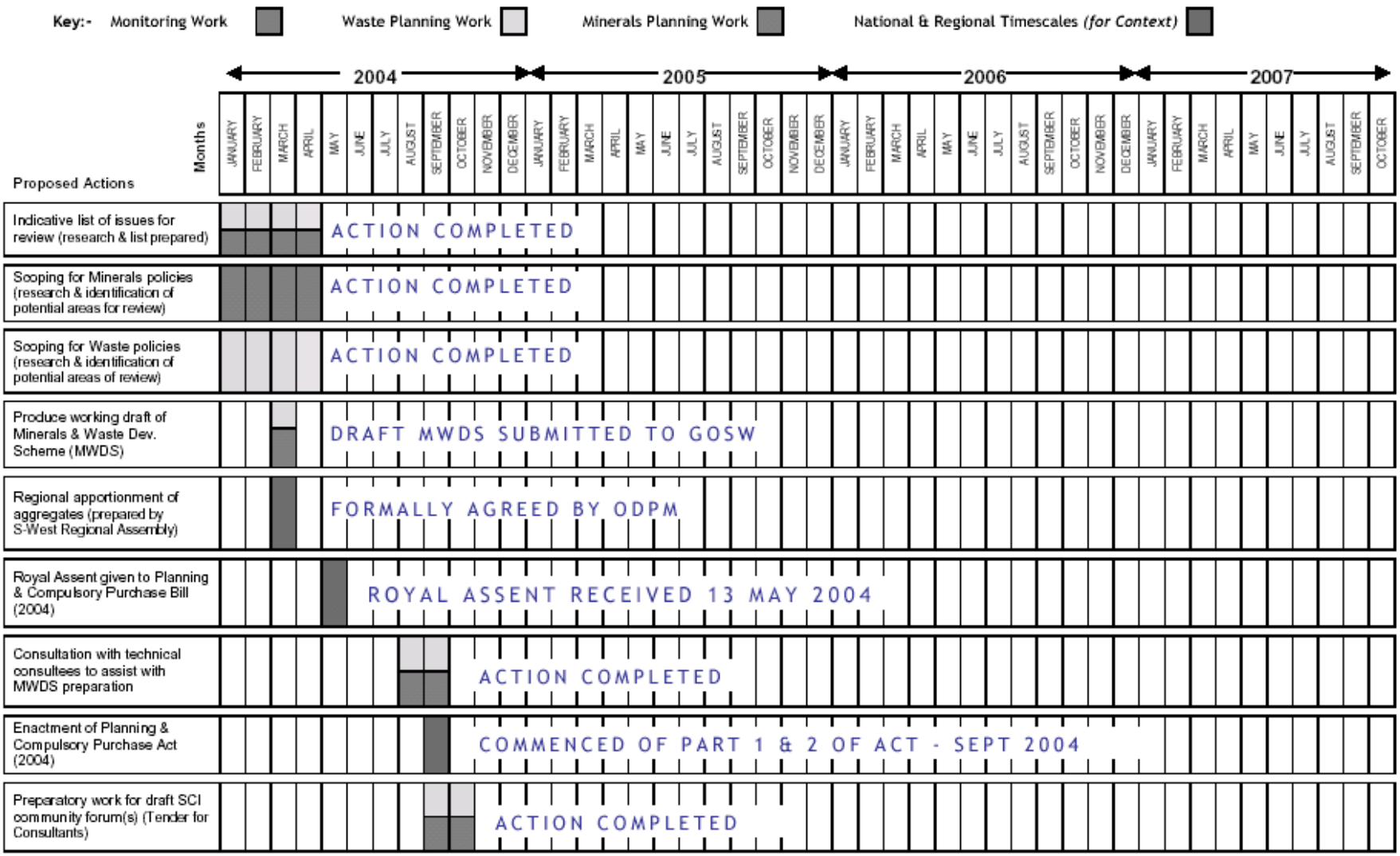
Telephone: 01452 426338
Email: david.ingleby@gloucestershire.gov.uk

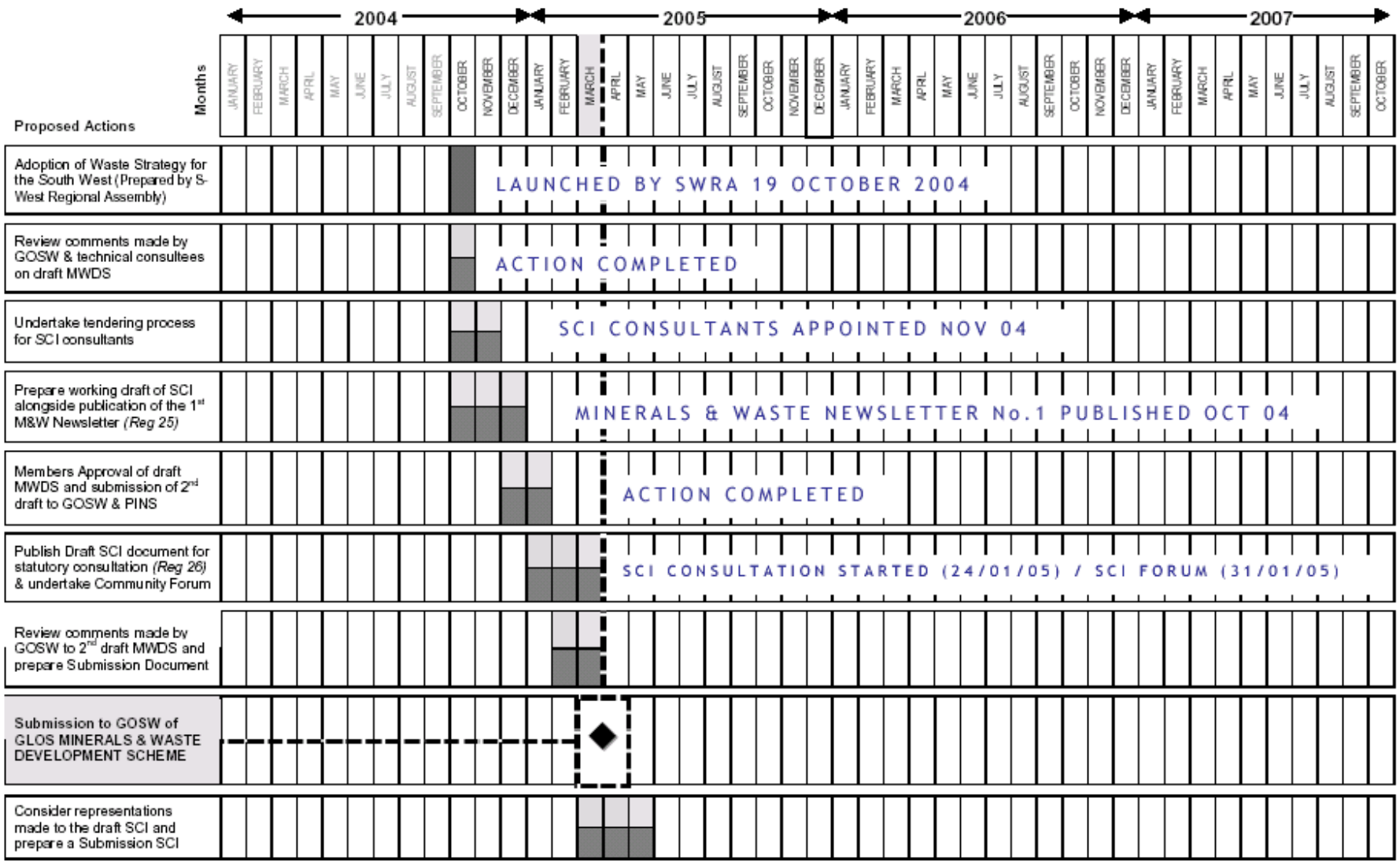
3. Useful Websites and Guidance related to the SA Process

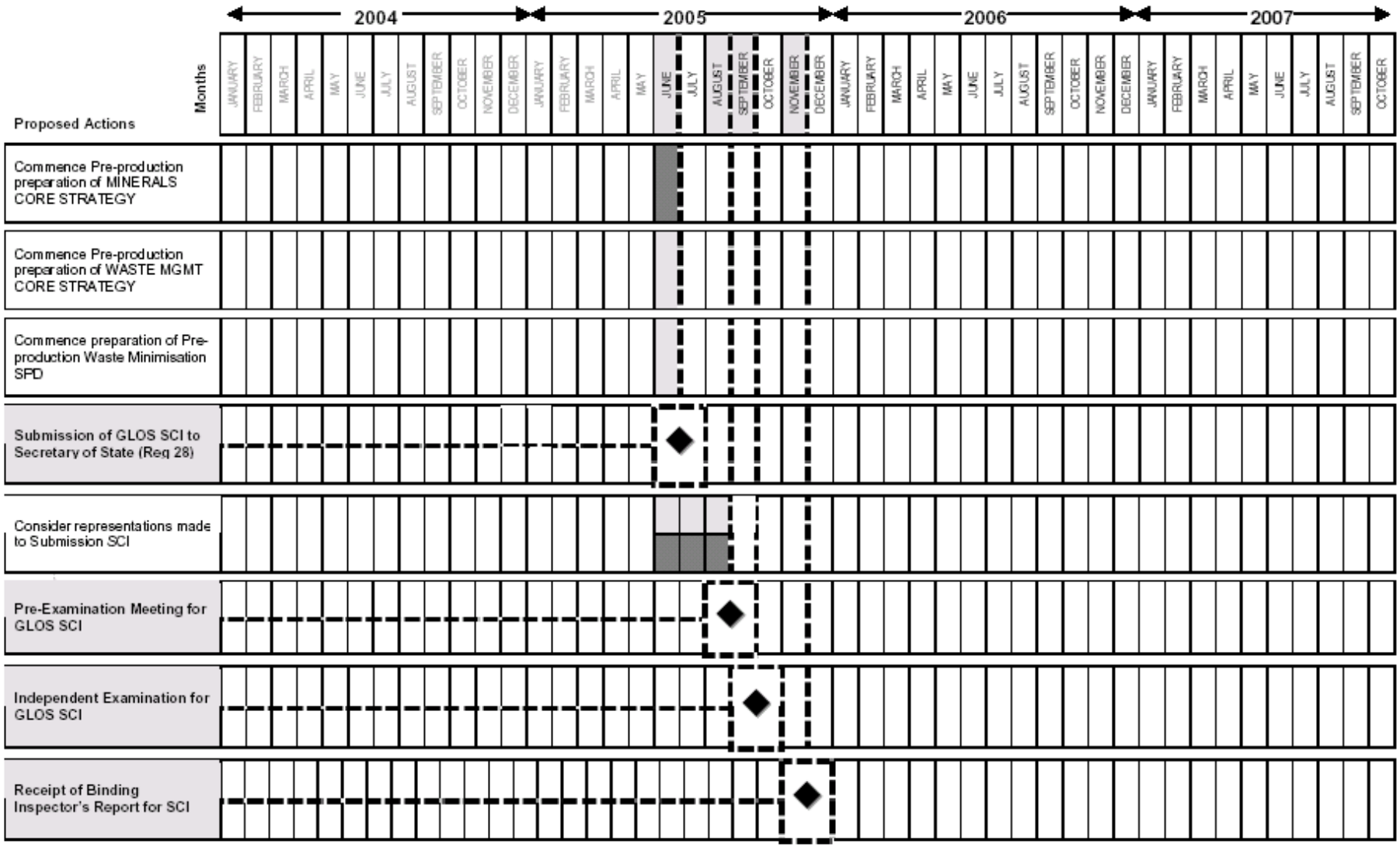
Office of the Deputy Prime Minister (ODPM) http://www.odpm.gov.uk to access the following useful documents:

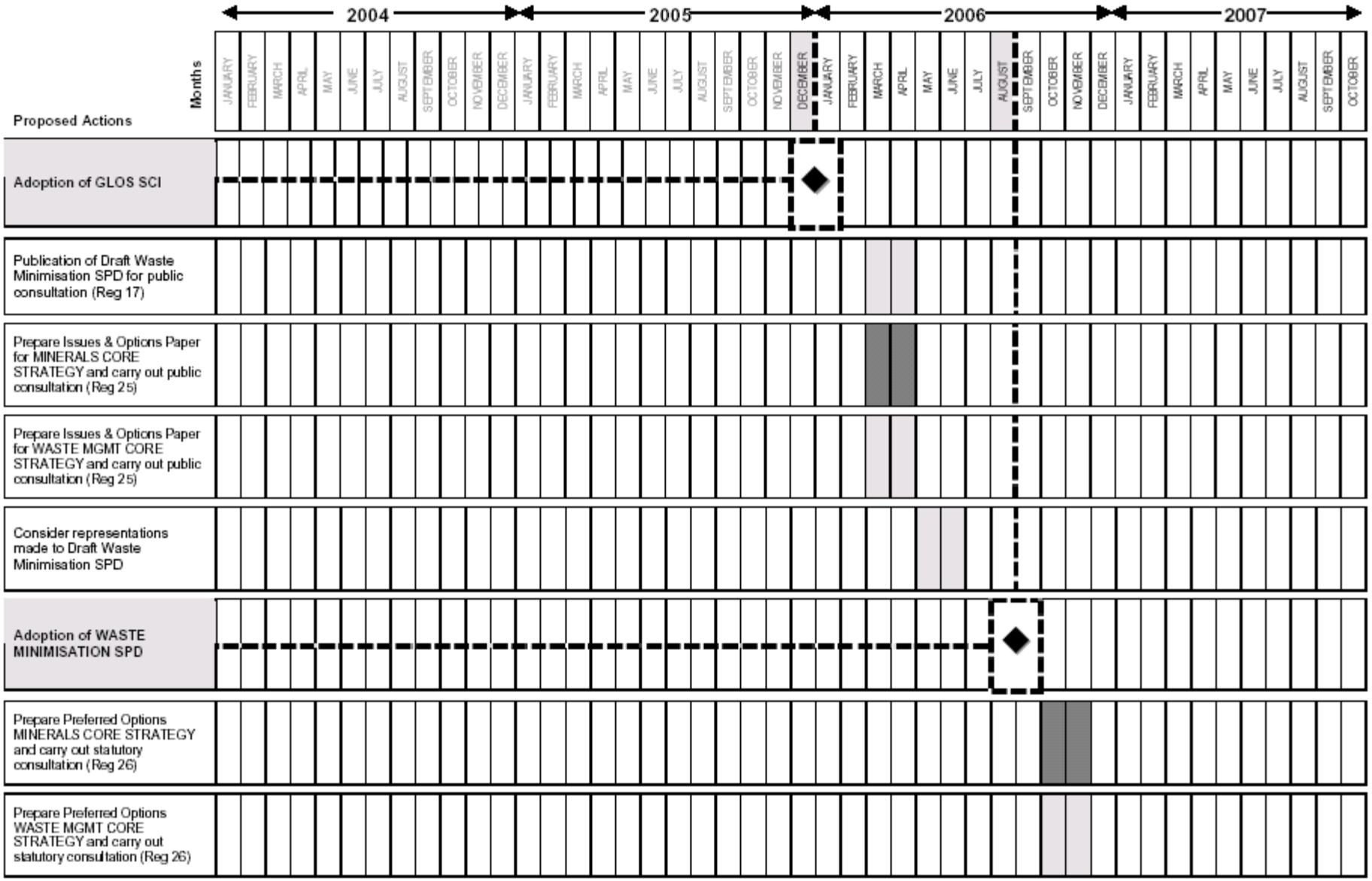
- The SEA Directive: Guidance to Planning Authorities.
- ODPM (November 2005) Sustainability Appraisal of Regional Spatial Strategies and Local Development Frameworks.
- Planning Policy Statement 12: Local Development Frameworks.
- Creating Local Development Frameworks: A Companion Guide to PPS12.

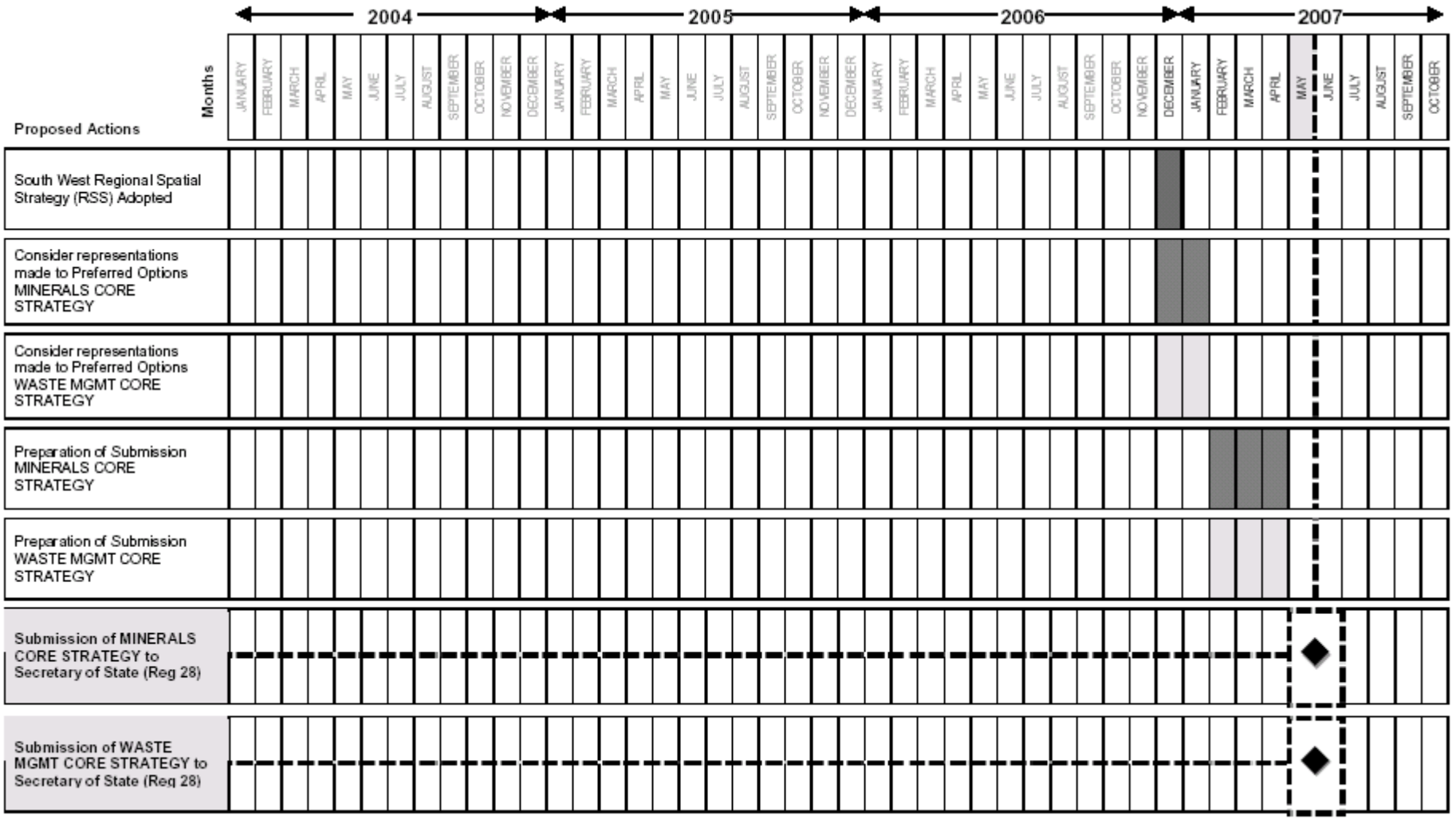
Appendix 1. Minerals and Waste Development Detailed Timeframe (From Minerals & Waste Development Scheme April 2005)

