Gloucestershire
COUNTY COUNCIL






MINERALS & WASTE

ANNUAL MONITORING REPORT

2004 - 2005

The Minerals & Waste Annual Monitoring Report (AMR) is a Development Document in the Gloucestershire Minerals & Waste Development Framework

CONTENTS: Gloucestershire Minerals & Waste Annual Monitoring Report 2004 - 2005

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Foreword

The Gloucestershire Minerals & Waste Annual Monitoring Report (AMR) is to be published each year and submitted to the Secretary of State by no later than 31st December. It is a statutory requirement under Section 35 of the Planning and Compulsory Purchase Act 2004 and accords with Regulation 48(8) of the Town & Country Planning (Local Development) (England) Regulations 2004.

The first statutory Gloucestershire Minerals & Waste AMR reports on the period 1 April 2004 – 31 March 2005 and provides an assessment on the implementation of the emerging Minerals & Waste Development Framework (MWDF), and the performance of the existing, saved policies of the adopted Gloucestershire Minerals & Waste Local Plans. It has undergone informal consultation with key local, regional and national monitoring stakeholders in autumn 2005 and has been submitted to the Secretary of State in December 2005.

CHAPTER 1: Introduction to Annual Monitoring

1. The Planning and Compulsory Purchase Act came into force on 28th September 2004 and with it the replacement of Minerals and Waste Local Plans with a new forward planning system of Minerals & Waste Development Frameworks (MWDF).

2. Under the new system, monitoring will become an essential element to the successful delivery of minerals and waste development frameworks. It will help identify key challenges and opportunities for the future, through positive feedback on plan preparation and policy implementation.

3. In view of the importance placed on monitoring, the preparation of annual monitoring reports (AMR's) has become a statutory function. Under Section 35 of the Planning and Compulsory Purchase Act (2004), all planning authorities must now prepare annual monitoring reports containing information on the preparation process for their local development frameworks *(including Minerals & Waste Development Frameworks)* and the extent to which policies set out in development documents are being achieved.

4. The detailed content of AMR's is governed under the requirements set by Local Planning Regulation 48, which identifies five key monitoring tasks that local planning authorities must undertake. These tasks have a strong inter-relationship with the Strategic Environment Assessment / Sustainability Appraisal process and can also be followed through Regulation 17 of The Environmental Assessment of Plans & Programmes Regulations 2004. The AMR monitoring tasks are detailed below: -

Annual Monitoring Reports must;

- **Review the 'actual' progress of local development documents against the timetable and milestones of the approved Local Development Scheme (i.e. Glos. Minerals & Waste Development Scheme);**
- **Assess whether policies and targets in local development documents have been met or progress is being made towards them or, where they are not being met or not on track to being achieved, the reasons why;**
- **Identify the impacts of policies in local development documents on national and regional policy targets;**
- **Assess whether policies in local development documents need adjusting or replacing because they are not working as intended and / or as a consequence of changes in national and regional policy;**
- **Identify the significant effects resulting from the implementation of policies in local development documents and their impact upon the social, environmental and economic objectives by which sustainability is defined, and whether these effects are as intended.**

1st Gloucestershire Minerals & Waste Annual Monitoring Report

5. The first AMR for 2004 – 2005 will reflect the transitional arrangements from the adopted minerals and waste local plans to the minerals & waste Development Framework (MWDF). As a consequence, and as advised within ODPM's recently published Good Practice Guide: *Monitoring and Annual Monitoring Reports,* the first AMR will concern itself with an analysis of 'saved' policies within the existing adopted minerals and waste plans, as well as charting the early progress of the approved MWDS.