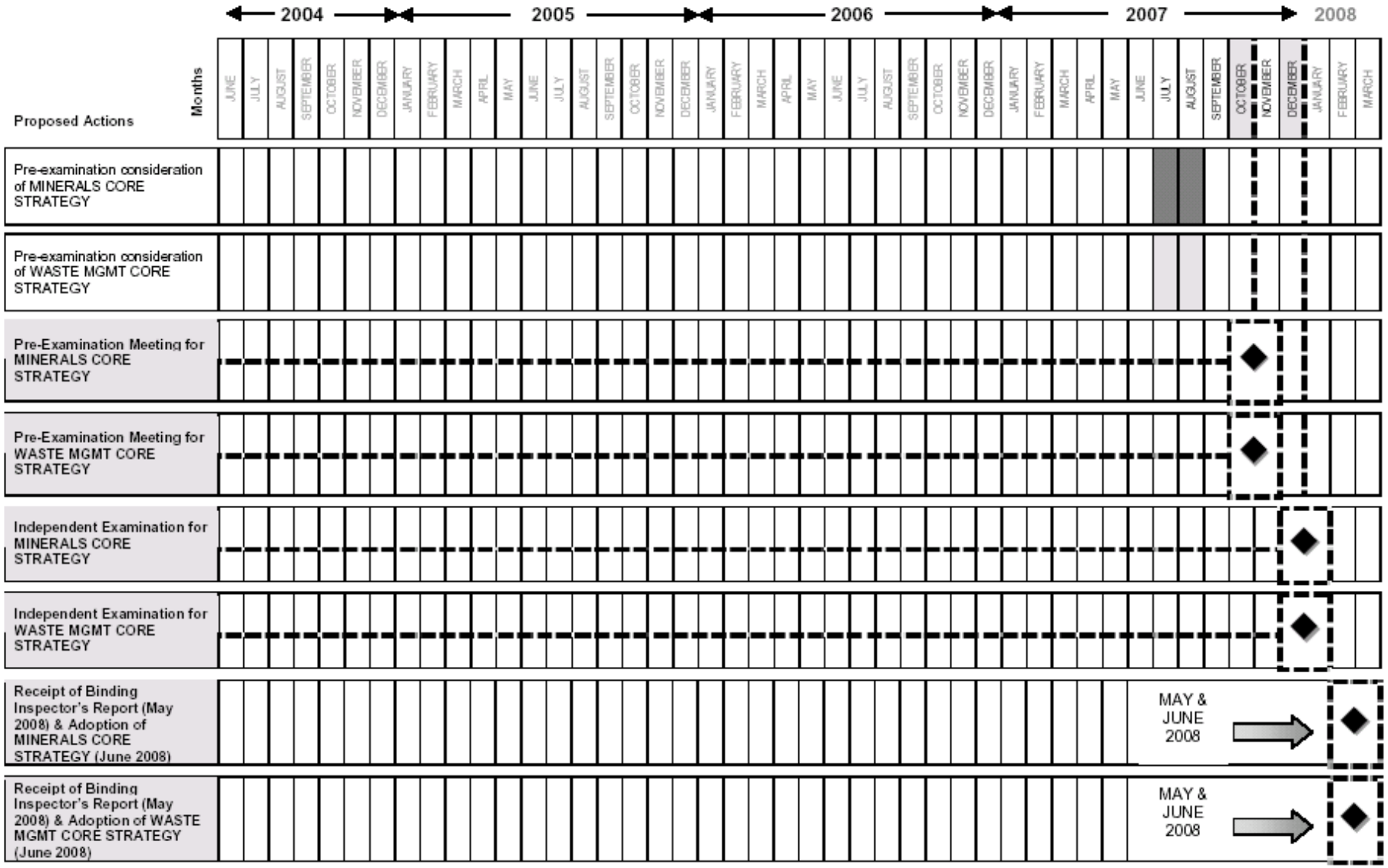



2004
2005
2006
2007
Months
JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY AUGUST SEPTEMBER OCTOBER NOVEMBER DECEMBER JANUARY FEBRUARY MARCH APRIL MAY JUNE JULY AUGUST SEPTEMBER OCTOBER
Proposed Actions
Adoption of Waste Strategy for the South West (Prepared by S-West Regional Assembly)
LAUNCHED BY SWRA 19 OCTOBER 2004
Review comments made by GOSW & technical consultees on draft MWDS
ACTION COMPLETED
Undertake tendering process for SCI consultants
SCI CONSULTANTS APPOINTED NOV 04
Prepare working draft of SCI alongside publication of the 1st M&W Newsletter (Reg 25)
MINERALS & WASTE NEWSLETTER No.1 PUBLISHED OCT 04
Members Approval of draft MWDS and submission of 2nd draft to GOSW & PINS
ACTION COMPLETED
Publish Draft SCI document for statutory consultation (Reg 26) & undertake Community Forum
SCI CONSULTATION STARTED (24/01/05) / SCI FORUM (31/01/05)
Review comments made by GOSW to 2nd draft MWDS and prepare Submission Document
Submission to GOSW of GLOS MINERALS & WASTE DEVELOPMENT SCHEME
Consider representations made to the draft SCI and prepare a Submission SCI


2004
2005
2006
2007
Months
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
Proposed Actions
Commence Pre-production preparation of MINERALS CORE STRATEGY
Commence Pre-production preparation of WASTE MGMT CORE STRATEGY
Commence preparation of Pre-production Waste Minimisation SPD
Submission of GLOS SCI to Secretary of State (Reg 28)
Consider representations made to Submission SCI
Pre-Examination Meeting for GLOS SCI
Independent Examination for GLOS SCI
Receipt of Binding Inspector's Report for SCI


2004
2005
2006
2007
Months
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
Proposed Actions
Adoption of GLOS SCI
Publication of Draft Waste Minimisation SPD for public consultation (Reg 17)
Prepare Issues & Options Paper for MINERALS CORE STRATEGY and carry out public consultation (Reg 25)
Prepare Issues & Options Paper for WASTE MGMT CORE STRATEGY and carry out public consultation (Reg 25)
Consider representations made to Draft Waste Minimisation SPD
Adoption of WASTE MINIMISATION SPD
Prepare Preferred Options MINERALS CORE STRATEGY and carry out statutory consultation (Reg 26)
Prepare Preferred Options WASTE MGMT CORE STRATEGY and carry out statutory consultation (Reg 26)


2004
2005
2006
2007
Months
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
Proposed Actions
South West Regional Spatial Strategy (RSS) Adopted
Consider representations made to Preferred Options MINERALS CORE STRATEGY
Consider representations made to Preferred Options WASTE MGMT CORE STRATEGY
Preparation of Submission MINERALS CORE STRATEGY
Preparation of Submission WASTE MGMT CORE STRATEGY
Submission of MINERALS CORE STRATEGY to Secretary of State (Reg 28)
Submission of WASTE MGMT CORE STRATEGY to Secretary of State (Reg 28)


2004
2005
2006
2007
2008
Months
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
Proposed Actions
Pre-examination consideration of MINERALS CORE STRATEGY
Pre-examination consideration of WASTE MGMT CORE STRATEGY
Pre-Examination Meeting for MINERALS CORE STRATEGY
Pre-Examination Meeting for WASTE MGMT CORE STRATEGY
Independent Examination for MINERALS CORE STRATEGY
Independent Examination for WASTE MGMT CORE STRATEGY
Receipt of Binding Inspector's Report (May 2008) & Adoption of MINERALS CORE STRATEGY (June 2008)
MAY & JUNE 2008
Receipt of Binding Inspector's Report (May 2008) & Adoption of WASTE MGMT CORE STRATEGY (June 2008)
MAY & JUNE 2008

DEVELOPMENT CONTROL DPD	Preparation is scheduled to begin in 2008
MINERALS SITE ALLOCATIONS DPD	Preparation is scheduled to begin in 2008
WASTE SITES ALLOCATIONS DPD	Preparation is scheduled to begin in 2010 +

Appendix 2. Minerals and Waste Annual Monitoring Report Objectives

Monitoring Objectives		Related Policies from the Adopted Minerals & Waste Local Plans
General		
1	To safeguard natural and historic environmental assets from the potential adverse impacts of minerals and waste developments.	MLP Policies – E1, E2, E3, E4, E5, E6, E7, E8, E9, E10, E11, E12 WLP Policies – 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 43
2	To safeguard local communities, public amenity and health from the potential adverse impacts of minerals and waste developments.	MLP Policies – DC1, DC4, E17, E18, E19, E20, EM1, EM2, EM4, EM6 WLP Policies – 17, 37, 38, 40, 41, 43, 44, 45
3	To ensure that appropriate reclamation, re-instatement and environmental enhancement schemes have take place for worked-out and / or discontinued mineral and waste sites.	MLP Policies – R1, R2, R3, R4 WLP Policies – 42, 43
4	To encourage the more efficient use of minerals and waste materials during development and re-development.	WLP Policies – 36
5	To safeguard existing and future minerals and waste resources from non-minerals developments.	MLP Policies – SE3, E21 WLP Policy – 7
Minerals-related		
6	To ensure the consistent and appropriate landbank provision and supply of aggregates in line with the regional guidelines set out in MPG 6.	MLP Policies A1, A2, A3, A4, A5, A6, A7
7	To facilitate the continued and sustainable supply of locally required building stone materials.	MLP Policy NE2
8	To facilitate the continued and sustainable supply of clay minerals.	MLP Policy NE1
Waste-related		
9	To ensure all new waste management facilities make a positive contribution towards developing an integrated and sustainable waste management system.	WLP Policies 1, 2, 3, 6

10	To facilitate the development of a strategic and local network of waste management facilities in line with the provision identified in the WLP.	WLP Policies 4, 5
11	To facilitate the development of a range of waste management facilities that will contribute towards an integrated waste management system.	WLP Policies 6, 8, 9, 10, 12, 13, 14, 15, 16, 18, 19, 20, 21, 22

Appendix 3. Baseline Data

SEA Directive requirements in relation to baseline: The 'Environmental Report' required under the SEA Directive should include:
- **"the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme"**
- **" the environmental characteristics of areas likely to be significantly affected" (Annex 1 (b) and (c))**

Headline Objectives

U.I **Under Investigation - no data at the present time**

✱ (For Annual Monitoring Report Objectives: see Appendix 2)

Indicator	Figures for Gloucestershire	Comparators and Targets	Trend	Commentary – (Including likely evolution without plan implementation)	Source	Quality of Data 1= high 3=low
1. To promote development that is socially, economically and environmentally sustainable.						
New Homes Built on Previously Developed Land	85% of all completions in the 15-month period of 01.01.2003 to 01.04.2004. 68% of commitments at 01.04.2004.	The Government target is 50% as defined in PPG3.	79% of completions 65% of commitments in 2002. 70% of completions 64% of commitments in 2001. 57% of completions 60% of commitments in 2000. A positive trend for Gloucestershire, but the averages conceal a wide variation among Districts.	The likely evolution without the plan implementation is unclear in relation to this indicator. However, it is clear that previously developed land is also favoured for some waste operations.	Gloucestershire Housing Monitor (2004).	1.

2. To give the opportunity to everyone to live in an affordable and sustainably designed and constructed home.						
Projected Population Growth	County population of 568, 500 (mid 2003).	Increase is 1.52 times the rate for England as a whole (4%).	6.1% increase 1991-2003 (541,330 – 566977). Projected net increase to 2026 4.24% (24,000 persons). Proportion of pensioners in the county increased by 5 percentage points to 20.3% between 1991 and 2003. Increasing dependency ratio (42% by 2026) Persons @ 65+ per 100 people of working age in SW Region.	The likely evolution without the plan implementation is unclear in relation to projected population growth. The plan will have little / no influence on population increase.	The Gloucestershire Story (2005) – produced by GCC Environment Directorate Research Team.	1.
Average House Prices	£200,477 (Q1 2005).	England & Wales: £183,486 10.27% Increase (2004-5). SW: £196,819 9/7% increase (2004-5).	9.68% increase 2004-05. 81.5% increase from £95,430 (1999).	The likely evolution without the plan implementation is unclear, but without robust minerals and waste plans building costs could increase should there be a shortfall in materials.	H.M Land Registry (2005).	2.
Projected Housing Need	35,200 additional houses required by 2026.	Projected shortfall of 9,000 homes by 2016.	Uneven distribution of housing need. Falling household sizes. Increasing rate of household formation.	Without mineral plan implementation it is possible that there could be a shortfall in construction materials for housing and infrastructure – or increased costs.	The Gloucestershire Story (2005) – produced by GCC Environment Directorate Research Team.	1.
Number of Unfit Homes per 1,000	Gloucestershire = 50.74	England = 55.89	No clear trend.	Unclear evolution without	Audit Commission QOL Indicators.	2.

Dwellings				implementation of plans.	(paul.lewis@gloucestershire.gov.uk)	
Provision of 'Affordable' Housing Units	Affordable housing for Gloucestershire: Capacity as of 01/04/2004 = 5916. Net Completions in 2003/4 = 473.	/	Capacity at 01.01.2001 = 1135. Net Completions in 2002 = 277.	The likely evolution without the plan implementation is unclear, but without robust minerals and waste plans building costs could increase should there be a shortfall in materials.	Figures provided by (GE) of GCC Environment Directorate Research Team.	2.
Earnings / House Price Affordability Ratio	8.7 (2003). All Districts within Gloucestershire have seen a reduction in the affordability of their housing. The Cotswolds have seen the greatest reduction in affordability = an increase in the ratio from 9.5 in 1999 to 13.8 in 2003. Cheltenham Borough has seen the lowest reduction = 5.5 in 1999 to 7.8 in 2003.	UK Average 3.40 (2003).	Increase from 5.7 in 1999. ▪ Houses becoming unaffordable to a greater proportion of the County's population. ▪ In-migration from SE acting as price driver. ▪ Second (holiday) homes are a possible price driver. ▪ The Cotswolds is one of the most expensive property areas in the country.	The likely evolution without the plan implementation is unclear, but without robust minerals and waste plans building costs could increase should there be a shortfall in materials – this might increase house prices and thus have an impact on affordability.	The Gloucestershire Story (2005) – produced by GCC Environment Directorate Research Team.	2.

3. To safeguard sites for the location of waste management facilities, or future mineral development from other proposed development.						
Strategic Sites (Schedule 1) in the Adopted Waste Local Plan ✱ (Link to Monitoring Objectives 5, 10 & 11) (For mapped information on this Indicator see Appendix 7)	5 Strategic sites and 1 site which is ancillary to a Strategic site. ▪ Wingmoor Farm West. ▪ Wingmoor Farm East. ▪ Sudmeadow – Hempstead. ▪ Moreton Valence Industrial Estate. ▪ Sharpness Docks.	/	Only 3 sites have current waste management operations.	Strategic waste sites are identified as appropriate for larger scale waste management facilities. Without plan implementation these sites may attract other forms of development to the	Adopted Waste Local Plan (2004).	1.

7)	▪ Netheridge (ancillary to Sharpness).			detriment of sustainable waste management in the County.		
Local Sites (Schedule 2) in the Adopted Waste Local Plan ✱ (Link to Monitoring Objectives 5, 10, 11 & 12)	15 Local Sites in the Waste Local Plan.	/	A trend in Gloucestershire is that increasingly proposals for waste management are not on preferred sites. In 2004 –2005 44 waste proposals were submitted / determined, only 6 (13.6%) were on WLP preferred sites. 29 (66%) were existing waste facilities and 9 (20.4%) were new waste facilities.	Local waste sites are identified as appropriate for certain waste management facilities. Without plan implementation these sites may attract other forms of development to the detriment of sustainable waste management in the County.	Adopted Waste Local Plan (2004). Minerals & Waste AMR (2004 –2005).	1.
Preferred Areas in the Adopted Minerals Local Plan ✱ (Link to Monitoring Objectives 5, 6, 7 & 8) (For mapped information on this Indicator see Appendix 7)	Stowe Hill / Clearwell (Crushed Rock – Forest of Dean) Drybrook (Crushed Rock - Forest of Dean) Stowfield (Crushed Rock Forest of Dean) Daglingworth (Crushed Rock - Cotswolds) Huntsman's (Crushed Rock – Cotswolds) Dryleaze Farm (Sand & Gravel) Cerney Wick (Sand & Gravel) Horcott / Lady Lamb Farm (Sand & Gravel) Kempsford / Whelford (Sand & Gravel)	/	The total estimated mineral yield for crushed rock from MLP preferred areas is 8mt. The total estimated mineral yield for sand and gravel from MLP preferred areas is 11.25mt. (See detailed caveats in AMR pg.32).	Without the implementation of the plan there are implications for meeting provision.	Adopted Minerals Local Plan (2003). Minerals & Waste AMR (2004 –2005).	1.
Mineral Consultation Areas (MCAs) in the Adopted Minerals	Currently there is a MCA to safeguard the sand and gravel resources of the	/	Potential in the County for other MCAs to be defined.	Without the implementation of the plan there are	Adopted Minerals Local Plan (2003).	1.

Local Plan ✱ (Link to Monitoring Objective 5)	Upper Thames Valley.			implications for MCAs.		

4. To protect and improve the health and well being of people living in Gloucestershire as well as visitors to the County.						
Average Life Expectancy ✱ (Link to Monitoring Objective 2)	2000 (2002 figures) Men = 77.3 Women = 81.6	Gloucestershire's figure is slightly higher than the national average which is: Men = 75.9 Women = 80.6	/	Not clear.	Gloucestershire Population Monitor 2005.	2.
% Population with Limiting Long-Term Illness ✱ (Link to Monitoring Objective 2)	16.1%	SW: 18.1% England: 17.9%	/	Not clear.	Census 2001 SWO.	3.
% Of People Describing their Health as not Good ✱ (Link to Monitoring Objective 2)	42,743 of the County's population (568, 500 in mid 2003) - about 7% described their health as 'not good' over the 12 months leading up to the 2001 Census night.	/	/	Not clear.	The Gloucestershire Story (2005) – produced by GCC Environment Directorate Research Team.	3.

5. To contribute to a strong and sustainable Gloucestershire which provides excellent opportunities for education, economic development, employment and recreation to people from all social and ethnic backgrounds.						
GVA per Capita	£15,940 per capita.	England £15,633. SW £14,286. 4th highest of SW NUTS areas.	51% increase 1995-2002. 43% increase England.	The likely evolution without the plan implementation is that there could be a negative impact on the economy. Minerals are needed by society for a variety of uses and waste needs to be efficiently managed and reduced.	The Gloucestershire Story (2005) – produced by GCC Environment Directorate Research Team.	3.
Index of Multiple Deprivation	6% of Gloucestershire's Super Output Areas are ranked in the most deprived 20% nationally. 6 of Gloucestershire's SOAs are in the most deprived 10% nationally.	5 of the most deprived SOA's (nationally) are in Gloucester, 1 is in Cheltenham.	The trend is unclear.	Unclear.	Index of Multiple Deprivation (ODPM). www.odpm.gov.uk	2.
% of Workforce with NVQ Level 3 Qualification and Above	46%	SW: 43.5% E&W: 45.0%	/	Unclear.	Department for Education & Skills. www.dfes.gov.uk Available in Gloucestershire Brief.	2.
% of Workforce with no Academic / Vocational or Professional Qualifications	8.2%	SW: 26.2% E&W: 29.1%	/	Unclear.	Department for Education & Skills. www.dfes.gov.uk Available in Gloucestershire Brief.	2.
Proportion of Students Achieving 5+ GCSEs at Grade A -C	60.7%	3rd highest in SW Region England: 53.4%	Steady increase from 56.1% in 1999	Unclear.	Department for Education & Skills. http://www.dfes.gov.uk/rsgateway/LEAS/916.shtml	2.

6. To safeguard the amenity of local communities from potential adverse impacts of minerals and waste development.						
No. of Houses within (xx) km of Preferred Minerals Sites ✱ (Link to Monitoring Objective 2)	U.I Requires GIS Calculation	U.I	U.I	U.I	/	/
No. of Houses within (xx) km of Preferred Waste Sites ✱ (Link to Monitoring Objective 2)	U.I Requires GIS Calculation	U.I	U.I	U.I	/	/
No. of Roads with Weight Restrictions ✱ (Link to Monitoring Objective 2)	U.I Requires GIS Calculation	U.I	U.I	U.I	/	/
No. of Inquiries / Complaints to County Council Enforcement ✱ (Link to Monitoring Objective 2)	In 2004 = 197 inquiries / Complaints. 121 – (61%) were resolved by December 2004) 162 – (82%) were related to planning conditions) 35 – (17.8%) were related to other matters e.g. illegal tipping etc. 9 – (4.6%) resulted in formal action e.g. through the use of stop notices.	/	/	The purpose of minerals and waste plans is to make provision for needed materials and facilities, whilst protecting amenity and the environment. The likely evolution without the plan implementation is that problematic / illegal development will increase.	Gloucestershire County Council Enforcement Team Data (2004).	1.

7. To conserve minerals resources from inappropriate development whilst providing for the supply of aggregates and other minerals sufficient for the needs of society.						
Crushed Rock Limestone Reserves ✱ (Link to Monitoring Objective 6)	27.85 M Tonnes. (As of 31st December 2003).	/	Expected contribution to meet SW Regional apportionment will contribute to deplete reserves.	Without the plan implementation, there may be doubts over Gloucestershire's contributions to regional apportionment.	Minerals Local Plan & 2003 Annual Minerals Monitoring Report.	2.
Non-Aggregate	4.07M Tonnes reserve.	/	/	Without the plan	Minerals Local Plan &	2.

Limestone (Building stone & Agricultural Lime) Reserves ✱ (Link to Monitoring Objective 7)	(As of 31st December 2003).			implementation, there may be doubts over the sustainable supply of building stone, essential for maintaining the local vernacular in e.g. Cotswold villages.	2003 Annual Minerals Monitoring Report.	
Sand & Gravel Reserves ✱ (Link to Monitoring Objective 6)	Sand = 5.29 M Tonnes. Gravel = 4,12 M Tonnes. Total = 9.41 M Tonnes. (As of 31st December 2003).	/	/	Without the plan implementation, there may be doubts over Gloucestershire's ability to contribute to regional apportionment.	Minerals Local Plan & 2003 Annual Minerals Monitoring Report.	2.
Non-Aggregate Sandstone Reserves ✱ (Link to Monitoring Objective 6)	0.58 M Tonnes (As of 31st December 2003).	/	/	Possible issues over supply / control of development.	Minerals Local Plan & 2003 Annual Minerals Monitoring Report.	2.
Clay Minerals Reserves ✱ (Link to Monitoring Objective 8)	1M Tonnes (made up of clay and colliery shale). (As of 31st December 2003).	/	/	Possible issues of supply / control of development.	Minerals Local Plan & 2003 Annual Minerals Monitoring Report.	2.
8. To provide employment opportunities in both rural and urban areas of the County, promoting diversification in the economy.						
Seasonally Adjusted Unemployment Rate	Gloucestershire = 4.1%.	SW: 3.5%. GB: 5.0%. (There are various ways of calculating the employment rate - need to verify that the figures are comparable).	37.5% decrease in rate (1998-2004) UK: 38.3%	Non – implementation of the plan may have an impact on minerals and waste related employment.	Labour Force Survey. www.nomisweb.co.uk The Gloucestershire Story (2005).	3.
LTU (Claiming Benefits and out of Work for 12 months+) as % of Overall	Gloucestershire = 13.43%.	England: 15.17%.	1999: 22.43%	Non – implementation of the plan may have an impact on minerals	Labour Force Survey www.nomisweb.co.uk	3.

Unemployed				and waste related employment.		
Stock of VAT Registered Business	21,385 (2003). 11.47% Increase (1994/03).	England: 12.15% (1994/03).	Gloucestershire has a generally smaller increase than the UK average but it mirrors national trends.	Unclear.	The Gloucestershire Story (2005) – produced by GCC Environment Directorate Research Team	3.

9. To protect, conserve and enhance Gloucestershire's biodiversity, natural environment, landscape and tourist assets including the historic environment.						
Number of SSSI ✱ (Link to Monitoring Objective 1) (For mapped information on this Indicator see Appendix 7)	122 sites.	Almost one fifth of English SSSI are in the SW.	106 covering 4039.4 Ha (1996). 122 covering 5496.18 Ha (1999).	The purpose of minerals and waste plans is to provide for the needs of society (i.e. minerals which we all use, and facilities for the handling waste that we all produce). At the same time plans contain policies which protect sensitive environmental designations. Without these plans it is likely that environmental designations would be damaged by un-regulated development.	County Ecologist / English Nature (2005)	2.
% of SSSI in a Good / Favourable Condition ✱ (Link to Monitoring Objective 1)	Total number of sites = 121 % of area in favourable condition = 79.27 % of are in unfavourable but recovering condition = 2.85 % of area unfavourable with no change = 13.94 % of area unfavourable and declining = 3.94	/	*These figures do not represent an increase from the 1999 figure, but it is anticipated that there will be a decline in the area in favourable condition as a result of more stringent assessment guidelines.*	As above.	Figure from English Nature (2005).	2.

Landscape Character Areas in Gloucestershire ✱ (Link to Monitoring Objective 1)	There are 33 Landscape Character Areas in Gloucestershire: 1. Wooded Valleys, 2. Limestone Hills 3. Limestone Plateau 4. Wooded Scarp and Lower Scarp Slopes 5. Wooded Syncline and Settled Forest Margin 6. Unwooded Vale 7. Drained Riverine Farmland & Grazed Saltmarsh 8. Littoral Sands and Rock Outcrops 9. Undulating Farmland 10. Ridges and Valleys 11. Wooded Hills. 12. Floodplain Farmland 13. Vale Hillocks 14. Low Hills and Orchards 15. Undulating Hill Farmland 16. River Meadows 17. Wooded Outlier 18. Settled Unwooded Vale 19. Farmed Slopes 20. Clay Vale 21. Broad Valley Floor Farmland 22. High Wold 23. High Wold Dipslope 24. Dip Slope Lowland 25. River Basin Lowland 26. Escarpment 27. Secluded Valleys 28. Escarpment Valleys 29 Low Sandstone Hills 30. Low Limestone Ridge 31. Gently Undulating Lowland Farmland 32. Low Wooded Hills 33. Urban.	/	/	Minerals and waste plans aim to provide for the needs of society (i.e. minerals which we all use, and facilities for the handling waste that we all produce). But in the process there may be damage to the landscape. But plans contain policies which aim to protect the landscape. Without these plans it is likely that environmental designations would be damaged by un-regulated development.	Gloucestershire Landscape Character Assessment (Draft – 2005)	2.
Extent of AONB ✱ (Link to Monitoring Objective 1) 🗎 (For mapped information on this Indicator see Appendix 7)	136,400Ha. (51% of County). 129,800Ha of AONB is in the Cotswolds.	My need more data on the extent of AONB that lies within 'change in countryside character' area.	/	Minerals and waste plans provide for the needs of society (i.e. minerals which we all use, and facilities for handling waste that we all produce). But in the process there may be damage to designations. But	County Ecologist (2005).	2.

				plans contain policies which aim to protect them. Without these plans it is likely that environmental designations would be damaged by un-regulated development.		
Change in Countryside Character (% of County Area) ✱ (Link to Monitoring Objective 1)	U.I Requires GIS Calculation.	U.I	U.I	U.I	English Nature 'State of the Countryside in the South West 2004.'	/
Area of Local Nature Reserves per 1000 of population ✱ (Link to Monitoring Objective 1)	0.4138 Ha (2003).	/	Up from 0.2112 Ha (1999).		County Ecologist (2005).	2.

Soils at Risk ✱ (Link to Monitoring Objective 1)	Soils in Gloucestershire listed as being vulnerable – with high or severe structural problems are: Sites on silstone and fine grained sandstone (Middle Lias) and (Triassic Landscapes). Such soils can be found in the far south west of the county, east of the River Severn, straddling the boundary with South Gloucestershire.	Nationally 2.3 million tonnes of agricultural soils was lost between 1995 and 1998 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.	/	Plans should have policies to protect soils at risk. Without such policies soils may increasingly be eroded/damaged.	South West Observatory website (2005). National Soil Resources Institute (2003).	2.
Agricultural Soils ✱ (Link to Monitoring Objective 1)	There is no current data on the qualities of soils in Gloucestershire specifically related to agriculture. However the following percentages are available for better/free draining soils: ▪ Freely draining acid loamy soils over rock = 2.55% ▪ Freely draining floodplain soils = 0.36% ▪ Freely draining lime-rich loamy soils =18% ▪ Freely draining slightly acid but base-rich soils = 2.55% ▪ Freely draining slightly acid loamy soils =11% ▪ Freely draining slightly acid sandy soils = 0.73%	The South West is the largest, most rural and most agricultural region in England with almost 20% of the total number of agricultural hectares in England.	/	Plans should have policies to protect and preserve high quality agricultural soils. Without such policies these soils could potentially be damaged / removed / sterilised by other development.	South West Observatory website (2005). Data from GCC Archaeology supplied by Cranfield.	2.
No. of Scheduled Ancient Monuments ✱ (Link to Monitoring Objective 1)	496 SAMs covering 1536.79Ha.	/	/	Minerals and waste development may potentially damage SAMs, but policies should ensure their protection. Non – implementation of the	County Archaeologist (2005).	1.

				plan may result in damage due to un-regulated / un-controlled / un-planned development.		
Extent of Conservation Areas ✱ (Link to Monitoring Objective 1)	264 Conservation Areas Covering 6233 Ha.	/	/	The same comments for SAMs apply to Conservation Areas.	County Archaeologist.	1.
No. of Listed Buildings ✱ (Link to Monitoring Objective 1)	12,860 Listed Buildings.	England has 30,491 buildings or groups of buildings listed Grade I and II*		The same comments for SAMs apply to Listed Buildings.	County Archaeologist & English Heritage Buildings at Risk Register 2005.	1.
No. of Listed Buildings on the 'at risk' Register ✱ (Link to Monitoring Objective 1)	There are 31 Grade 1 and Grade II* Listed Buildings in Gloucestershire on the English Heritage Buildings at Risk Register. Figures for Gloucestershire Districts on the number of listed buildings and structures 'at risk'. Gloucester: 47 of 700+ Listed Buildings. Cheltenham: 1 of 2,602 Listed Buildings. Stroud: [No data as yet]. Forest of Dean: 27 of (unknown) Listed Buildings. Tewkesbury: 208 of 1,800+ Listed Buildings. Cotswold: 196 of 6,496 Listed Structures.	In England 3.4% of Grade I and II* list entries – 1 in 30 – remain at risk of loss through neglect and decay. 1.9 – 2.4% at risk in the South West.	A probable negative trend i.e. more Listed Buildings are falling into the 'at risk' category.	The same comments for SAMs apply to Listed Buildings at risk.	English Heritage Buildings at Risk Register 2005.	1.
No. of Locally Important Archaeological Sites ✱ (Link to Monitoring Objective 1)	23,920 Locally Important Sites listed in the SMR (05/2005).	/	/	The same comments for SAMs apply to Locally Important Archaeological Sites.	County Archaeologist (2005).	1.

International Sites Protected under the Habitats Directive (92/43/EEC) ✱ (Link to Monitoring Objective 1)	Special Areas of Conservation (SACs) = 6/7 (2,739 Ha). 1.Cotswold Beechwoods 2.Dixton Wood 3.Rodborough Common 4.Wye Valley & Forest of Dean Bat Sites 5.River Wye Sites 6.Wye Valley Woodlands (7. North Meadow & Clattinger Farm – Wiltshire) RAMSAR = 2 (8,450 Ha). 1.Severn Estuary – (also designated in Gwent, Somerset & South Glamorgan) 2.Walmore Common.	In England there are currently 66 Ramsar sites. UK = 144. In England there are currently 228 SACs. UK = 608.	/	Minerals & waste development may potentially damage sensitive sites which are protected by law. The plan should ensure that such sites are fully protected. Non – implementation of the plan may result in damage as a result of to un-regulated / un-controlled / un-planned development.	County Ecologist (2005). Joint Nature Conservation Committee (2006).	1.
Species Protected under the Habitats Directive (92/43/EEC) ✱ (Link to Monitoring Objective 1)	Gloucestershire: - Otter – in reserves at Coombe Hill Meadows, Frome Banks, Greystones Farm. - Dormouse - are known to be present on at least 10 nature reserves. - Lesser Horseshoe Bat - Greater Horseshoe Bat - Pipistrelle Bat - Early Gentian (*Gentianella anglica)* recorded at Hornsleasow Roughs/Oldhill Plantation (nb. Early Gentian is on the waiting list in terms of the Vascular Plant Red Data List for Britain.	Otters in England between 2000 and 2002 a survey of 399 sites - 83% of which showed positive signs of otters (an increase of 24% since the last survey 1991 - 1994).	/	The same comments apply for Species as for Sites (above).	County Ecologist (2005). Gloucestershire Wildlife Trust. South West Observatory website (2005). Gloucestershire Environmental Data Unit (GEDU) (2005).	1.

Number of Key Wildlife Sites & their condition ✱ (Link to Monitoring Objective 1)	Key Wildlife Sites: 696 (12,845 Ha).	Targets for biodiversity are in the County BAP.	(No data currently available regarding the condition of Key Wildlife Sites, but this will be monitored).	The same comments apply for Key Wildlife Sites as for Habitats Directive Sites & Species.	County Ecologist (2005).	2.
Species Protected under the Birds Directive (79/409/EEC) ✱ (Link to Monitoring Objective 1)	Gloucestershire: - Avocet Annex 1 and WCA Schedule 1 birds that have been recorded within the administrative boundary of Gloucestershire = more than 60 bird species. To be confirmed by GEDU.	/	/	The same comments apply for Species Protected under the Birds Directive as for Habitats Directive Sites & Species.	County Ecologist (2005).	1.
Sites Protected under the Birds Directive (79/409/EEC) ✱ (Link to Monitoring Objective 1)	Special Protection Areas (SPA) / RAMSAR 1.Severn Estuary – (also designated in Gwent, Somerset & South Glamorgan) 2.Walmore Common.	(July 2005) SPAs in England = 77. SPAs in UK = 247.	/	The same comments apply for Sites Protected under the Birds Directive as for Habitats Directive Sites & Species.	County Ecologist (2005). Joint Nature Conservation Committee (2006).	1.
Declining Bird Species ✱ (Link to Monitoring Objective 1)	In the South West between 1994 and 2002: Farmland birds = down 9%, Woodland birds = little change. In the South West from 1979-2005: Starlings declined by 71%, House sparrow declined by 52%, Song thrush declined by 34%, Blackbirds declined	Targets are contained in the County BAP.	Trend = A decline in certain species.	(The same comments apply as above).	Gloucestershire BAP.	1.

	by 31%. Farmland birds in Gloucestershire: Skylark, Grey Partridge, Corn Bunting, Linnet, Reed Bunting, Tree Sparrow, Bullfinch, Turtle Dove, Song Thrush and Lapwing have all declined in Gloucestershire, reflecting a national decline in numbers. Other species of birds that have suffered dramatic declines include: Bittern, Nightjar, Woodlark and Spotted flycatcher.					

Reported Levels of Damage to Designated Sites / Species due to Development resulting from the Plan ✱ (Link to Monitoring Objective 1)	(Data to be added as a result of monitoring).	(Data to be added as a result of monitoring).	(Data to be added as a result of monitoring).	(Data to be added as a result of monitoring).	/	/
Achievement of BAP Targets due to Development resulting from the Plan ✱ (Link to Monitoring Objective 1)	(Data to be added as a result of monitoring).	(Data to be added as a result of monitoring).	(Data to be added as a result of monitoring).	(Data to be added as a result of monitoring).	/	/
Achievement of 'Accessible Natural Greenspace Standards' due to Development resulting from the Plan ✱ (Link to Monitoring Objective 1)	(Data to be added as a result of monitoring).	(Data to be added as a result of monitoring).	(Data to be added as a result of monitoring).	(Data to be added as a result of monitoring)	/	/
Number / area of Local Nature Reserves resulting from the Plan ✱ (Link to Monitoring Objective 1)	(Data to be added as a result of monitoring).	(Data to be added as a result of monitoring).	(Data to be added as a result of monitoring).	(Data to be added as a result of monitoring).	/	/
Extent of Old Orchards and their Condition ✱ (Link to Monitoring Objective 1)	Estimated 280 Ha (No data currently available regarding the specific condition of Old Orchards but this will be monitored).	75% of Gloucestershire's orchards have been lost in the past 50 years.	Loss has now stabilised, 3000 fruit trees planted since 1992. Old Orchards are a locally important feature of	Old Orchards may potentially be damaged as a result of minerals and waste development, but plan should	Defra Agricultural and Horticultural Census (2002) http://www.orchard-group.uklinux.net/glos/overview.html	2.

			Gloucestershire's landscape and the county is a nationally important area for their conservation. 'Old Orchards' are defined as follows: *"Sites with a continuous presence since before 1950 of fruit or nut trees on vigorous rootstocks and at traditional standard spacing, with a grass sward usually either grazed by livestock or cut for hay."*	contain policies to protect them. With the non-implementation of plans further orchards may be lost or damaged due to un-regulated / un-controlled / un-planned development.		
No. of Public Rights of Way (PROW) ✱ (Link to Monitoring Objective 1 & 2) (For mapped information on this Indicator see Appendix 7)	Approx 16,000 paths making up 9662 PROW.	/	/	PROW, or the public's enjoyment of them, may be lost or damaged as a result of minerals and waste development. But plan policies should afford them protection. Thus the non-implementation of plans may lead to damage to PROW as a result of un-regulated development.	PROW, Environment Dept, Gloucestershire County Council.	2.
PROW (Miles) ✱ (Link to Monitoring Objectives 1 & 2)	3397 miles in Gloucestershire.	/	/	(As above).	PROW, Environment Dept, Gloucestershire County Council	2.
% of Workforce Employed in Tourism	8% of Gloucestershire's overall workforce.	/	/	Tourist assets may be damaged by minerals and waste development. But, as in the case of the Cotswolds Water	2003 Gloucestershire Economic Impact Report pdf	2.

				Park, new opportunities can also be created. Plans should aim to protect tourist assets. If plans are not implemented un-regulated development may have detrimental impacts.		
Contribution of Tourism to the Local Economy	Tourism accounts for about £500 million spending per year in Gloucestershire and an estimated 11% of County employment is dependent on tourism.	8% of overall spend in SW region.	35% increase 2001-2003.	(As above).	2003 Gloucestershire Economic Impact Report pdf	3.

10. To prevent flooding, in particular preventing inappropriate development in the floodplain and to ensure that development does not compromise sustainable sources of water supply.						
% of County Area at Risk of Flooding & Numbers of Properties at Risk. ✱ (Link to Monitoring Objective 1) (For mapped information on this Indicator see Appendix 7)	Figures for other rivers are no available but for the River Severn around Gloucester the following applies: ▪ 300 properties (residential and commercial) at risk in a ▪ 1 in 100 annual chance event. ▪ Present value damages of 16 million. ▪ More information needed using GIS calculations / EA data for other areas of the County.	/	Most recent serious floods were in 2000, it is likely that as a result of climate change flooding will be an increasing problem in the County.	Without the implementation of the plan there is the possibility that waste development in particular could be inappropriately located.	River Severn at Gloucester study Environment Agency (December 2005).	/

Main water suppliers in Gloucestershire	Most of the County is supplied by Severn Trent Water. The following areas are supplied by Thames water: Cirencester, Burford, Stow on the Wold, Kineton, Withington, Sapperton, Rodmarton or Kemble. The Tetbury area is supplied by Bristol Water.	/	/	/	Gloucestershire County Council – People & Community webpage.	/
Rivers in Gloucestershire ✱ (Link to Monitoring Objective 1) (For mapped information on this Indicator see Appendix 7)	Cotswolds: Rivers: Churn, Coln, Windrush, Dikler, Eye, Sherborne Brook, Leach, Evenlode; (Upper Thames catchment) Frome, Slad Brook, Painswick Brook, Isbourne (Lower Severn Catchment) Thames and Avon Vales: Rivers: Thames, Coln, Churn, Ampney Brook (Upper Thames Catchment) Severn and Avon Vales: Rivers: Severn, Avon, Cam, Wicksters Brook, Little Avon River, Swilgate, Leadon, Chelt (Lower Severn Catchment). Dean Plateau and Wye Valley: Rivers: Wye; (several smaller brooks such as Cinderford Brook, Cannop Brook and Ell Brook drain the central Dean plateau and flow into the Wye or the Severn).	/	/	/	Gloucestershire Biodiversity Partnership (2005) http://www.swbiodiversity.org.uk/Habitats/Rivers/Rivers_glouc.htmT	2.

11. To protect Gloucestershire's environment – the land, the air and water from pollution and to apply the precautionary principle.						
Recorded 1 & 2 Level of Pollution Incidents Affecting Air, Land or Water ✱ (Link to Monitoring	No figures specifically relating to Gloucestershire. U.I	England & Wales: 2004: 114 Category 1 incidents - an increase of	Trend for the SW: Substantiated pollution incidents in the region have declined over the last	Minerals & waste development needs to be carefully controlled and regulated. People	State of the Environment in the South West (2005) Environment Agency.	2.

Objective 1)		almost 18% or 20 incidents on 2003). 594 Category 2 (a decrease of around 14% or 685 incidents on 2003). SW: 2004: 11 Category 1 incidents & 69 Category 2 incidents.	5 years - reducing by 10.5% on 2003 (3,952), by 19.5% on 2001 (4,393) and by over 30% since 2000 (5,117). Incidents from domestic & water industry sources have reduced in recent years, but there has been an increase in manufacturing related incidents – particularly Category 2.	and the environment need to be protected from potential pollution incidents. Without plan implementation minerals and waste development may not be appropriately located regulated or controlled.		
Level 1 & 2 Pollution Incidents Arising from Waste Management Facilities ✱ (Link to Monitoring Objectives 1 & 2)	No figures specifically relating to Gloucestershire. U.I	SW: 2004: Origin of Category 1 incidents: ▪ Agriculture: 3 ▪ Domestic / residential: 2 ▪ Manufacturing: 3 ▪ Waste management: 1 ▪ Not Specific: 2		(As above).	State of the Environment in the South West (2005) Environment Agency.	2.
% of Rivers of Good Biological Quality ✱ (Link to Monitoring Objectives 1 & 2)	Gloucestershire: 2004: 66.62%	SW: The number of rivers of good or fair (chemical & biological together) quality has improved by 4% (from 93% in 1990 to 97% in 2003). This is consistently above the English average.	In Gloucestershire there has been a decline in the percentage of rivers of 'good' biological quality from 68.53 in 1990.	(As above).	State of the Environment in the South West (2005) Environment Agency.	2.

% of Rivers of Good Chemical Quality ✱ (Link to Monitoring Objective 1)	Gloucestershire: 2004: 68.33%	(As above).	In Gloucestershire there has been a decline in the percentage of rivers of specifically 'good' chemical quality from 84.02% in 2001.	(As above).	State of the Environment in the South West (2005) Environment Agency.	2.
Flytipping Incidents ✱ (Link to Monitoring Objectives 1 & 2)	The combined figures for the 6 Districts in Gloucestershire April 2004 – December 2005: Total Sum of Single Item Incidents = 1056 Total Sum of Car Boot or Less Incidents = 1557 Total Sum of Small Van Load Incidents = 2628 Total Sum of Transit Van Load Incidents = 1464 Total Sum of Tipper Lorry Load Incidents = 1204 Total Sum of Significant Multiload Incidents = 47	/	April 2004 to March 2005 = on average over 88,500 fly tipping incidents were reported every month in England. April 2004 to March 2005 = 30,000 flytipping incidents were reported in the South West.	Without an effective and sustainable network of waste management facilities in the County it is likely that flytipping incidents will increase in number.	Flycapture Database Environment Agency (2006). South West Regional Observatory (2005).	1.

Air Quality ✱ (Link to Monitoring Objectives 1 & 2) (For mapped information on this Indicator see Appendix 7)	Gloucestershire Local Authorities: Averaged $N0^2$ background concentration for 2005: ▪ Gloucester: 22.6 ▪ Cheltenham: 19.5 ▪ Tewkesbury: 14.6 ▪ Stroud: 12.9 ▪ Cotswold: 12.8 ▪ Forest of Dean: 10.5 Particularly poor areas in Gloucester (subject to an air quality management area order) are Barton St. and Priory Rd.	SW: 2004 = a below average number of poor air quality days in all of its representative urban sites but an above average record in Yarner Wood - one of the representative rural sites. --- Requirements / targets under local air quality management timetable: April 2006 = Updating & screening assessment for all Authorities. 2008 = Annual progress report for all Authorities.	A mixed picture in terms of improvements. Strong link with levels of traffic and traffic 'hotspots'.	There is the potential for air pollution to become an increasingly serious problem – particularly as it is linked to increasing traffic levels. Increasingly warm summers are also an important consideration.	Appendix F – Air Quality Management –Gloucestershire Local Transport Plan 2001/2002 – 2005/2006. South West Observatory website (2005).	1.