6. The 1st Gloucestershire Minerals & Waste Annual Monitoring Report is to be divided into three chapters:

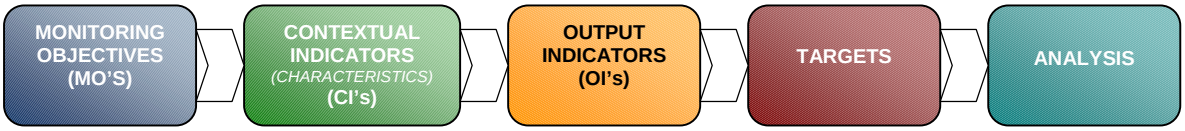
   - Chapter 1 – An introduction to annual monitoring
   - Chapter 2 – A review of the implementation of the MWDS
     (*Including progress to date of minerals and waste development documents)*
   - Chapter 3 – An assessment of the 'saved' policies of the adopted Gloucestershire Minerals & Waste Local Plans.

Developing Gloucestershire minerals & waste monitoring regime

7. Developing a systematic and dynamic monitoring system is crucial to delivering a well-structured and robust AMR that is capable of meeting the five key monitoring tasks, set out in the Local Planning Regulations and good practice guidance. Consistent with the existing regional level policy monitoring, the Gloucestershire Minerals & Waste AMR is to adopt an; *'objectives-targets-indicators'* approach to the monitoring process.

8. The structure of the AMR will consist of monitoring objectives, contextual and output indicators, and targets *(where appropriate)*. Diagram 1 below provides the monitoring profile to be followed throughout Part B of the AMR: -

Diagram 1: The Monitoring Profile



Monitoring Objectives (MO's)

9. The MO's for the AMR are initially based upon the existing 'saved' policies of the adopted minerals and waste local plans and where possible are linked to emerging SEA / SA objectives identified at the early scoping stages of development plan documents. Monitoring objectives for further AMR reports will relate to the specific policy objectives developed out of the emerging Minerals and Waste Development Framework and associated SEA / SA process, as and when local development plan documents are prepared.

Contextual Indicators (CI's)

10. The CI's establish the *'area profile'* of the County of Gloucestershire with a specific focus upon minerals and waste matters. They are to be used to provide a quantified description of the wider socio-economic, environmental and demographic background against which minerals and waste planning policies and strategies operate.

Output Indicators (OI's)

11. Output Indicators (OI's) aim to measure quantifiable impacts and events *(e.g. the tonnage of municipal waste collected within the period 2004 - 2005)* that are directly related to, and are a consequence of, the implementation of minerals and waste planning polices. OI's can be divided into two categories, Core Output Indicators (COI's) and Local Output Indicators (LOI's);

CORE OUTPUT INDICATORS (COI's) - must be included with the AMR to provide a clear and consistent data source for the strategic monitoring functions of regional planning bodies. It is envisaged that the information provided by COI's would be used to develop a 'regional picture' of spatial planning that will inform the preparation of the regional spatial strategy. To ensure consistency throughout all of the locally prepared AMR's, a defined set of CIO's have been published by ODPM within The Good Practice Guide: *Monitoring and Annual Monitoring Reports.* For the purposes of the Gloucestershire Minerals & Waste AMR, there are four CIO's that will require consideration;

- ***Production of primary land won aggregates***
- ***Production of secondary / recycled aggregates***
- ***Capacity of new waste management facilities by type***
- ***Amount of municipal waste arising, and managed by management type, and the percentage each management type represents of waste managed***

LOCAL OUTPUT INDICATORS (LOI's) - are necessary to provide specific local data requirements for the monitoring of 'saved' policies within the adopted minerals and waste local plans and the emerging policies of future development plan documents. Linked with the Core Output Indicators, LOI's should provide sufficient information to continue the development of Gloucestershire's policy monitoring regime and to demonstrate the success of the monitoring objectives set out in the AMR.