12. To reduce the adverse impacts of lorry traffic on communities, through reducing the need to travel, promoting more sustainable means of transport (including through sensitive routing and the use of sustainable alternative fuels) and to promote the management of waste in one of the nearest appropriate installations.						
No. of Registrations of 28T Trucks or over ✱ (Link to Monitoring Objectives 2)	No data currently available for Gloucestershire. U.I	(2003 – 2004) Western Area = 14,730. Nationally = 102,946. 105,000 registrations of 28T trucks at the end of 2003 in	Nationally there has been a 14% increase in trucks over 28T since 1994.	Minerals & waste sites generate significant lorry movements. Without plan implementation these movements may not be appropriately planned regulated or controlled.	▪ Western Traffic Area Traffic Commissioners website. ▪ Transport Statistics Great Britain 2004 (DfT).	2. 2.

		the UK.				
No. of Movements on County Roads (by Vehicle Type and Road Type) ✱ (Link to Monitoring Objectives 2)	U.I	U.I	U.I	U.I	/	/
Gloucestershire Million Vehicle Kms ✱ (Link to Monitoring Objective 2)	Gloucestershire: 2004 = 5,941.	Nationally, total road traffic volume in 2003 was estimated to be 20% higher than in 1990 and 7% higher then in 1998. It has more then doubled since 1970.	1994 = 4,815 / 1995 = 4,941 / 1996 = 5,127 / 1997 = 5,234 / 1998 = 5,307 / 1999 = 5,509 / 2000 = 5,561 / 2001 = 5,644 / 2002 = 5,741 / 2003 = 5,844 / A clear trend in increasing vehicle Kms in the County.	Minerals & waste sites generate significant lorry & other vehicle movements. Without plan implementation these movements may not be appropriately planned regulated or controlled.	▪ DfT National Road Traffic Survey. ▪ Sustainable Development Indicators 2004 – National Statistics.	1.
HGV 24 Hour Work Day Flows in Gloucestershire ✱ (Link to Monitoring Objective 2) 🗎 (For mapped information on this Indicator see Appendix 7)	The busiest routes in the County with over 1000 HGVs in a 24 hour working day are, sections of the: A40 A417 M50 M5 A46 A438 A435 A4311	/	No trend figures but a high likelihood of increasingly large HGV flows in line with the above indicator.	Minerals & waste sites generate significant lorry & other vehicle movements. Without plan implementation these movements may not be appropriately planned regulated or controlled.	Gloucestershire Local Transport Plan 2001/2002 – 2005/2006.	/
Proximity of HGV Generators to Local Villages ✱ (Link to Monitoring Objective 2)	U.I [Requires GIS Calculation]	U.I	U.I	U.I	/	/
Use of Sustainable		EU Directive			/	/

Alternative Fuels ✱ (Link to Monitoring Objective 2)	U.I	2003/30/EC 'The Biofuels Directive' came into force in Dec 2004 with the objective of 20% substitution in road transport by 2020. Targets for 2005 = 2% and 2010 = 5.75%	U.I	U.I		

13. To restore mineral sites to a high standard in order to achieve the maximum environmental and nature conservation benefits.						
No. of Mineral Sites with Comprehensive Restoration Plans ✱ (Link to Monitoring Objective 3)	U.I	U.I	U.I	U.I	/	/
Extent (Ha) of Sites Restored after Use ✱ (Link to Monitoring Objective 3)	U.I	U.I	U.I	U.I	/	/

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, Dispose) to achieve the sustainable management of waste.						
Total Municipal Solid Waste Arisings (MSW) ✶ (Link to Monitoring Objectives 4, 10 & 11)	309,499 Tonnes (2004/05).	2.88 mt of municipal waste were produced in the SW during 2003–2004. This was 24,000 less than in 2002–2003 but still 2% (or 42,000 t) more than 2001–2002. Household waste is growing at an average of over 3.4% annually, however the population is growing by just 0.5%.	In Gloucestershire - A 35% increase since 1994. Average = 3.2% increase per annum.	Everyone produces waste and there is a need for it to be effectively managed. Without the implementation of the plan the effective management of waste in the County would be compromised.	Gloucestershire figures from County Council Waste Management. Regional data from: State of the Environment in the South West (2005) Environment Agency.	2.
% of Waste Recycled / Composed ✶ (Link to Monitoring Objectives 4, 10 & 11)	Of MSW (2004/05) 6.3% composted. 19.9 % recycled.	English County Councils: 22.49%	Gloucestershire average annual increase of 13.5% since 1994.	Everyone produces waste and there is a need for it to be effectively managed. In the event of the non-implementation of the plan this effective management would be less likely.	Figures from County Council Waste Management.	2.
% of Submission of Waste Minimisation Statements as part of 'Major' Planning Applications ✶ (Link to Monitoring	No data as yet as SPD has yet to be adopted.	Target: To obtain 100% submission of Waste Minimisation statements as part of 'Major'	No trend data. ---------- The ODPM's Development Control Statistics for England, define 'major'	In the event of the non-implementation of the plan more primary materials and resources will be wasted.	Gloucestershire County Council: SPD on Waste Minimisation in Development Projects (2006).	/

Objective 4)		planning applications by 2008 (this date was chosen as it ties in with one year after SPD adoption).	development by site size. For residential developments, a major site is one where 10 or more dwellings are to be constructed or, if this is not known, where the site area is 0.5 hectares or more. For other types of development a major site is one where the floorspace to be built is 1,000 square metres or more, or the site area is 1 hectare or more.			
Annual Levels of Biodegradable Municipal Waste to Landfill ✱ (Link to Monitoring Objectives 10 & 11)	Gloucestershire: 2004/05 = 228,321 Tonnes Assumes bio content is 100%, but probably more like 70%.	The target for 2005 / 2006 is 36% (Municipal Waste Strategy (MWS) This has been revised and capped at 30%.	(Figures in 1000 Tonnes). 1993/4 = 198. 1994/5 = 204. 1995/6 = 199. 1996/7 = 215. 1997/8 =234. 1998/9 = 229. 1999/00 = 239. 2000/01 = 232. 2001/02 = 239. 2002/03 = 236. 2003/04 = 229.	The likely evolution without the plan is that there will only be small reductions in BMW to landfill which will result in a failure to meet targets.	Figures from County Council Waste Management (2005).	1.
Annual Level of Municipal Waste Recycled ✱ (Link to Monitoring Objectives 10 & 11)	Gloucestershire: 2004/5 = 81,000 Tonnes.	/	(Figures in 1000 Tonnes). 1993/4 = 21. 1994/5 = 23. 1995/6 = 28. 1996/7 = 25. 1997/8 = 28. 1998/9 = 28. 1999/00 = 29. 2000/01 = 36. 2001/02 = 38. 2002/03 = 48.	In the event of the non-implementation of the plan it is unlikely that targets will be met. This cost (i.e. the cost of fines) may be transferred to tax payers.	Figures from County Council Waste Management (2005).	1.

			2003/04 = 63			
Municipal Waste Recycling Rate ✱ (Link to Monitoring Objectives 10 & 11)	Gloucestershire: 2004/5 = 26.2%.		1993/4 = 10%. 1994/5 = 10%. 1995/6 = 12%. 1996/7 = 10%. 1997/8 = 11%. 1998/9 = 11%. 1999/00 = 11%. 2000/01 = 13%. 2001/02 = 14%. 2002/03 = 17%. 2003/04 = 22%. (N.b. early figures do not include composting).	In the event of the non-implementation of the plan it is unlikely that targets will be met. This cost (i.e. the cost of fines) may be transferred to tax payers.	Figures from County Council Waste Management (2005).	1.
Domestic Recycling Rate ✱ (Link to Monitoring Objectives 10 & 11)	Gloucestershire: 2004/5 = 24.2%.	The target for 2005 / 2006 is 36% (Revised to 30%)	1993/4 = 10.2%. 1994/5 = 10.4%. 1995/6 = 12.6%. 1996/7 = 9.5%. 1997/8 = 10.1%. 1998/9 = 10.7%. 1999/00 = 10.8%. 2000/01 = 13.4%. 2001/02 = 13.7%. 2002/03 = 16.6%. 2003/04 = 20.9%. (N.b. early figures do not include composting).	In the event of the non-implementation of the plan it is unlikely that targets will be met. This cost (i.e. the cost of fines) may be transferred to tax payers.	Figures from County Council Waste Management. (2005).	1.
Household Waste per Head ✱ (Link to Monitoring Objectives 10 & 11)	Gloucestershire: 2003/04 = 490Kg.	In 2003/04 the production of household waste in the County was 51Kg per head of population higher than the national average.	1998/99 = 445Kg. 1999/00 = 464Kg. 2000/01 = 458Kg. 2001/02 = 473Kg. 2002/03 = 483Kg.	In the event of the non-implementation of the plan it is likely that targets for the reduction of household waste going to landfill will not be met.	Figures from County Council Waste Management. (2005).	1.

Landfill Allowance Trading Scheme (LATS) Targets ✱ (Link to Monitoring Objectives 10 & 11)	Gloucestershire: Final Allocations: 2005/06 = 158,634 T. 2006/07 = 150,100 T. 2007/08 = 138,721 T. 2008/09 = 124,497 T. 2009/10 = 107, 428 T.	/	/	Unclear.	Figures from County Council Waste Management. (2005).	1.
Commercial and Industrial Waste ✱ (Link to Monitoring Objectives 10 & 11)	Gloucestershire: 2002/03: around 360,000 tonnes of commercial and industrial waste was managed in Gloucestershire plus 250,000 tonnes of metal wastes (of which over 31,000 tonnes of metal waste was transferred out of the county).	/	The majority of C&I waste is still landfilled although the situation which may be attributed to the introduction of the landfill tax. The situation is better in relation to metals due to the market – the economic value of scrap metals.	In the event of the non-implementation of the plan it is likely that targets for the reduction of C&I waste will not be met.	Figures from the Environment Agency.	1.
Construction and Demolition waste ✱ (Link to Monitoring Objectives 10 & 11)	In 2002/03 418,000 tonnes of construction and demolition waste was handled in the county. Of this 312,000 tonnes was landfilled (about 75%).	/	The *percentage* of C&D waste going to landfill has been reducing in recent years (attributable to the landfill tax) and the *tonnage* of construction and demolition waste being diverted from landfill has trebled since 1999.	In the event of the non-implementation of the plan it is likely that targets for the reduction of C&D waste will not be met.	Figures from the Environment Agency.	1.
Waste Management Facilities by Type ✱ (Link to Monitoring Objectives 10 & 11)	Materials Recycling / Recovery and Treatment Facilities = 5. Composting Facilities = 4. End-of Life Vehicle Dismantling & Metal Facility =27. Household Recycling Centre = 6. Waste Transfer Stations =	/	/	In the event of the non-implementation of the plan it is likely that facilities for the management of waste in the County will not be adequately provided for – or planned and regulated.	Draft Waste Annual Monitoring Report (2004-2005) + updated information.	2.

	31. Sewage Treatments Works / Operations = 87. Hazardous Waste Treatment Facilities = 1. Thermal treatment / pet cremation = 2. (2004/05) Landfill/Landraise Operations Hazardous = 1. Non-Haz - Bio-degradable = 4. Non-Haz – Inert = 12.					
Hazardous Waste Produced / Managed in Gloucestershire ✱ (Link to Monitoring Objectives 10 & 11)	(2002 figures in Tonnes per Annum) Transfer = 3,163 Storage = 0 Recycled = 128 Treatment = 16 Landfill = 38,935 Sub Total = 42,242 --------- In 2002 25,038 tonnes of hazardous waste was produced in Gloucestershire. Of this only 3,123 tonnes was managed in the county. This means that businesses in Gloucestershire exported 21,915 tonnes out of the county. Further analysis of detailed movements indicate that for example, 9,690 tonnes was sent to other authorities in the South West, 5,477 tonnes went to the West Midlands,	/	/	In the event of the non-implementation of the plan it is likely that facilities for the management of hazardous waste in the County will not be adequately provided for – or planned and regulated.	The Environment Agency. Updated Figures (2002) from the EA sent on 24 October 2005.	2.

	and 2,732 tonnes was sent to the North West.					

15. To reduce contributions to and to adapt to Climate Change.						
Installed Capacity of Renewable Energy Installations (MW) ✱ (Link to Monitoring Objective 1)	Gloucestershire = 8.9Mw.	Target for Gloucestershire = the production of 40 – 50 MW by 2010.	/	There is a potential conflict with aspirations to reduce biodegradable waste to landfill in that there will be a reduction in the production of biogas. It is unlikely that both targets, renewable energy targets and targets to reduce BMW to landfill will be met.	Gloucestershire Renewable Energy Action Plan (2005).	2.
CO^2 Emissions ✱ (Link to Monitoring Objective 1)	No figures for the county but for the South West = in 2001 the SW had the joint lowest CO^2 emissions of all the English Regions at 8 million tonnes carbon & the second lowest emissions per head at 1,500kg.	National targets for reductions in CO^2 emissions under the Kyoto Protocol are: Reduction in the emissions of a 'basket' of six greenhouse gases by 12.5% below 1990 bench levels during the 2008 - 2012 period.	/	Unclear.	State of the Environment in the South West (2005). Defra website (2005).	2.
Possible Climate Change Impacts ✱ (Link to Monitoring Objective 1)	There are numerous potential impacts on the County and the region. A particularly significant one for Gloucestershire could be the increased incidence of flooding due to wetter winters.	For a detailed look at many potential impacts throughout the SW see: The TSW Climate Change Impact Scoping Study	/	In the event of the non-implementation of the plan it is likely that minerals & waste development will (a) continue to contribute to climate change (b) suffer the negative	South West Observatory website (2005).	2.

		(2003) or information on climate change on the SW Observatory website.		effects of climate change e.g. be subject to increased incidents of flooding.		
Waste to Energy Facilities ✱ (Link to Monitoring Objective 1)	Hempsted (Gloucester City) and Wingmoor Farm (Tewkesbury Borough) landfill sites both produce small amounts of electricity utilising methane release. There is currently no incineration in the county apart from small scale and for clinical or animal / pet crematorium use.			Unclear.	Gloucestershire Waste Local Plan (Adopted 2004).	1.
Levels of NO^2 and other Pollutants from Road Traffic ✱ (Link to Monitoring Objectives 1 & 2) 🗎 (For mapped information on this Indicator see Appendix 7)	Averaged NO_2 background concentration (µg/m3) for Districts in Gloucestershire 2005 = Glos = 22.6 / Chelt = 19.5 / Tewks = 14.6 / Stroud = 12.9 / Cots = 12.8 FoD = 10.5 / From modeling results, the highest concentrations of NO_2 in 1998 came from vehicle emissions along the length of the M5, with NO_2 concentrations ranging between 50-56µg/m3 along the seven identified sections of the motorway. Other links/areas included the A417(j) link east of Cirencester and the A417(f) link south east of Gloucester. Two further road links were estimated to contribute to the annual mean concentrations of	LTP8 Indicator Air pollutant levels within AQMA areas (two in Gloucester and one near Tewkesbury M5 Jct 10). Annual mean of below 40 microgrammes per cubic metre by the end of 2009. Currently the readings are: - Prior Road, Gloucester = 42 - Barton St, Gloucester = Between 42 and 46 - Tewkesbury Jct 10 = 42.	The 2005 figures are significantly higher than those for 1998.	Minerals & waste operations / development are associated with significant levels of lorry traffic. In the event of the non-implementation of the plan it is likely that traffic movements may not be appropriately planned regulated or controlled.	Gloucestershire County Council Local Transport Plan (1) Appendix F: Air Quality Management.	2.

	NO2 of between 25-30µg/m3 in 1998, and these were links A40d, A40(f), A40(g) and A40(h) to the immediate west of Gloucester, and between Gloucester and Cheltenham. The most heavily trafficked link, the A40d, has a smaller percentage of heavy goods vehicles along it compared to other A40 links, suggesting the volume of traffic to be more significant than % HGV at a given speed.					

Note: When assessing the quality of data used in the baseline, the following criteria were used:

1 = The data is readily available, locally relevant, directly relevant to the SA/SEA process and up to date.

2 = Up to two of the above criteria were not met i.e. data available at regional level, not up to date, etc.

3 = Data is of poor quality, not directly relevant to minerals and waste.

/ = There is no data at the present time and so the quality has not been assessed.

This categorisation entails a degree of subjectivity and was based on the professional opinion of the assessor.

Appendix 4. Identifying Sustainability Issues / Problems

SEA Directive requirements in relation to sustainability issues / problems: 'The Environmental Report' required under the SEA Directive should include:
▪ "any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of 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))

S = Social issues Ec = Economic issues En = Environmental issues

	Key Sustainability Issues / Problems	Source	Likely Evolution without M&W Plan
S	**1. High house prices** The disproportionate growth in house prices is making homes increasingly unaffordable. In 2003 the average house cost 8.7 times the average salary.	The Gloucestershire Story 2005 – produced by Gloucestershire County Council Environment Directorate Research Team. (Stage A2 - Review of Baseline)	Although there are clearly other factors associated with currently inflated house prices, (a situation that is UK wide), without a regular and appropriately planned supply of minerals for building, the cost of building materials may increase thus leading to further house prices rises.
S	**2. Low average income** In 2003 the average income in Gloucestershire was almost £840 per annum lower than the national average, but it was higher in Cheltenham and Tewkesbury.	The Gloucestershire Story 2005 – produced by Gloucestershire County Council Environment Directorate Research Team. (Stage A2 - Review of Baseline)	Possible continued low average income in Gloucestershire.
S	**3. Crime levels** Rates for key crimes of violent offences, vehicle crime and robbery in Gloucestershire are below national levels, although they are higher in Cheltenham and Gloucester.	The Gloucestershire Story 2005 – produced by Gloucestershire County Council Environment Directorate Research Team. (Stage A2 - Review of Baseline)	Not clear.

S	**4. Health** In 2001, 91,164 people in Gloucestershire (16% of the total population) suffered from a Limiting Long-Term Illness (up from the 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.	UK Census 2001. (Stage A2 - Review of Baseline)	Not clear, but a possible continued trend of more people suffering from long-term illnesses in the County.

Ec	**5. Traffic impacts and congestion** There are high levels of traffic congestion particularly in Cheltenham and Gloucester at peak hours. Car ownership in Gloucestershire amounts to just over one car per household, one of the highest figures nationally. Since 1985 (to 2003) traffic in the County has grown by 42%, and the County Council's household surveys of 1999 revealed that 72% of all journeys are made by car (65% car driver, 7% car passenger), 10% on foot, 3% on public transport and 5% by bicycle.	Gloucestershire Local Transport Plan 2000 & Gloucestershire Local Transport Plan (2) (Draft). (Stage A1 - Review of other plans and programmes) The Gloucestershire Story 2005 – produced by Gloucestershire County Council Environment Directorate Research Team. Also updated figures from GCC Transport Planning Unit. (Stage A2 - Review of Baseline)	Continued congestion and lorry traffic associated with minerals and waste development would add to this problem if it is not addressed through plans, policies and conditions.

Ec	**6. Rural economy** There is a need for diversification and initiatives to boost and support the rural economy in Gloucestershire.	Gloucestershire Labour Market Information Unit. (Stage A2 - Review of Baseline) The rural Economic strategy for Gloucestershire. (Stage A1 - Review of other plans and programmes)	Mineral operators are a significant employer in rural Gloucestershire. Without these jobs the rural economy and rural communities may be less viable.

Ec	**7. Areas of deprivation and social exclusion** There are significant areas of deprivation and social exclusion in the County, particularly in parts of Gloucester and Cheltenham. Although Gloucestershire is ranked as one of the least deprived counties in England, there are marked differences in deprivation scores for the six districts. Gloucester is the most deprived district in the County, ranking 139th most deprived English district according to the Rank of Average Score measure out of 354 English districts. The Forest of Dean is next most deprived at 195th. The least most deprived is the Cotswolds at 314th. (UK Indices of Deprivation 2004, issued by ODPM).	Gloucestershire Labour Market Information Unit using data from the Indices of Deprivation 2004, Social Disadvantage Research Centre, University of Oxford, ODPM. (Stage A2 - Review of Baseline)	Continued high levels of deprivation / disadvantage and social exclusion in certain districts and particular areas within districts.

En	**8. Potential for flooding** In the western part of the County lies the floodplain of the River Severn, which is a significant constraint on development. The Upper Thames floodplain also affects the existing workings within the Cotswolds Water Park area. There is a potential for the pollution of water resources from minerals and waste operations should they be subject to flooding. Flooding is not solely restricted to the floodplain and can also occur as a result of increased surface water run-off from new development.	Environment Agency floodplain maps. (Stage A2 - Review of Baseline)	Continued potential for flooding to have a serious and detrimental impact on certain vulnerable areas. This potential may increase with wetter winters etc as a result of a changing climate.

En	**9. Waste to landfill** Approximately 1.37 million tonnes of controlled waste is handled in Gloucestershire each year, the majority still going to landfill and land raising. In 2002/03 73.8% of waste was disposed of through landfill and land raising.	Gloucestershire Waste Local Plan 2002 – 2012. (Stage A2 - Review of Baseline)	Adherence to the waste hierarchy will continue to be a priority, as it is in the current WLP. Without appropriate plans and policies, waste to landfill will be unlikely to decrease with resulting costs to local authorities and ultimately local communities.

En	**10. Growing levels of waste in Gloucestershire** The quantity of household waste per head of the population has grown steadily over the last few years. In 2003/04 it was 51kg per head of population higher than the national average. Assuming the same rate of growth as last year of approximately 7kg per head per year, related to the projected population growth, household waste would grow to just under 234,000 tonnes in 2005/06. This is approximately 27,600 tonnes more waste than in 2003/04.	The Gloucestershire Story 2005 – produced by Gloucestershire County Council Environment Directorate Research Team. Information supplied by the Waste Management Team, Environment Directorate, Gloucestershire County Council. (Stage A2 - Review of Baseline)	Levels of waste will continue to increase without appropriate plans and coordination between the Waste Planning Authority, the Waste Disposal Authority, the Waste Collection Authorities and the EA – the Waste Regulation Authority.

En	**11. Recycling / composting rates** Gloucestershire's recycling / composting rate in 2002/ 2003 was 16.7 %. The target for 2005 / 2006 is 36%* (*revised to 30% in the MWS).	Regional Waste Strategy and information provided by the County Waste Management Team. (Stage A1 - Review of other plans and programmes)	There may be some difficulty in reaching the targets without the positive contribution of plans.

En	**12. Minerals restoration** Increasingly within the County, there is a lack of inert material that could be used for appropriate restoration schemes following mineral extraction. There are issues over the general quality of minerals restoration. There are also problematic issues in the Cotswold Water Park regarding wet restoration and 'bird strike' issues related to RAF Fairford.	Gloucestershire Minerals Local Plan 1997-2006. (Stage A2 - Review of Baseline)	Continued potential for poor / conflictual restoration schemes.

En	**13. Protecting Gloucestershire's environment whilst providing minerals needed by society** There are 36 operational minerals working sites in the County (2003 figures), 18 within the Cotswolds and the Forest of Dean extracting limestone for aggregate and non-aggregate purposes. Ten sites, primarily located in the Upper Thames Valley are extracting sand and gravel. There are a further 8 sites in the County extracting either sandstone or clay. Additionally there are a number of inactive and dormant sites where minerals may potentially be worked in the future. Gloucestershire makes an important contribution to the regional supply of aggregate minerals. Although mineral working can have an impact on the environment as well as local amenity, mineral products are used to improve our quality of life. For example the continued extraction of building stone in the Cotswold maintains the local vernacular. Mineral workings are considered to be a temporary land-use and when properly restored, the after use can enhance the environment. For example the Cotswold Water Park, one of the largest man-made inland water areas is a product of sand and gravel extraction. Finally primary minerals are a finite natural resource, which must be used prudently.	Gloucestershire Minerals Local Plan 1997-2006. (Stage A2 - Review of Baseline) Gloucestershire Minerals Monitoring Report 2003. (Stage A2 - Review of Baseline)	Potential for degraded environments allied with insufficient provision of minerals needed by society e.g. for house building and infrastructure.

En	**14. Renewable energy** The current total renewable energy capacity in Gloucestershire is 8.873MW – almost all of this is from landfill and sewage gas. There is a target for Gloucestershire of the production of 40-50MW by 2010 (enough electricity to supply 45,750 – 52,250 households).	Gloucestershire Renewable Energy Action Plan. (Stage A1 - Review of other plans and programmes)	Continued low levels of use of renewable energy sources.

En	**15. The general state of Gloucestershire's biodiversity, the condition of SSSIs, sites protected under the Habitats Directive and locally designated sites** Detailed information on the general state of Gloucestershire's biodiversity, in particular relating to various habitats are contained in the Gloucestershire BAP. The South West: The region has 965 Sites of Special Scientific Interest (SSSI), representing nearly a quarter of the total for England (4,113), a little over a fifth (47) of the country's 214 National Nature Reserves and 66 of the country's 230 Special Areas of Conservation (2003 figures). Of the region's SSSI habitats in 2003, only 52.9% were in a 'favourable' condition although this indicates an upward trend when compared to the 51.0% recorded in 2002 and the 44% recorded in 2001. In addition, a further 14.8% of SSSI habitats were classed as 'unfavourable recovering' and so taken together, two-thirds of the region's sites were favourable or recovering, a proportion some 10% higher than the 57.3% recorded for the country as a whole. Nonetheless, 14.2% of the region's SSSI habitats were recorded as 'unfavourable declining'. SSSIs in Gloucestershire: Total number of sites = 121 % of area in favourable condition = 79.27 % of are in unfavourable but recovering condition = 2.85 % of area unfavourable with no change = 13.94 % of area unfavourable and declining = 3.94 These figures indicate that Gloucestershire has a good record in the protection of its SSSIs but that more needs to be done. The above figures do not represent an increase from the 1999 figure but it is anticipated that there will be a decline in the area in favourable condition as a result of more stringent assessment guidelines. Sites protected under the Habitats Directive There are a number of SPA / SAC / Ramsar sites in the County, including: Cotswolds Beachwoods, Dixton Wood, Rodborough Common, River Wye Sites, Wye Valley and Forest of Dean Bat	Gloucestershire BAP (Stage A2 - Review of Baseline) The Countryside Agency - The State of the Countryside in the South West 2004. (Stage A1 - Review of other plans and programmes) English Nature - SSSIs Reports and Statistics. (Stage A2 - Review of Baseline) Information from the County Council Ecologist. (Stage A2 - Review of Baseline)	Without the plan (i.e. – specific policies which seek to protect and mitigate against damaging development) there is the potential for a decline in the general state of biodiversity in Gloucestershire and for SSSIs and other protected areas to be degraded or fall into a 'less favourable' condition as a result of minerals and waste development. However it is recognised that without certain sites in a plan, (i.e. if minerals and waste development were not to take place at all) then the condition of that particular area would be likely to improve. A careful balance needs to be struck between providing for the needs of society for certain minerals and facilities to manage the waste it produces, and the protection of biodiversity and designated sites.

	Sites, Wye Valley Woodland, North Meadow & Clattinger Farm (Wilts site), Walmore Common and the Severn Estuary. A number of candidate SAC sites (included in the above list) have recently gained full SAC status. These sites may potentially be affected by minerals and waste development, although they are protected by law. <u>Locally designated sites</u> There are 0.4138 Ha (2003) of local nature reserves per 1000 of population in Gloucestershire and 696 (12,845 Ha) Key Wildlife Sites. Again, these sites may potentially be affected by minerals and waste development, although there are policies and mechanisms in place to protect them.		

En	**16. Decline in species biodiversity – in particular of certain bird species in Gloucestershire** Biodiversity decline: (See the Gloucestershire BAP for the specifics on species). Bird populations: In the South West between 1994 and 2002: Farmland birds = down 9%, Woodland birds = little change. In the South West from 1979-2005: Starlings declined by 71%, House sparrow declined by 52%, Song thrush declined by 34%, Blackbirds declined by 31%. Farmland birds in Gloucestershire: Skylark, Grey Partridge, Corn Bunting, Linnet, Reed Bunting, Tree Sparrow, Bullfinch, Turtle Dove, Song Thrush and Lapwing have all declined in Gloucestershire, reflecting a national decline in numbers. (The specifics are contained in the Gloucestershire BAP) Other species of birds that have suffered dramatic declines include: Bittern, Nightjar, Woodlark and Spotted flycatcher. ("Birds are generally good indicators of the broad state of wildlife and the countryside, because they are wide-ranging in habitat distribution and tend to be at or near to the top of the food chain") Source: Government's indicators of sustainable development.	Gloucestershire BAP (Stage A2 - Review of Baseline) Government's indicators of sustainable development. (Stage A2 - Review of Baseline) Results of RSPB Big Garden Birdwatch 2005. Gloucestershire BAP. (Stage A2 - Review of Baseline)	Continued potential for a decline in species biodiversity and certain bird species.

En	**17. Increases in serious pollution incidents** The South West: There were 3,538 substantiated pollution incidents during 2004, a reduction of over 30% since 2000. The number of Category 1 incidents (the most serious) increased from 3 in 2003 to 11 in 2004. Gloucestershire: [No figures as yet – under investigation]	Environment Agency 'State of the Environment in the South West' (Stage A2 - Review of Baseline)	Continued increase in serious pollution incidents.

En	**18. Possible damage to the historic environment** There are 496 Scheduled Monuments in the Gloucestershire, covering roughly 0.57% of the County. There are 23920 Locally Important Sites registered on the SMR. – an estimated 2% of the County. There are 12860 Listed buildings in the County. There are 264 Conservation areas covering c.2.3% of the county. There are 2 Registered battlefields covering 277.57ha (0.1% of the County). There are 99 Registered parks and gardens, in total these cover 6109ha (c.2.26% of the county). There are 31 Grade 1 and Grade 2* buildings in Gloucestershire on the English Heritage Buildings at Risk Register. The following are the figures for Gloucestershire Districts on the number of listed buildings and structures 'at risk'. Gloucester: 47 of 700+ Listed Buildings Cheltenham: 1 of 2,602 Listed Buildings Stroud: No data as yet Forest of Dean: 27 of (unknown) Listed Buildings Tewkesbury: 208 of 1,800+ Listed Buildings Cotswold: 196 of 6,496 Listed Structures [More data regarding damage to SAMs etc, - under investigation with a joint GIS project between minerals and Waste Planning Policy & County Archaeology]	Information provided by Gloucestershire County Council's Archaeological Unit & District Conservation Officers (2005) Also information from English Heritage BAR Register on their website. (Stage A2 - Review of Baseline)	Policies in the plan should protect the historic environment. Without robust policies there is the potential for increasing damage to the historic environment.

En	**19. Detrimental changes to landscape character** In October 2004 Gloucestershire County Council in association with the 6 Districts appointed consultants to undertake a Landscape Character Assessment (LCA) of: ▪ The Severn Vale ▪ The Upper Thames Valley ▪ The Vale of Moreton ▪ The Vale of Evesham Fringe Sections of the County for which a detailed LCA have already been completed include: ▪ The Forest of Dean District ▪ The Cotswold's AONB [Further information needed – under investigation.]	Gloucestershire Landscape Character Assessment (Draft) (Stage A1 - Review of other plans and strategies)	Policies in the plan should aid the protection of quality landscapes in the County. Without robust policies there is the potential for further detrimental changes to landscape character.

Appendix 5. Charting the Development of SA Objectives & Checklist Against SEA Directive Article 5 (1) Annex 1 (f)

The SA Objectives have been developed on the basis of:

- The objectives/ priorities for action contained in the Government's national sustainability strategies – 1999 and 2005.
- The objectives in "Just Connect" the Integrated Regional Strategy for the South West 2004 –2026.
- Through the process of identifying other relevant plans and programmes, resulting key messages and the identification of sustainability issues.
- ODPM Guidance on SA.

The Objectives of: A better quality of life – A strategy for sustainable development for the UK (1999) & Securing the future – delivering UK sustainable development strategy (2005) – Priorities for UK action	Objectives of West 'Just Connect' – the Integrated Regional Strategy for the South	Key messages from the review of plans & programmes	The identification of sustainability issues / problems in Gloucestershire	SEA Directive - Topics Checklist as per SEA Directive Article 5 (1) Annex 1 (f)	Gloucestershire MWDF SA Objectives
▪ Social progress which meets the needs of everyone. ▪ Sustainable communities.	To provide sufficient housing to meet identified future needs, including housing that is affordable.	Provide housing. Provide employment in industries associated with housing.	**Issue 1.** High house prices.	Population.	**Objective 2.** To give the opportunity to everyone to live in an affordable and sustainably designed and constructed home.
▪ Social progress which meets the needs of everyone. ▪ Sustainable communities.	To ensure that the long term effects of population growth and change are anticipated in the planning of the full range of public services.	/	/	Population.	**Objective 1.** To promote development that is socially, economically and environmentally sustainable.
▪ Social progress which meets the needs of everyone. ▪ Effective protection of the environment. ▪ Prudent use of natural resources.	To ensure that growth and development is sustainable – supporting environmental quality, managing resource consumption and waste generation, promoting sustainable communities, and supporting economic prosperity.	▪ Follow the waste hierarchy. ▪ Encourage opportunities for waste minimisation in the industrial and commercial sector and for small firms. ▪ Reduce negative impacts of landfills on communities. ▪ Reduce waste to landfill & reduce levels of fines – the cost to the tax payer. ▪ Use extracted natural resources prudently. ▪ Prevent and reduce waste.	**Issue 9.** Waste to landfill. **Issue 10.** Growing levels of waste in Gloucestershire. **Issue 11.** Recycling /	Biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage (including architectural and archaeological	**Objective 3.** To safeguard sites suitable for the location of waste management facilities, or future mineral development, from other proposed development. **Objective 6.** To safeguard the amenity of local

The Objectives of: A better quality of life – A strategy for sustainable development for the UK (1999) & Securing the future – delivering UK sustainable development strategy (2005) – Priorities for UK action	Objectives of West 'Just Connect' – the Integrated Regional Strategy for the South	Key messages from the review of plans & programmes	The identification of sustainability issues / problems in Gloucestershire	SEA Directive - Topics Checklist as per SEA Directive Article 5 (1) Annex 1 (f)	Gloucestershire MWDF SA Objectives
▪ Natural resource protection and environmental enhancement. ▪ Sustainable consumption and production. ▪ Sustainable communities.		▪ Prevent and reduce waste of EEE. ▪ Reduce, reuse, recycle more packaging. ▪ Protect the environment from the effects of incineration. ▪ Reduce waste to landfill from ELVs. ▪ Safely dispose of animal-by-products. Follow the waste hierarchy in order to meet specific targets. ▪ Reduce waste generation in the business sector. ▪ Meet recycling and composting of domestic waste targets. ▪ Reduce waste and encourage recycling. ▪ Reduce waste and conserve natural resources. ▪ Promote increased recycling. ▪ Minimise waste. ▪ Promote waste minimisation in the affordable house sector. ▪ Promote waste minimisation through sustainable construction. ▪ Provide facilities for dealing with hazardous waste. ▪ Protect the South West's environment and pursue regional targets for recycling, composting and reducing waste to landfill. ▪ Adhere to the waste hierarchy in order to meet regional targets and encourage businesses and households to maximise reuse and recycling opportunities. ▪ Reduce the amount of waste produced in Gloucestershire and make the best use of the waste that is produced. ▪ Facilitate greater understanding and	composting rates. **Issue 12.** Minerals restoration. **Issue 13.** Protecting Gloucestershire's environment whilst providing minerals needed by society.	heritage) and landscape.	communities from the potential adverse impacts of minerals and waste development. **Objective 7.** To conserve mineral resources from inappropriate development whilst providing for the supply of aggregates and other minerals sufficient for the needs of society. **Objective 13.** To restore mineral sites to a high standard in order to achieve the maximum environmental and nature conservation benefits. **Objective 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, Dispose) to achieve the sustainable management of waste.

The Objectives of: A better quality of life – A strategy for sustainable development for the UK (1999) & Securing the future – delivering UK sustainable development strategy (2005) – Priorities for UK action	Objectives of West 'Just Connect' – the Integrated Regional Strategy for the South	Key messages from the review of plans & programmes	The identification of sustainability issues / problems in Gloucestershire	SEA Directive - Topics Checklist as per SEA Directive Article 5 (1) Annex 1 (f)	Gloucestershire MWDF SA Objectives
		appreciation of waste management and resource depletion issues. ▪ Find and/or develop markets for recyclables and value added residual waste. ▪ Raise the importance of reducing waste production and concentrate on promoting minimisation activities to stem the growth of Gloucestershire's municipal waste. ▪ Focus on commercial waste as this accounts for c.85% of all waste produced. ▪ Protect and improve wildlife habitats, the historic and built environment / landscape and use fewer non-renewable resources and reduce waste. ▪ Follow the waste hierarchy, prevent pollution and harm to human health. Substitute Strategic SEA for the current expectation of a specific BPEO process for determining Municipal Waste Management Strategies. ∗ Also including all key messages related to minerals development.			
▪ Maintenance of high and stable levels of economic growth and employment. ▪ Sustainable communities.	To use growth as an opportunity to provide adequate transport infrastructure and make the best use of existing and proposed investment.	Control developments adversely affecting trunk roads. Protect communities from the effects of lorry traffic transporting minerals or waste. Encourage the movement of freight by rail and water, where possible, in order to reduce lorry traffic on	**Issue 5.** Traffic impacts and congestion.	Population, material assets.	**Objective 12.** To reduce the adverse impacts of lorry traffic on communities, through reducing the need to travel, promoting more sustainable means of transport (including through sensitive routing and the use of sustainable

The Objectives of: A better quality of life – A strategy for sustainable development for the UK (1999) & Securing the future – delivering UK sustainable development strategy (2005) – Priorities for UK action	Objectives of West 'Just Connect' – the Integrated Regional Strategy for the South	Key messages from the review of plans & programmes	The identification of sustainability issues / problems in Gloucestershire	SEA Directive - Topics Checklist as per SEA Directive Article 5 (1) Annex 1 (f)	Gloucestershire MWDF SA Objectives
		Gloucestershire's roads. Consider the implications of the increased use of an advisory Freight Route Map. Protect sensitive environments from the effects of lorry traffic. Encourage modal shift to sustainable transport.			alternative fuels) and to promote the management of waste in one of the nearest appropriate installations.
▪ Effective protection of the environment. ▪ Climate change and energy.	To adapt to unavoidable climate change impacts and minimise any further impacts on a growing region.	Mitigate against the possible effects/impacts of climate change. Consider biomass production and waste to energy schemes, in order to meet renewable energy targets. Focus on future growth sectors such as Environmental technology, including bio-fuels, the recycling and reprocessing of waste, renewable energy and other market leaders. Promote the increased use of renewable energy.	**Issue 8.** Potential for flooding. **Issue 14.** Renewable Energy.	Climatic factors.	**Objective 10.** To prevent flooding, in particular preventing inappropriate development in the floodplain and to ensure that development does not compromise sustainable sources of water supply. **Objective 15.** To reduce contributions to and adapt to Climate Change.
▪ Natural resource protection and environmental enhancement.	To maintain and enhance our high quality environments and cultural activity, and access to them.	▪ Protect the countryside and designations within rural areas. ▪ Protect the historic environment from potentially damaging development. ▪ Ensure that the environment is protected through the effective enforcement of planning conditions. ▪ Conserve and enhance biodiversity.	**Issue 12.** Minerals restoration. **Issue 13.** Green Belt	Biodiversity, fauna, flora, soil, water, air, cultural heritage.	**Objective 9.** To protect, conserve and enhance Gloucestershire's biodiversity, natural environment, landscape and tourist assets including the historic

The Objectives of: A better quality of life – A strategy for sustainable development for the UK (1999) & Securing the future – delivering UK sustainable development strategy (2005) – Priorities for UK action	Objectives of West 'Just Connect' – the Integrated Regional Strategy for the South	Key messages from the review of plans & programmes	The identification of sustainability issues / problems in Gloucestershire	SEA Directive - Topics Checklist as per SEA Directive Article 5 (1) Annex 1 (f)	Gloucestershire MWDF SA Objectives
		▪ Conserve and protect the water environment. ▪ Protect birds and habitats. ▪ Address contaminated land issues. ▪ Protect the land, air and water from pollution and apply the precautionary principle. ▪ Protect and enhance the natural and built environment of the Forest of Dean. ▪ Protect the 'high value' natural and historic environment of the Cotswolds. ▪ Protect and conserve the natural environment from the effects of minerals and waste development. ▪ Protect and conserve biodiversity and geological resources and mitigate against the effects of mineral or waste development. ▪ Protect and enhance the natural environment of the Costwolds AONB. ▪ Protect and improve air quality. ▪ Conserve and enhance the natural and built identity of Stroud district. ▪ Protect the environment and use natural resources prudently. ▪ Protect the natural environment against specific damaging impacts. ▪ Protect and enhance the countryside in the South West. ▪ Ensure better environmental protection through the quality of conditions, mitigation measures and enforcement. ▪ Protect and enhance biodiversity in the Cotswold Water Park ensuring that the requirements of industry, leisure, people and wildlife are successfully integrated. ▪ Protect beautiful and valued	**Issue 14.** Renewable energy. **Issue 15.** General state of biodiversity, condition of SSSIs and other designations. **Issue 16.** Decline speciesin biodiversity - particularly certain bird species in Gloucestershire. **Issue 17.** Increases in serious pollution incidents.		environment. **Objective 11.** To protect and enhance Gloucestershire's environment – (the land, the air and water) from pollution and to apply the precautionary principle. **Objective 13.** To restore mineral sites to a high standard in order to achieve the maximum environmental and nature conservation benefits.

The Objectives of: A better quality of life – A strategy for sustainable development for the UK (1999) & Securing the future – delivering UK sustainable development strategy (2005) – Priorities for UK action	Objectives of West 'Just Connect' – the Integrated Regional Strategy for the South	Key messages from the review of plans & programmes	The identification of sustainability issues / problems in Gloucestershire	SEA Directive - Topics Checklist as per SEA Directive Article 5 (1) Annex 1 (f)	Gloucestershire MWDF SA Objectives
		landscapes in the county. ▪ Protect and enhance the natural environment of the Wye Valley and ensure all minerals development within the AONB is compatible with the aims of AONB designation. ▪ Protect the natural and cultural environment.			
▪ Effective protection of the environment. ▪ Prudent use of natural resources. ▪ Natural resource protection and environmental enhancement.	To ensure our natural resources are used much more sustainably by using land wisely, minimising waste and increasing recycling, using renewables, and promoting sustainable construction and design.	(See key messages relating to the third IRS objective - i.e. all related to all aspects of waste).	**Issue 9.** Waste to landfill. **Issue 10.** Growing levels of waste in Gloucestershire. **Issue 11.** Recycling / composting rates.	Biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage (including architectural and archaeological heritage) and landscape.	**Objective 1.** To promote development that is socially, economically and environmentally sustainable. **Objective 2.** To give the opportunity to everyone to live in a sustainably designed and constructed home. **Objective 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, Dispose) to achieve the sustainable management of waste.
▪ Social progress which meets the needs of everyone.	To fully understand and recognise the significance, and make	Protect the historic environment from potentially damaging development.	**Issue 6.** Rural economy.	Material assets, cultural heritage (including	**Objective 9.** To protect, conserve and enhance Gloucestershire's

The Objectives of: A better quality of life – A strategy for sustainable development for the UK (1999) & Securing the future – delivering UK sustainable development strategy (2005) – Priorities for UK action	Objectives of West 'Just Connect' – the Integrated Regional Strategy for the South	Key messages from the review of plans & programmes	The identification of sustainability issues / problems in Gloucestershire	SEA Directive - Topics Checklist as per SEA Directive Article 5 (1) Annex 1 (f)	Gloucestershire MWDF SA Objectives
▪ Maintenance of high and stable levels of economic growth and employment. ▪ Sustainable communities.	much better use of the social and economic benefits of the region's high quality environment and cultural distinctiveness of the South West.	Ensure that the tourist economy is not damaged by inappropriate minerals / waste development. Protect the 'high value' natural and historic environment of the Cotswolds. Protect the natural and cultural environment. Promote sustainable economic development and employment in Gloucestershire.	**Issue 18.** Damage to the historic environment. **Issue 19.** Detrimental changes to landscape character.	architectural and archaeological heritage) and landscape.	biodiversity, natural environment, landscape and tourist assets including the historic environment.
▪ Sustainable communities. ▪ Maintenance of high and stable levels of economic growth and employment.	To ensure that housing development and the needs of the economy are planned together.	Provide employment in industries associated with housing. Locate houses in sustainable locations and design them following principles of sustainability.	**Issue 1.** High house prices.	Population, material assets.	**Objective 2.** To give the opportunity to everyone to live in an affordable and sustainably designed and constructed home.
▪ Maintenance of high and stable levels of economic growth and employment. ▪ Effective protection of the environment.	To improve intra and inter-regional communications and embrace new technological developments to enhance access to labour and product markets, whilst shifting	Encourage continued economic development. Encourage modal shift to sustainable transport. Control developments adversely affecting trunk roads.	**Issue 5.** Traffic impacts and congestion.	Population, material assets, climatic factors.	**12.** To reduce the adverse impacts of lorry traffic on communities, through reducing the need to travel, promoting more sustainable means of transport (including through sensitive routing and the use of sustainable

The Objectives of: A better quality of life – A strategy for sustainable development for the UK (1999) & Securing the future – delivering UK sustainable development strategy (2005) – Priorities for UK action	Objectives of West 'Just Connect' – the Integrated Regional Strategy for the South	Key messages from the review of plans & programmes	The identification of sustainability issues / problems in Gloucestershire	SEA Directive - Topics Checklist as per SEA Directive Article 5 (1) Annex 1 (f)	Gloucestershire MWDF SA Objectives
▪ Prudent use of natural resources. ▪ Natural resource protection and environmental enhancement. ▪ Climate change and energy.	towards a more sustainable transport policy which protects the environment and manages 'greenhouse' gas emissions.	Protect communities from the effects of lorry traffic transporting minerals or waste. Encourage the movement of freight by rail and water, where possible, in order to reduce lorry traffic on Gloucestershire's roads. Protect sensitive environments from the effects of lorry traffic.			alternative fuels) and to promote the management of waste in one of the nearest appropriate installations.
▪ Maintenance of high and stable levels of economic growth and employment.	To ensure that the competitive position of the South West's economy is improved and that the differences in economic performance within the region are addressed.	Encourage continued economic development. Deliver development that is beneficial to the economy. Address deprivation and disadvantage to reduce significant intra –regional inequalities. Create sustainable jobs. Achieve an integrated sustainable approach. Deliver sustainable development across the region. Enhance economic prosperity and quality of employment opportunity.	**Issue 2.** Low average income. **Issue 6.** Rural economy. **Issue 7.** Areas of deprivation and social exclusion.	Population, material assets.	**Objective 5.** To contribute to a sustainable Gloucestershire which provides excellent opportunities for education, economic development, employment and recreation to people from all social and ethnic backgrounds. **Objective 8.** To provide employment opportunities in both rural and urban areas of the County, promoting diversification in the economy.
▪ Maintenance of high and stable levels of	To increase investment in the region's research	(As above).	/	Population, material assets.	**Objective 5.** To contribute to a sustainable

The Objectives of: A better quality of life – A strategy for sustainable development for the UK (1999) & Securing the future – delivering UK sustainable development strategy (2005) – Priorities for UK action	Objectives of West 'Just Connect' – the Integrated Regional Strategy for the South	Key messages from the review of plans & programmes	The identification of sustainability issues / problems in Gloucestershire	SEA Directive - Topics Checklist as per SEA Directive Article 5 (1) Annex 1 (f)	Gloucestershire MWDF SA Objectives
economic growth and employment.	base and develop the connections between universities and research establishments, businesses and the economy of the South West.				Gloucestershire which provides excellent opportunities for education, economic development, employment and recreation to people from all social and ethnic backgrounds.
▪ Maintenance of high and stable levels of economic growth and employment. ▪ Social progress which meets the needs of everyone.	To focus on raising the attainment of skills at all levels, and at all ages to improve the life chances of individuals and the long term economic prosperity of the region.	(As above).	**Issue 2**. Low average income. **Issue 6.** Rural economy. **Issue 7.** Areas of deprivation and social exclusion.	Population, material assets.	**Objective 8.** To provide employment opportunities in both rural and urban areas of the County, promoting diversification in the economy. **Objective 4.** To protect and improve the health and well-being of people living and working in Gloucestershire as well as visitors to the county. **Objective 5.** To contribute to a sustainable Gloucestershire which provides excellent opportunities for education, economic development, employment and recreation to people from all social and ethnic backgrounds.

The Objectives of: A better quality of life – A strategy for sustainable development for the UK (1999) & Securing the future – delivering UK sustainable development strategy (2005) – Priorities for UK action	Objectives of West 'Just Connect' – the Integrated Regional Strategy for the South	Key messages from the review of plans & programmes	The identification of sustainability issues / problems in Gloucestershire	SEA Directive - Topics Checklist as per SEA Directive Article 5 (1) Annex 1 (f)	Gloucestershire MWDF SA Objectives
▪ Social progress which meets the needs of everyone. ▪ Sustainable communities.	To support those parts of the region that are in need.	As above, as well as the following health issues: Protect human health. Protect and improve air quality.	**Issue 2.** Low average income. **Issue 4.** Health. **Issue 6.** Rural economy. **Issue 7.** Areas of deprivation and social exclusion.	Population, material assets.	**Objective 4.** To protect and improve the health and well-being of people living and working in Gloucestershire as well as visitors to the county. **Objective 5.** To contribute to a sustainable Gloucestershire which provides excellent opportunities for education, economic development, employment and recreation to people from all social and ethnic backgrounds.
▪ Social progress which meets the needs of everyone. ▪ Sustainable communities.	To ensure that resources are targeting those areas that are in need.	(As above).	**Issue 2.** Low average income. **Issue 4.** Health. **Issue 6.** Rural economy. **Issue 7.** Areas of deprivation and social exclusion.	Population, material assets.	**Objective 4.** To protect and improve the health and well-being of people living and working in Gloucestershire as well as visitors to the county. **Objective 5.** To contribute to a sustainable Gloucestershire which provides excellent opportunities for education, economic development, employment and recreation to people

The Objectives of: A better quality of life – A strategy for sustainable development for the UK (1999) & Securing the future – delivering UK sustainable development strategy (2005) – Priorities for UK action	Objectives of West 'Just Connect' – the Integrated Regional Strategy for the South	Key messages from the review of plans & programmes	The identification of sustainability issues / problems in Gloucestershire	SEA Directive - Topics Checklist as per SEA Directive Article 5 (1) Annex 1 (f)	Gloucestershire MWDF SA Objectives
					from all social and ethnic backgrounds.
▪ Social progress which meets the needs of everyone. ▪ Sustainable communities. ▪ Effective protection of the environment.	To ensure that policy and delivery actively seek to reduce inequality in the region on a variety of different measures integrating social economic and environmental factors.	Address deprivation and disadvantage to reduce significant intra –regional inequalities. Deliver sustainable development across the region. Involve the community in decision-making and local action.	**Issue 2.** Low average income. **Issue 4.** Health. **Issue 6.** Rural economy. **Issue 7.** Areas of deprivation and social exclusion.	Population, material assets.	**Objective 4.** To protect and improve the health and well-being of people living and working in Gloucestershire as well as visitors to the county. **Objective 5.** To contribute to a sustainable Gloucestershire which provides excellent opportunities for education, economic development, employment and recreation to people from all social and ethnic backgrounds.
▪ Social progress which meets the needs of everyone. ▪ Sustainable communities.	To ensure that in tackling intolerance and discrimination, the particular needs of individual people and communities are not overlooked in favour of a 'group' solution.	(As above).	**Issue 2**. Low average income	Population, material assets.	**Objective 4.** To protect and improve the health and well-being of people living and working in Gloucestershire as well as visitors to the county. **Objective 5.** To contribute to a sustainable Gloucestershire which provides excellent opportunities for

The Objectives of: A better quality of life – A strategy for sustainable development for the UK (1999) & Securing the future – delivering UK sustainable development strategy (2005) – Priorities for UK action	Objectives of West 'Just Connect' – the Integrated Regional Strategy for the South	Key messages from the review of plans & programmes	The identification of sustainability issues / problems in Gloucestershire	SEA Directive - Topics Checklist as per SEA Directive Article 5 (1) Annex 1 (f)	Gloucestershire MWDF SA Objectives
					education, economic development, employment and recreation to people from all social and ethnic backgrounds.
▪ Social progress which meets the needs of everyone. ▪ Sustainable communities.	To work alongside one another to ensure that co-ordinated, consistent education and communication are given about tackling discrimination and exclusion in the region.	(As above).	**Issue 2.** Low average income. **Issue 4.** Health. **Issue 6.** Rural economy. **Issue 7.** Areas of deprivation and social exclusion.	Population.	**Objective 4.** To protect and improve the health and well-being of people living and working in Gloucestershire as well as visitors to the county. **Objective 5.** To contribute to a sustainable Gloucestershire which provides excellent opportunities for education, economic development, employment and recreation to people from all social and ethnic backgrounds.
▪ Social progress which meets the needs of everyone. ▪ Sustainable communities.	To ensure that everyone is able to access jobs, services, cultural facilities and activities and quality environments to enable them to participate in society.	(As above).	**Issue 2.** Low average income. **Issue 4.** Health. **Issue 6.** Rural economy.	Population, material assets.	**Objective 5.** To contribute to a sustainable Gloucestershire which provides excellent opportunities for education, economic development, employment and recreation to people from all social and ethnic

The Objectives of: A better quality of life – A strategy for sustainable development for the UK (1999) & Securing the future – delivering UK sustainable development strategy (2005) – Priorities for UK action	Objectives of West 'Just Connect' – the Integrated Regional Strategy for the South	Key messages from the review of plans & programmes	The identification of sustainability issues / problems in Gloucestershire	SEA Directive - Topics Checklist as per SEA Directive Article 5 (1) Annex 1 (f)	Gloucestershire MWDF SA Objectives
			Issue 7. Areas of deprivation and social exclusion.		backgrounds.
▪ Social progress which meets the needs of everyone. ▪ Sustainable communities.	To ensure an active, inclusive and creative approach to consultation on policy and delivery in the region.	(As above).	**Issue 2.** Low average income. **Issue 4.** Health. **Issue 6.** Rural economy. **Issue 7.** Areas of deprivation and social exclusion.	Population.	/

SEA Directive Article 5 (1) Annex 1 (f) / Statutory Instrument 2004 No.1633 Schedule 2 (6)	Gloucestershire's SA Objectives
Biodiversity	9
Population	1, 2, 5, 6, 8
Human health	4, 5
Fauna	9, 11, 13
Soil	9, 11, 13
Water	9, 10, 11, 13
Air	9, 11, 13
Climatic factors	15,
Material Assets	3, 5, 7, 10
Cultural heritage including architectural and archaeological heritage	9
Landscape	9, 13

Appendix 6. Matrix Showing the Internal Consistency of the SA Objectives

Internal Consistency Matrix for the SA Objectives

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.
1.		A	A	A	A	A	A	A	A	A	A	A	A	A	A
2.			B	A	C	C	A	A	D	B	D	C	C	B	B
3.				B	B	B	A	D	D	C	B	B	A	A	C
4.					A	A	B	A	A	A	A	A	A	A	A
5.						B	B	A	D	A	D	B	B	B	B
6.							B	D	A	A	A	B	B	B	C
7.								A	D	B	D	A	A	B	C
8.									D	B	B	B	A	A	A
9.										A	A	B	A	B	A
10.											A	B	B	A	A
11.												B	A	B	A
12.													A	A	A
13.														B	A
14.															C
15.															

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

Comments and Recommendations:

Objectives 2 & 9 – There will always be a conflict between house building and other forms of development (need) and protecting the environment, and a balance has to be stuck. Mitigation measures will need to be taken. The planning system is designed to ensure that all factors are considered. *Recommendation:* No change needed.

Objectives 2 & 11 – As above.

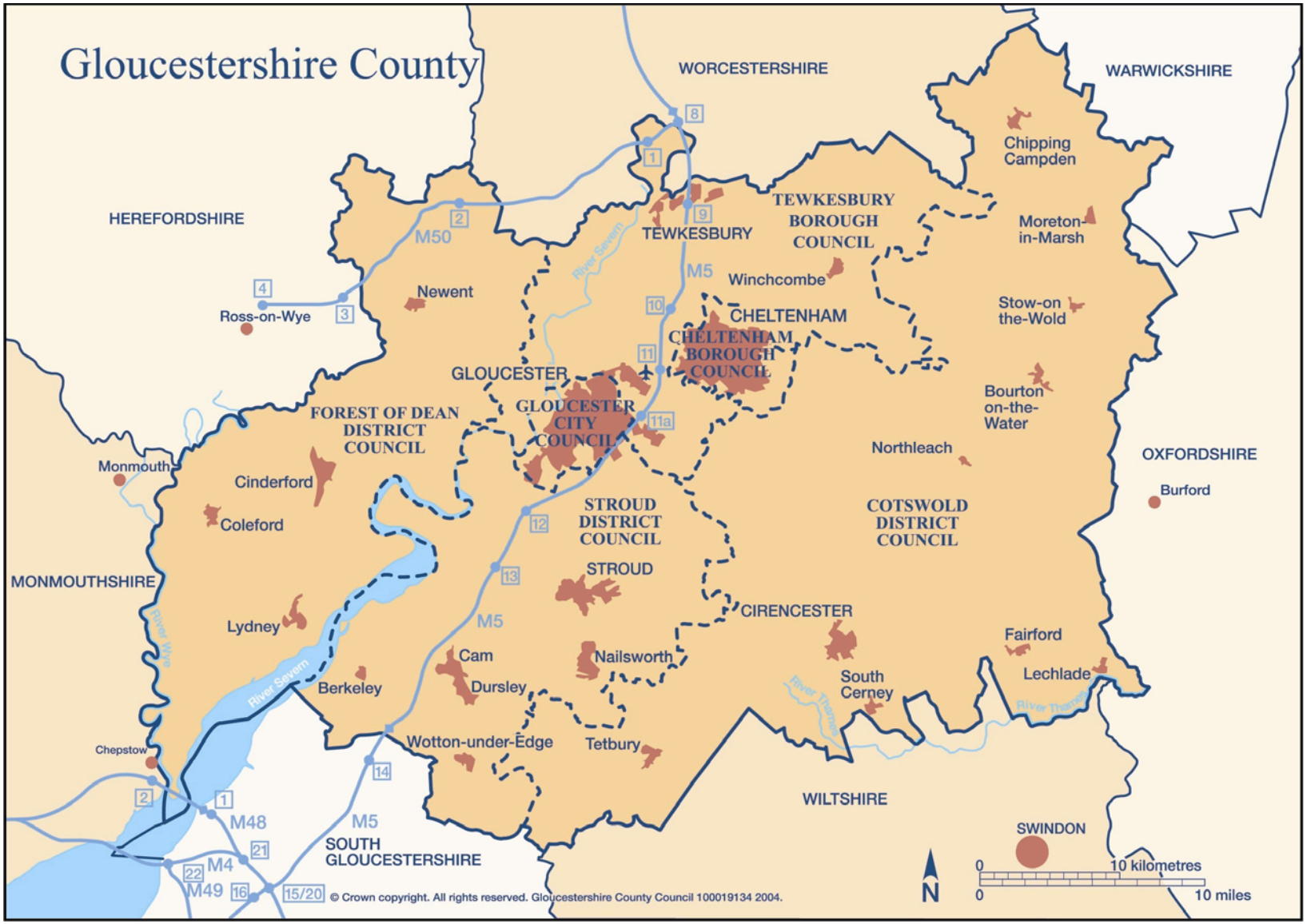
Objectives 3 & 8 – Safeguarding sites may have an impact in that there is less land available for employment use, or that businesses may be discouraged from locating in a particular area near to a safeguarded site. *Recommendation:* The Government requires that sites be safeguarded e.g. for waste sites PPS 10 paras 17,18,19 – no change needed.

Objectives 3 & 9 – There may be conflicts of interest between environmental / nature conservation aims and objectives and the need to safeguard sites, particularly for minerals development as minerals can only be won where they arise. *Recommendation:* The selection process is very rigorous, and it is often the case that, e.g. with quarries preferred areas/sites, they are extensions to existing quarries/workings.

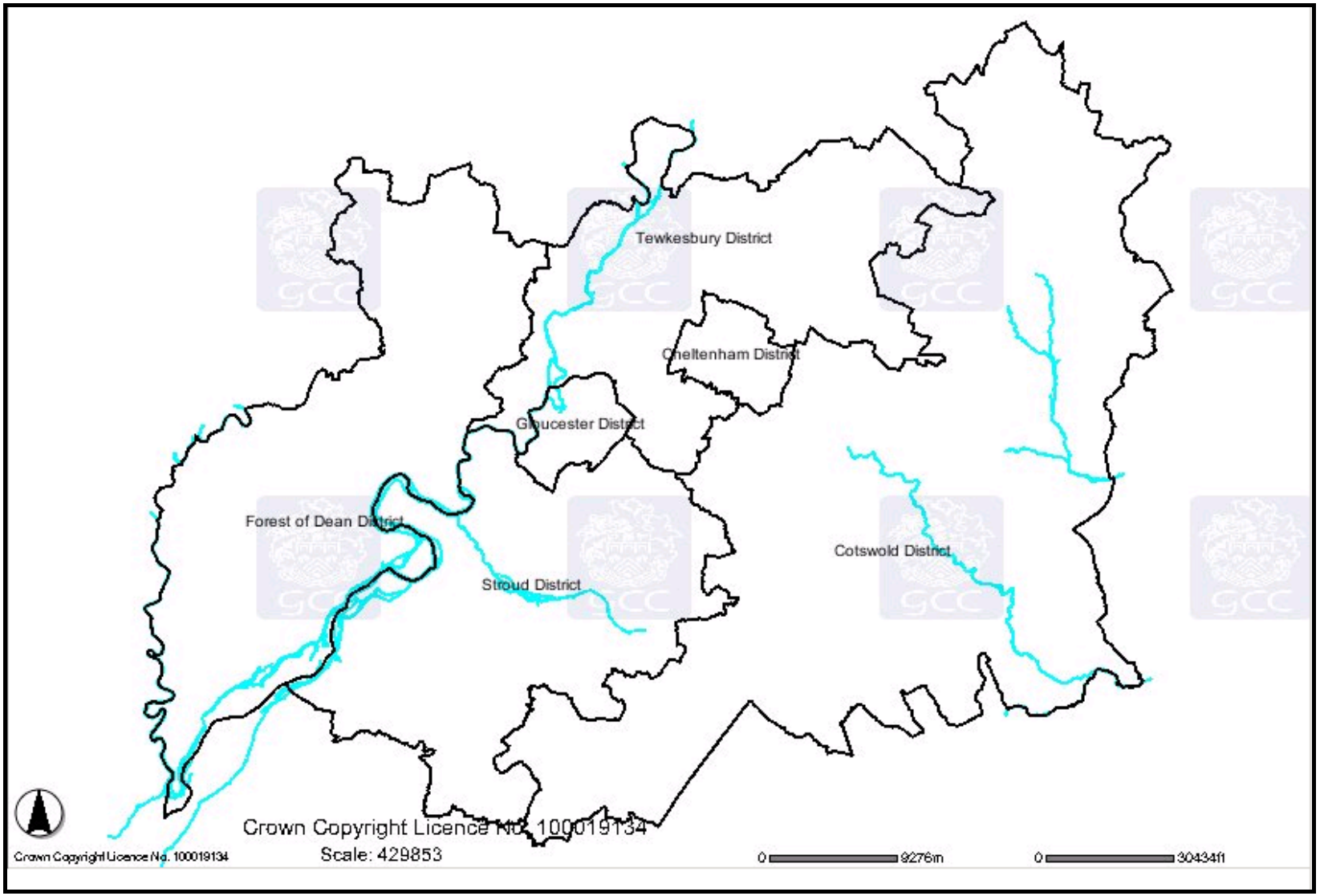
There is a need to reflect Government policy. No change needed.
Objectives 5 & 9 – There will always be a conflict between economic development and protecting the environment and a balance has to be stuck. The planning system is designed to ensure that all factors are considered. *Recommendation:* No change needed.
Objectives 5 & 11 – As above.

Objectives 6 & 8 – Minerals and waste developments do provide employment opportunities, which can be quite significant especially in rural areas. So while local communities benefit from these opportunities, their amenity can be affected. *Recommendation:* No change needed – Judgements are made on a case-by-case basis through a rigorous process in order to find a positive and balanced solution and minimise the impact of development.
Objectives 7 & 9 – Potential conflict in securing supplies and the protection of the environment. . *Recommendation:* No change needed – Judgements are made on a case-by-case basis through a rigorous process in order to find a positive and balanced solution. Significant mitigation measures are available.
Objectives 7 & 11 – As above.
Objectives 8 & 9 – There are potential conflicts between providing employment (facilitating economic growth) and protecting the environment and a balance has to be stuck. The planning system is designed to ensure that all factors are considered in each case. *Recommendation:* No change needed.

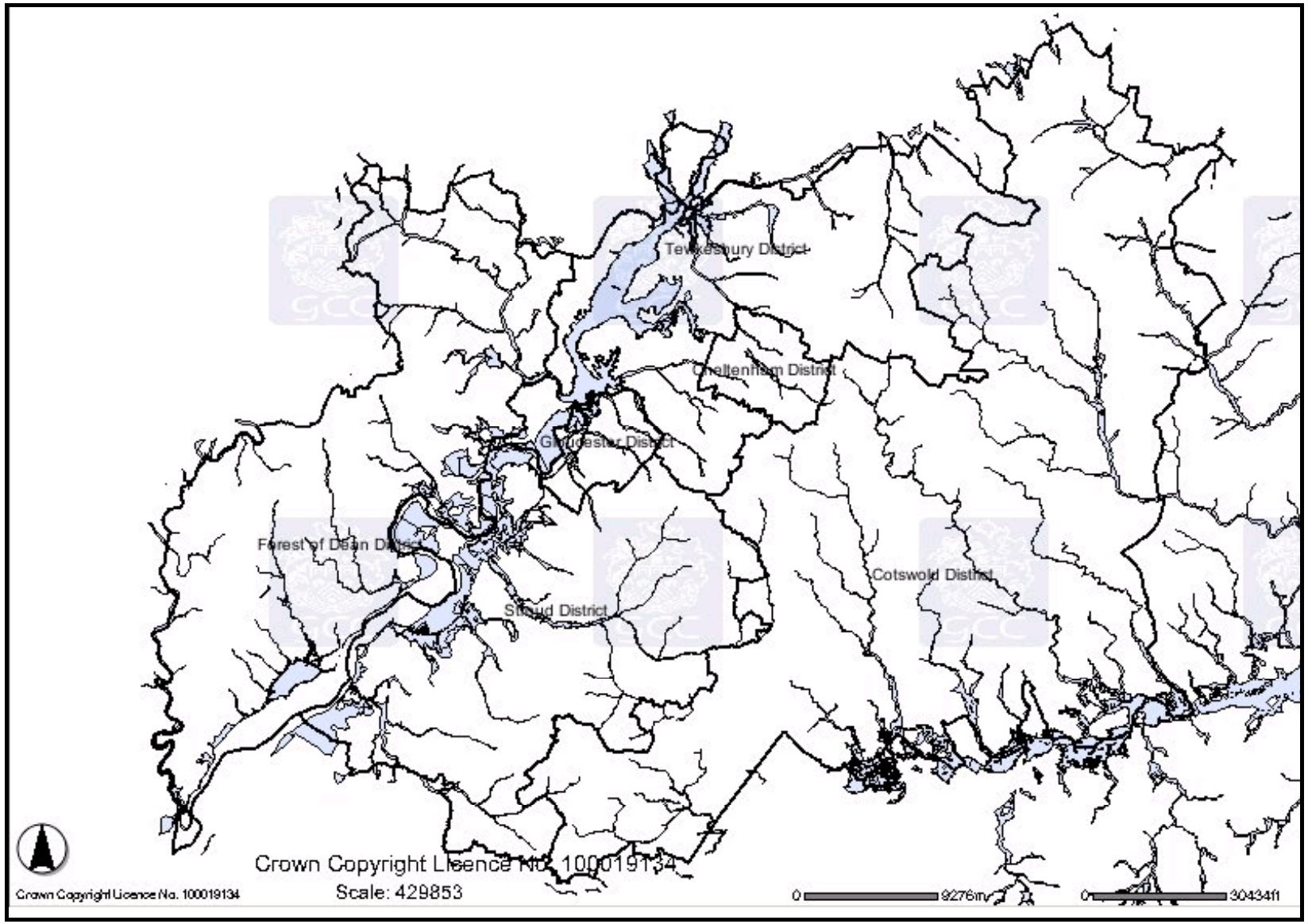
Appendix 7. Mapped Baseline Data for Gloucestershire



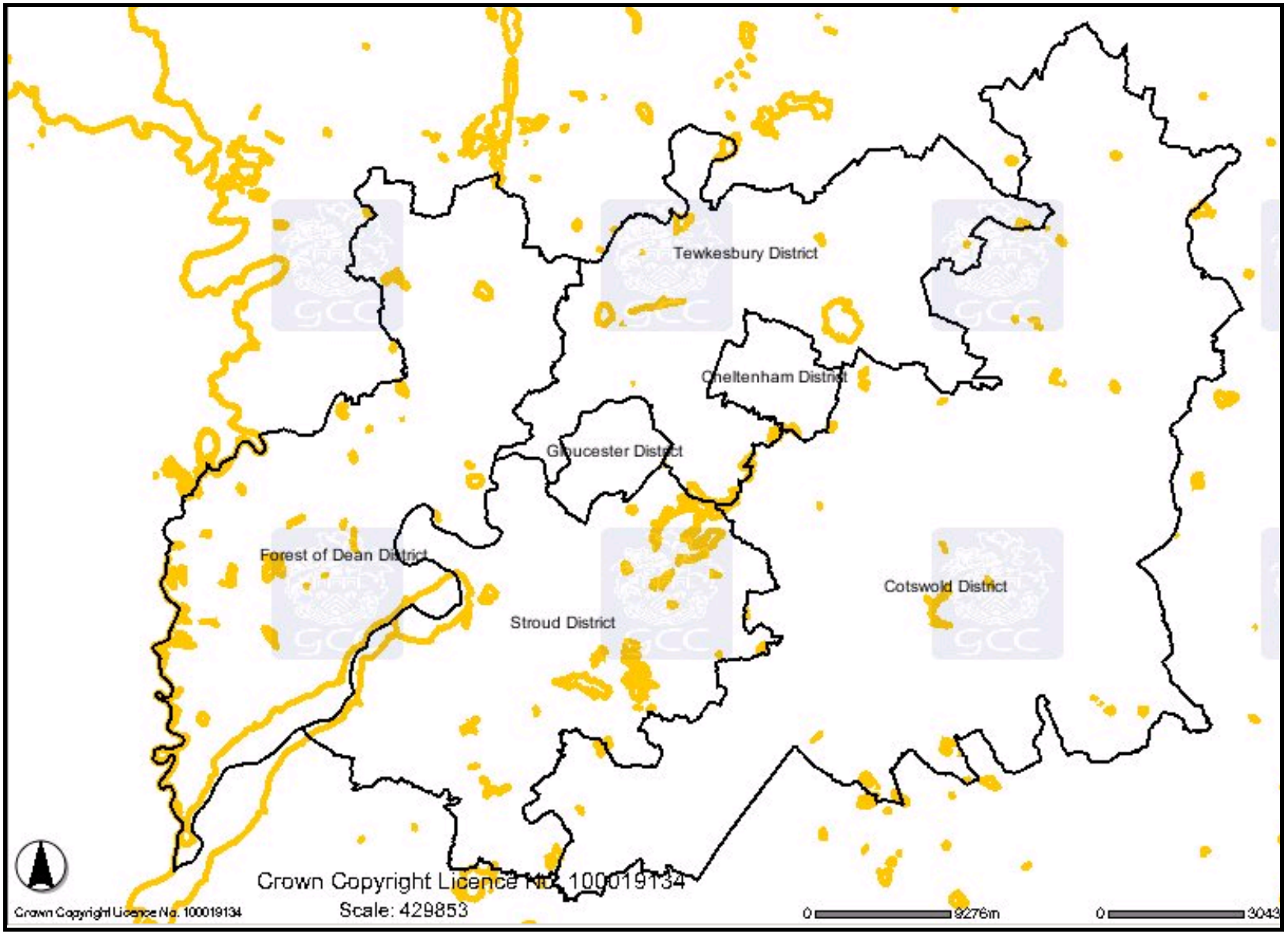
Map 1. Gloucestershire – Districts and main settlements. Source: Gloucestershire County Council (2005).



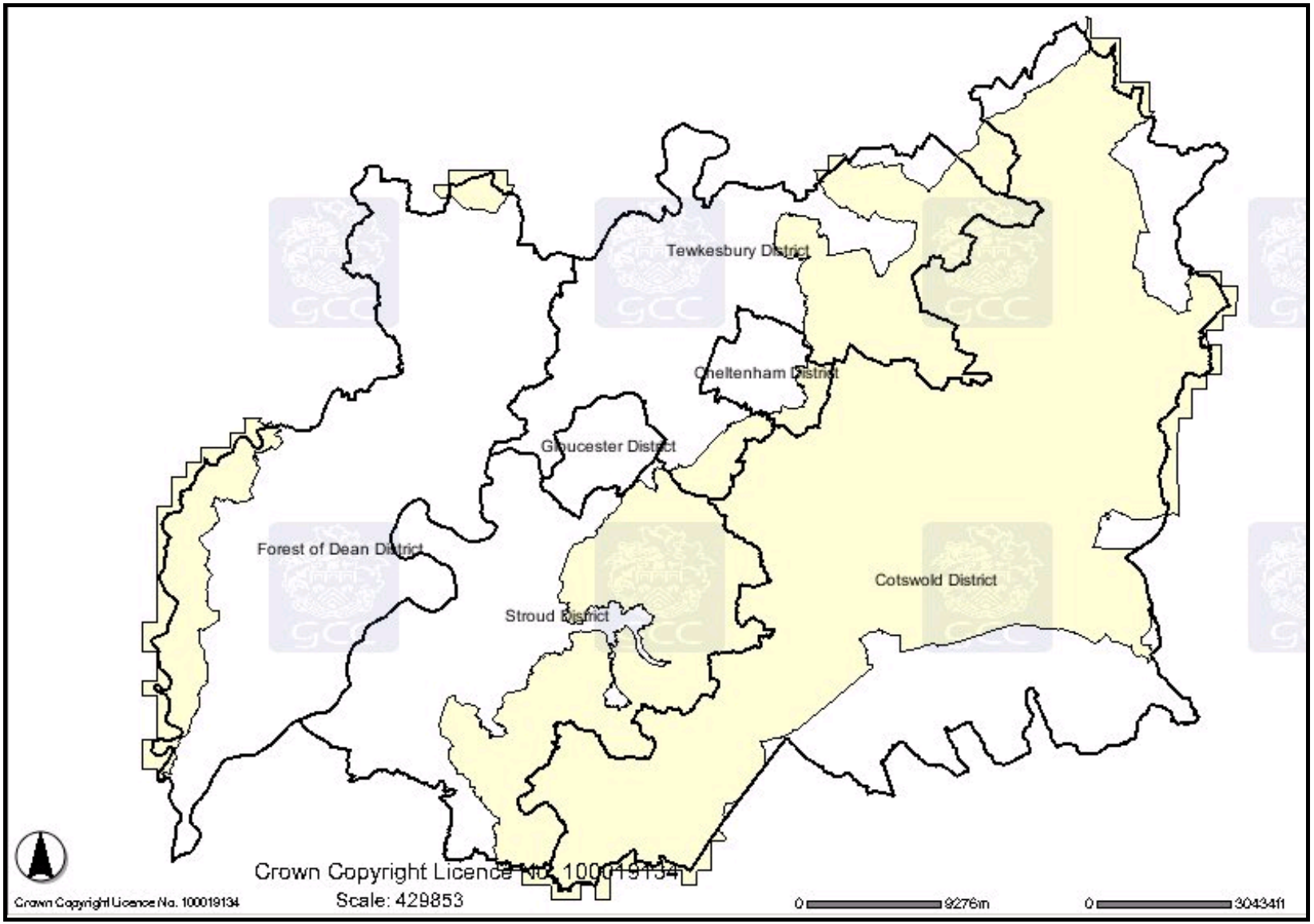
Map 2. Rivers in Gloucestershire. Source: GlosMap (2006).



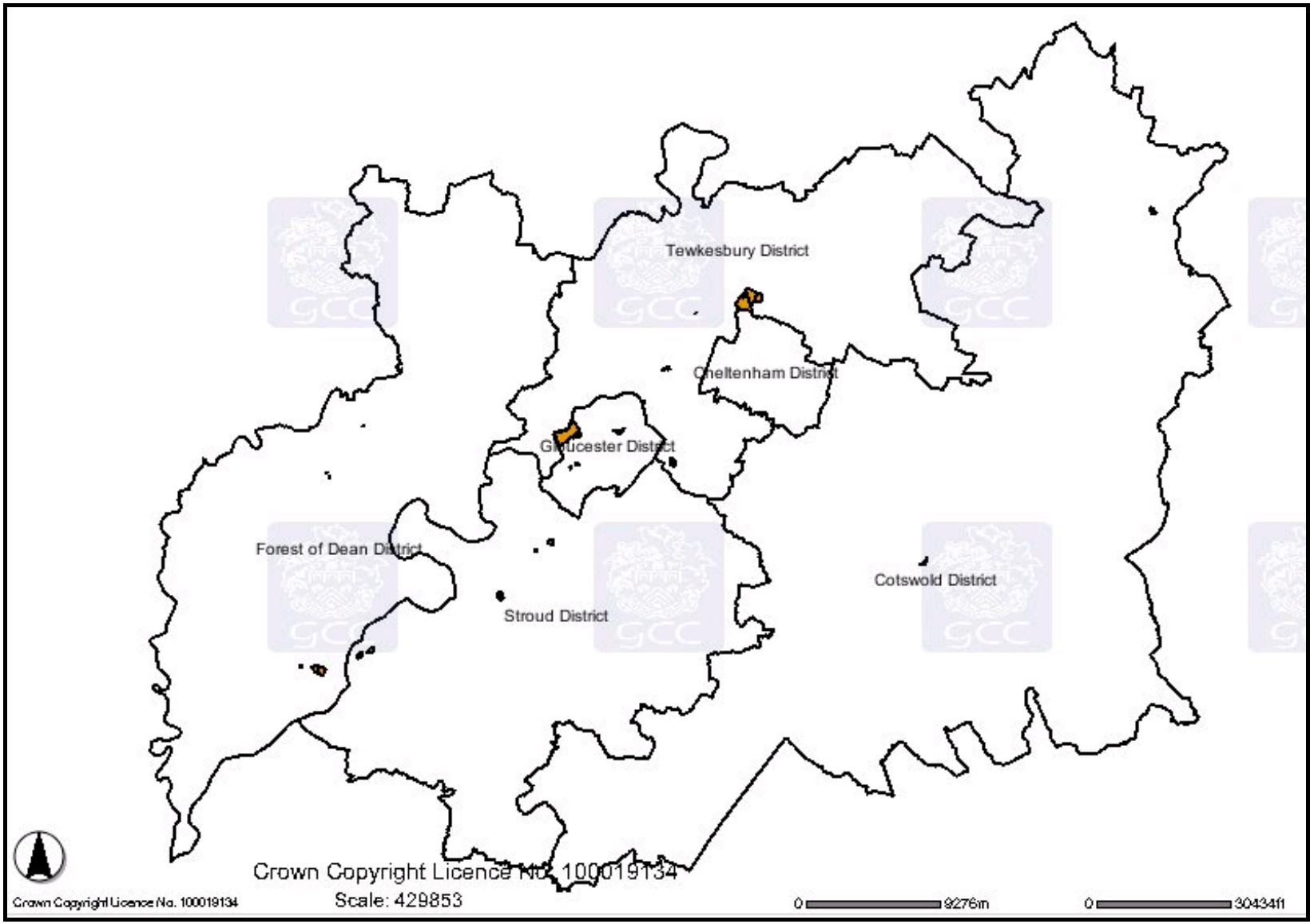
Map 3. Floodplain in Gloucestershire. Source: GlosMap (2006).



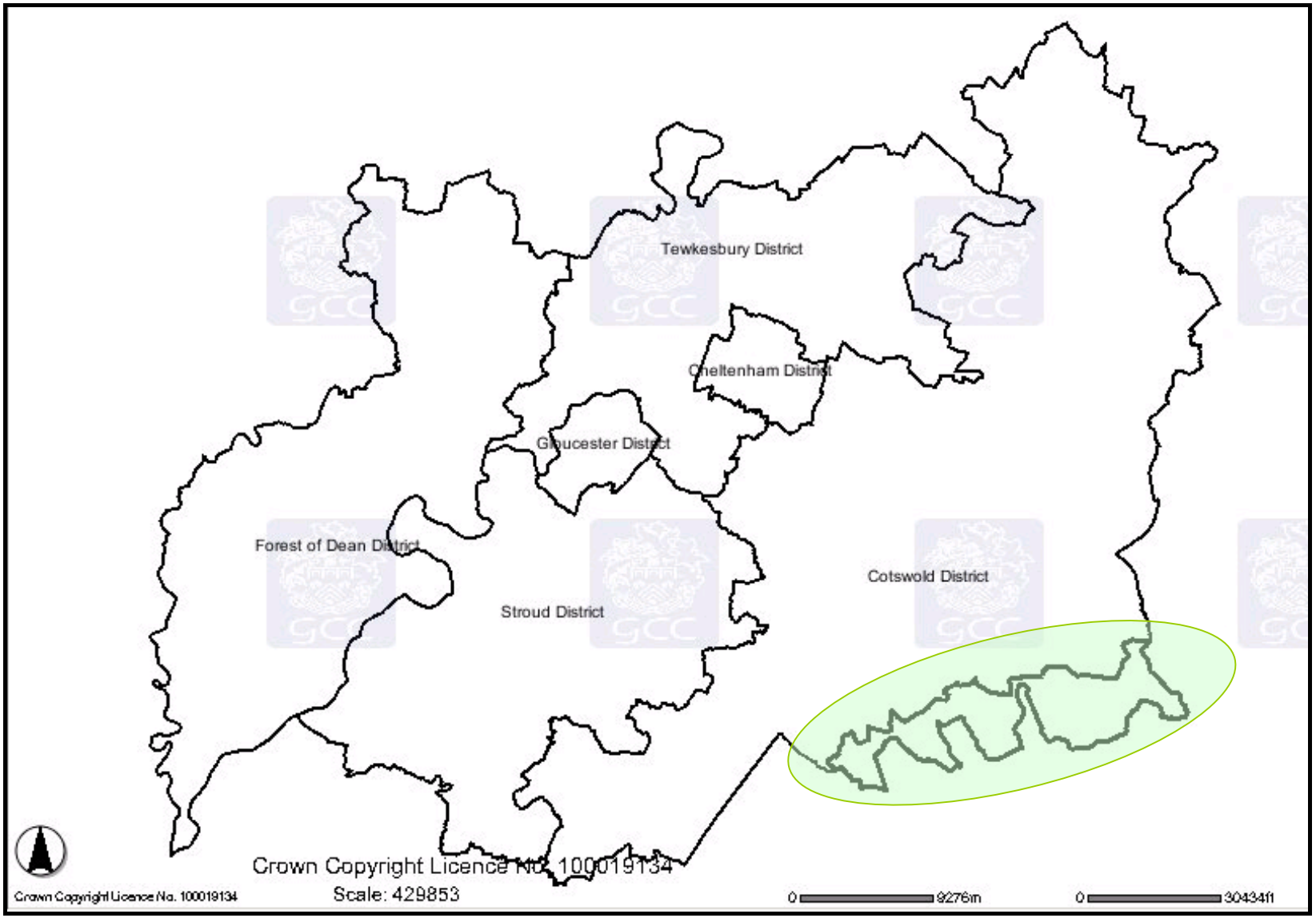
Map 4. SSSI in Gloucestershire (Linear). Source: GlosMap (2006).



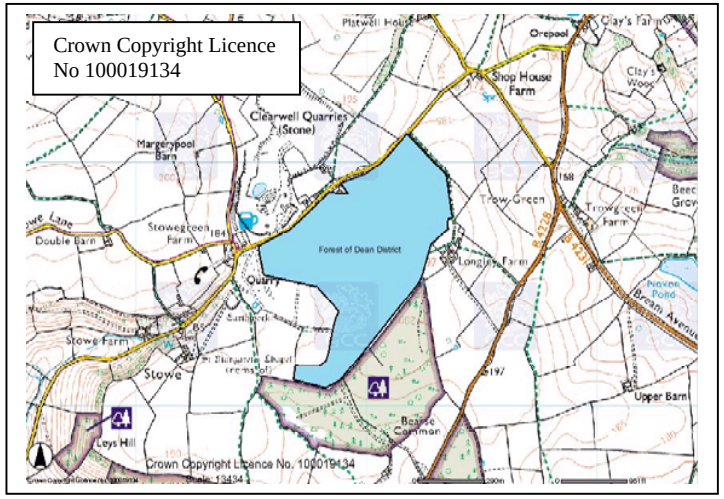
Map 5. Extent of AONB in Gloucestershire. Source: GlosMap (2006).



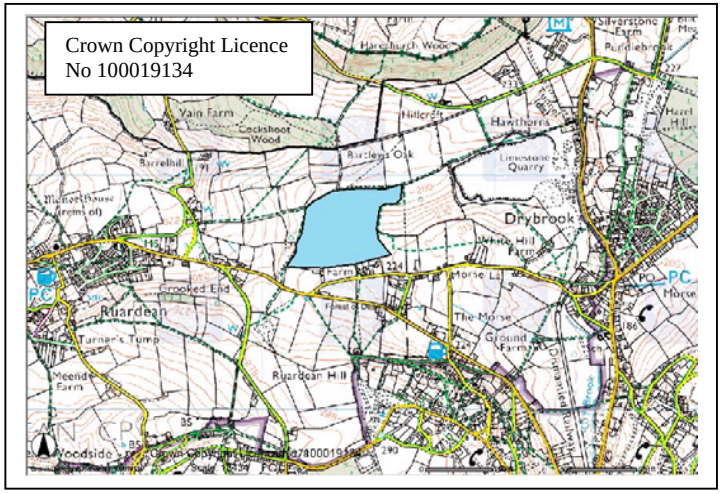
Map 6. Prefered Strategic Waste Sites in Gloucestershire as per the Adopted Waste Local Plan 2004. Source: GlosMap (2006).



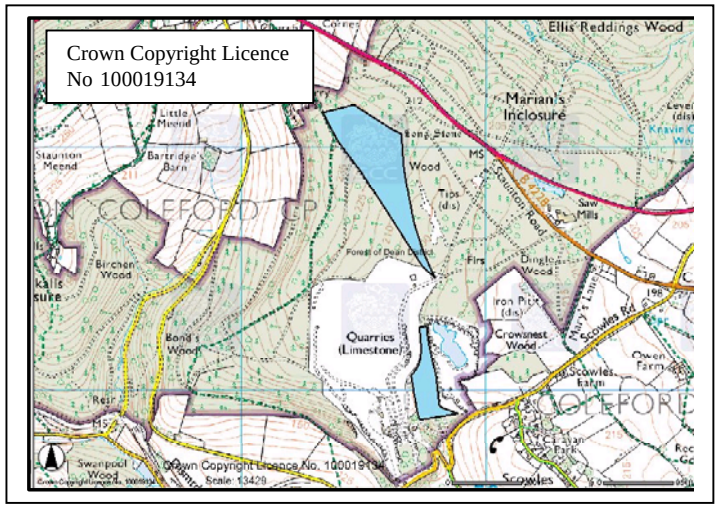
Map 7. Mineral Consultation Area – indicated by thick black line. Source: GlosMap (2006).



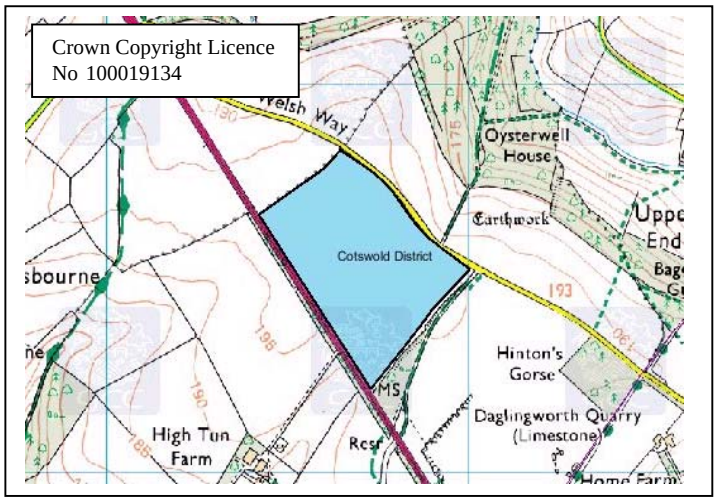
Stowe Hill / Clearwell, Crushed Rock, FoD.



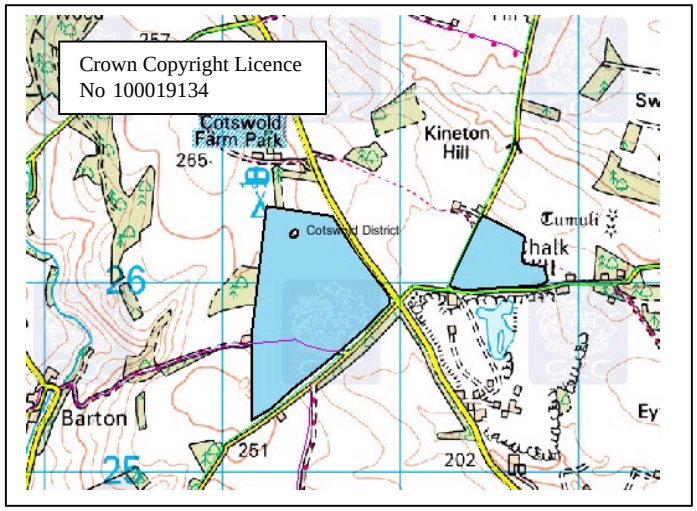
Drybrook, Crushed Rock, FoD.



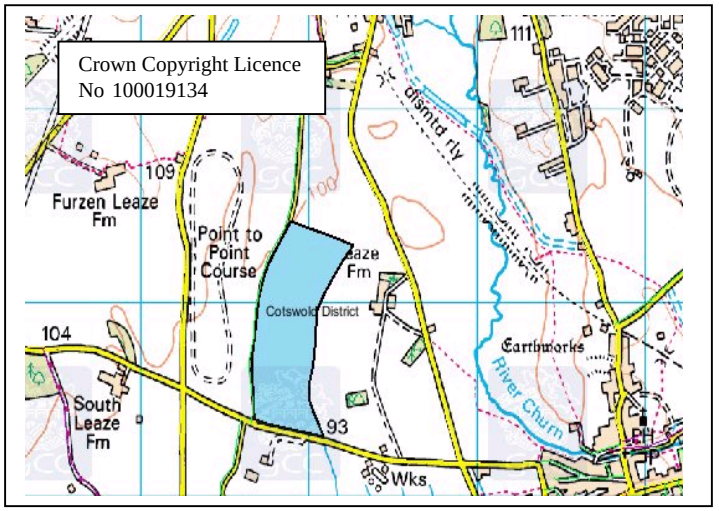
Stowfield, Crushed Rock, FoD.



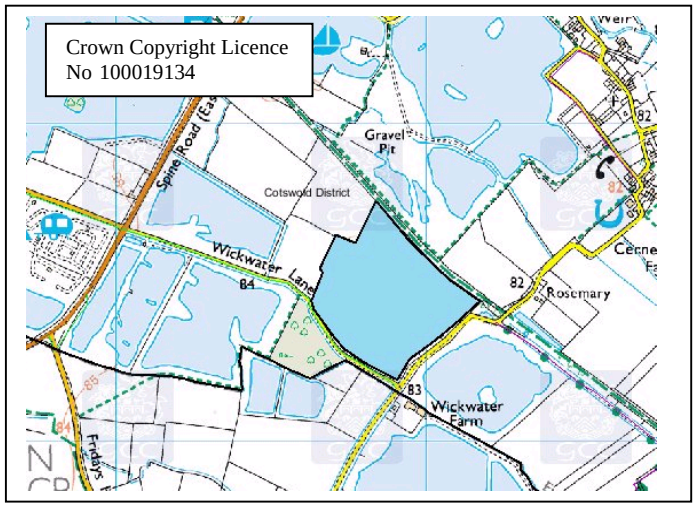
Daglingworth, Crushed Rock, Cotswolds.



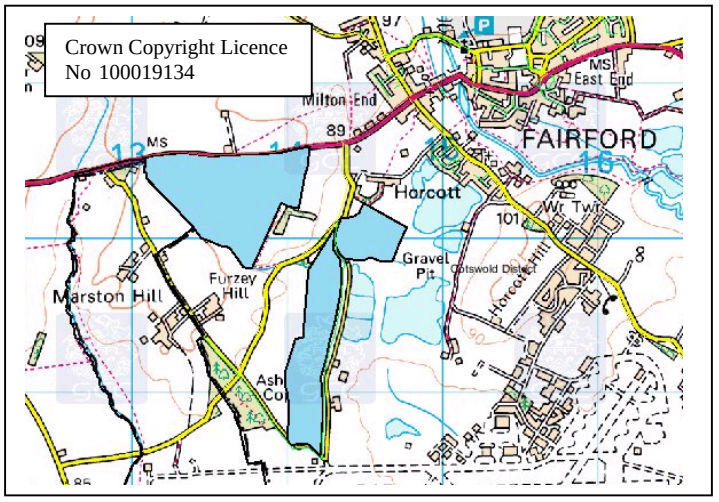
Huntsmans, Crushed Rock, Cotswolds.



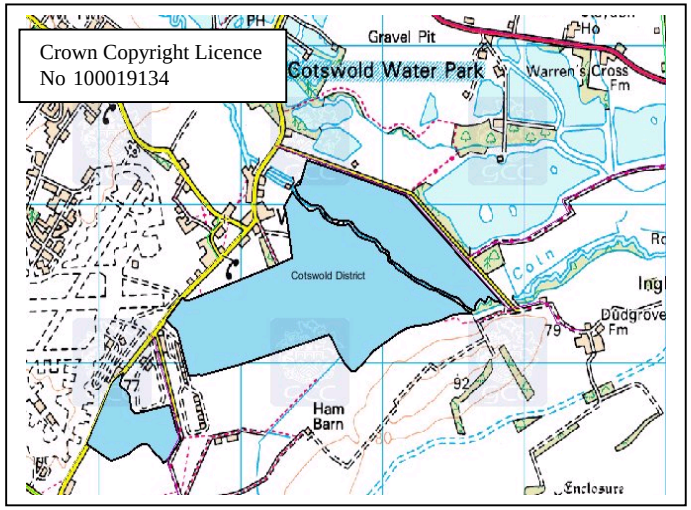
Dryleaze Farm, Sand & Gravel, Cotswolds.



Cerney Wick, Sand & Gravel, Cotswolds.

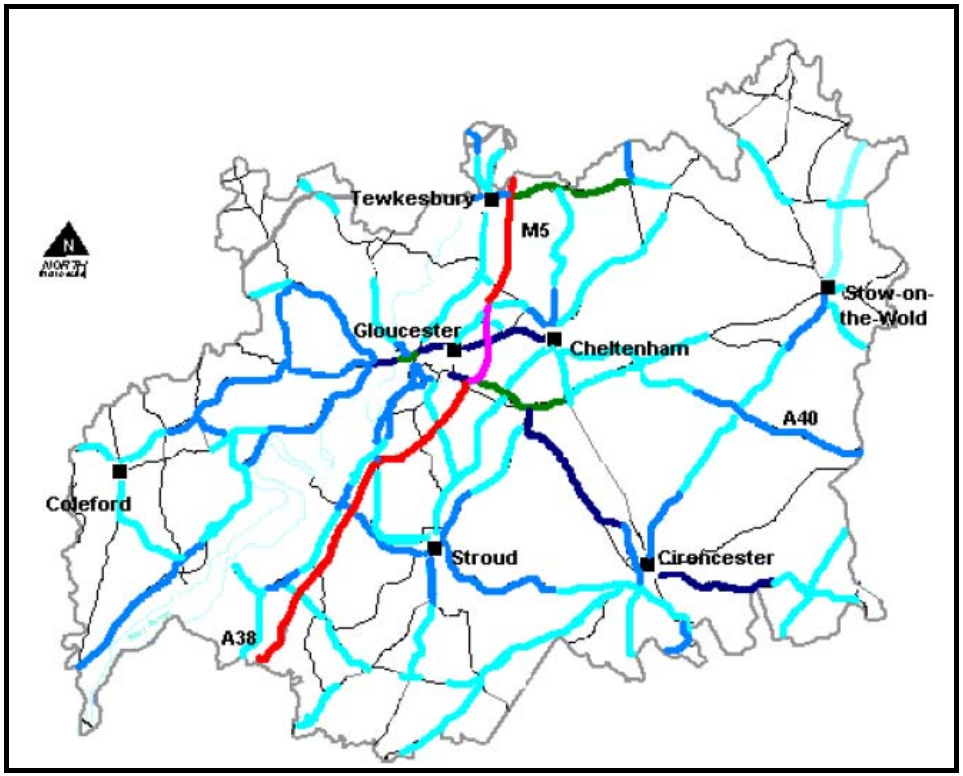


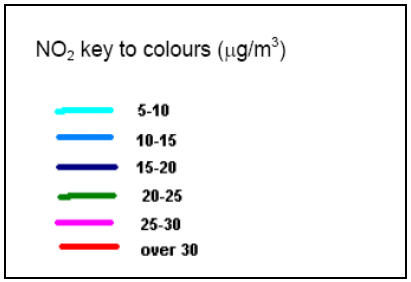
Horcott / Lady Lamb Farm, Sand & Gravel, Cotswolds.



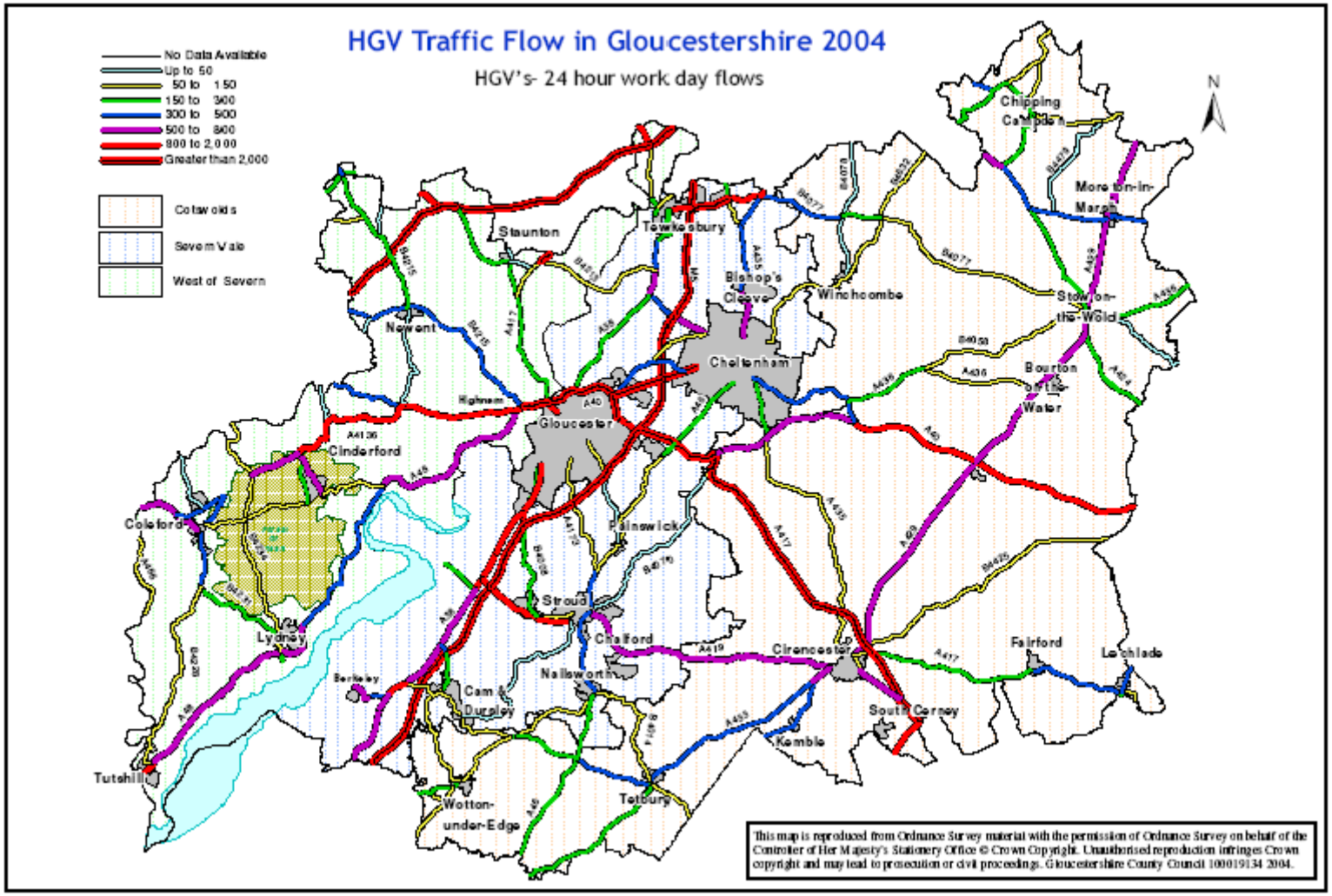
Kempsford / Whelford, Sand & Gravel, Cotswolds.

Map Series 8. Prefered Areas in the Adopted Minerals Local Plan. Source: GlosMap (2006). (Note: Maps at different scales).





Map 9. The predicted relative contribution of nitrogen dioxide (as an annual mean)
Source: The Gloucestershire Road Network for 2005: Appendix F – Air Quality Management – Gloucestershire Local Transport Plan 2001/2002 – 2005/2006.



Map 10. HGV Traffic Flow in Gloucestershire 2004. Source: Appendix H. of the Provisional Gloucestershire Local Transport Plan 2006 – 2011.

Glossary

Annual Monitoring Report: part of *the local development framework*, the annual monitoring report will assess the implementation of the *local development scheme* and the extent to which policies in *local development documents* are being successfully implemented.

Community Strategy Plan: local authorities are required by the Local Government Act 2000 to prepare these, with aim of improving the social, environmental and economic well being of their areas. Through the community strategy, authorities are expected to co-ordinate the actions of local public, private, voluntary and community sectors. Responsibility for producing community strategies may be passed to *local strategic partnerships*, which include local authority representatives.

Contextual Indicators: measure changes in the wider social, economic, and environmental background against which policies operate. As such, they help to relate policy outputs to the local area.

Core Strategy: sets out the long-term spatial vision for the local planning authority area, the spatial objectives and strategic policies to deliver that vision. The core strategy will have the status of a *development plan document.*

Development Plan: as set out in Section 38 of the Act, an authority's development plan consists of the relevant *regional spatial strategy* (or the spatial development strategy in London) and the *development plan documents* contained within its *local development framework.*

Development Plan Documents: spatial planning documents that are subject to independent examination, and together with the relevant regional spatial strategy, will form the *development plan* for a local authority area for the purposes of the *Act*. They can include a *core strategy, site specific allocations of land*, and *area action plans* (where needed). Other development plan documents, including generic development control policies, can be produced. They will all be shown geographically on an adopted *proposals map*. Individual development plan documents or parts of a document can be reviewed independently from other development plan documents. Each authority must set out the programme for preparing its development plan documents in the *local development scheme*.

Local Development Order: allows local planning authorities to introduce local permitted development rights.

Local Development Framework: the name for the portfolio *of local development documents and related documents.* It consists *of development plan documents, supplementary planning documents, a statement of community involvement, the local development scheme and annual monitoring reports.* It may also include *local development orders and simplified planning zone schemes*. Together all these documents will provide the framework for delivering the spatial planning strategy for a local authority area.

Local Development Scheme: sets out the programme for preparing *local development documents.* All authorities must submit a scheme to the Secretary of State for approval within six months of commencement of *the Act*.

Monitoring: regular and systematic collection and analysis of information to measure policy implementation.

ODPM Guidance: this specifically refers to *Sustainability Appraisal of Regional Spatial Strategies and Local Development Frameworks – Consultation Paper* September 2004. The final version of the guidance is due to be published in September of 2005.

Output Indicators: measure the direct effect of a policy. Used to assess whether policy targets are being achieved in reality using available information.

Policy Implementation: assessment of the effectiveness of policies in terms of achieving their targets. Measured by use of output and contextual indicators.

Regional Planning Body: one of the eight regional bodies in England responsible for preparing draft revisions to regional spatial strategies. In London the equivalent is the Greater London Authority responsible for the Spatial Development Strategy or *"London Plan"* as it is known. For the purposes of this guidance references to RSSs should also be taken as referring to the London Plan.

Regional Spatial Strategy: sets out the region's policies in relation to the development and use of land and forms part of the *development plan*. Planning Policy Statement 11 'Regional Spatial Strategies' provides detailed guidance on the function and preparation of regional spatial strategies.

The Regulations: the Town and Country Planning (Local Development) (England) Regulations 2004, and the Town and Country Planning (Transitional Arrangements) (England) Regulations 2004.

Saved Policies or Plans: existing adopted development plans are saved for three years from the date of commencement of *the Act*. Any policies in old style development plans adopted after commencement of the Act will become saved policies for three years from their adoption or approval. The *local development scheme* should explain the authority's approach to saved policies.

SEA Directive: European Directive 2001/42/EC 'on the assessment of the effects of certain plans and programmes on the environment'.

SEA Regulations: the Environmental Assessment of Plans and Programmes Regulations, 2004.

Strategic Environment Assessment: generic term used internationally to describe environmental assessment as applied to policies, plans and programmes. In this guidance, 'SEA' is used to refer to the type of environmental assessment required under the SEA Directive.

Supplementary Planning Documents: provides supplementary information in respect of the policies in *development plan documents*. They do not form part of the development plan and are not subject to independent examination.

Sustainability Appraisal: generic term to describe the form of assessment that considers social, environmental and economic effects, which fully incorporates the requirements of the SEA Directive.

Targets: thresholds which identify the scale of change to be derived from policies over a specific time period (e.g. number of affordable homes to be built by a set date).

Printed on 100% Recycled Paper

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

www.gloucestershire.gov.uk

April 2006