Targets

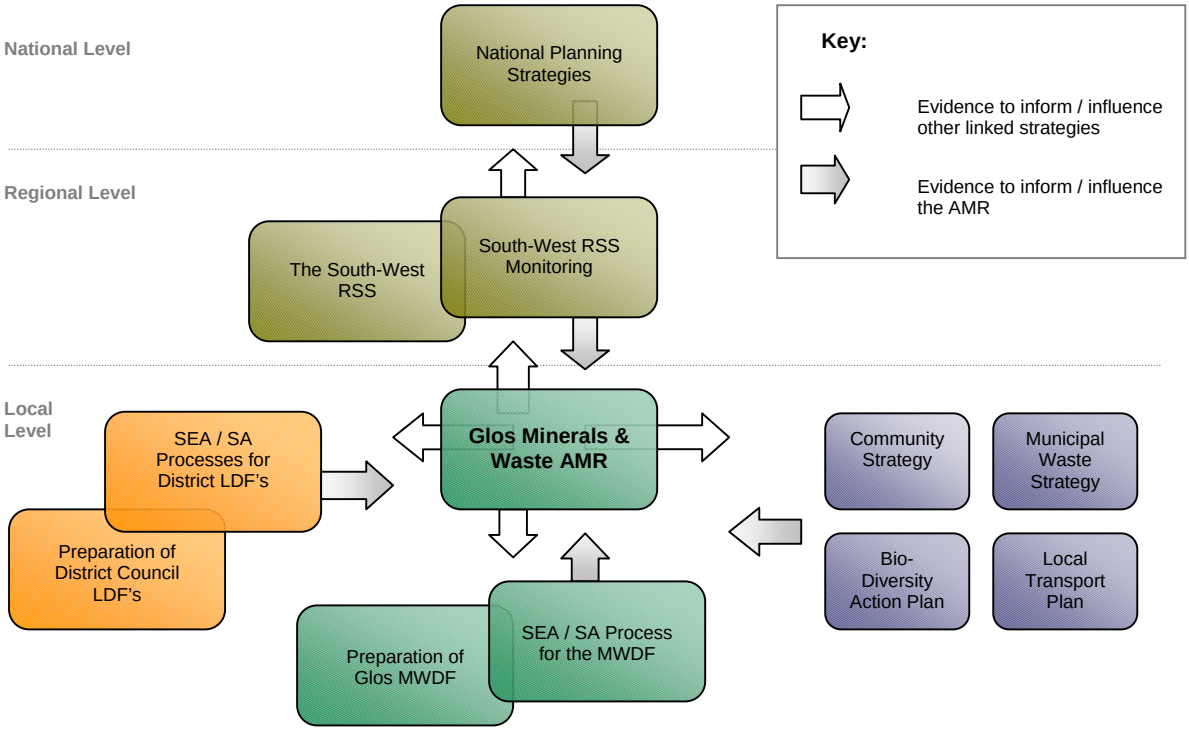
12. AMR targets must reflect the specific, measurable and desired achievements derived from the monitoring objectives. Within the initial Glos Minerals & Waste AMR, targets will be linked to the policy targets contained within the adopted minerals and waste local plans and, or other relevant national, regional and local targets deemed appropriate for the monitoring objectives. In time, revised targets will be considered to take into account emerging development plan documents and associated SEA / SA process. The use of targets is an essential element of the monitoring process as these can be used to assess whether the rationale of planning policies and strategies are still valid and are on track to achieve their wider objectives.

The wider policy context

13. The AMR process must be seen in a wider policy context related to the Government's sustainable communities agenda. As discussed in Section 2 of the ODPM's Good Practice Guide: *Monitoring and Annual Monitoring Reports,* the AMR process provides an ideal opportunity to develop greater interactivity between policies at different spatial levels and between different sectors and strategies from within and outside of planning (see diagram 2). Whilst the emergence of 'spatial' development plan documents will undoubtedly encourage greater cross cutting with other initiatives and strategies, the AMR process has an important role to play in constructing the necessary policy linkages through the development of a 'spatial' evidence base.

14. The first Gloucestershire minerals and waste AMR will acknowledge the need to consider the linkages with other policy initiatives, regimes and strategies. Through the monitoring profile, followed throughout Part B of the report, clear links will be made to a range of planning and non-planning policy objectives that will influence, and or be as a result of policy implementation of the 'saved' policies from the adopted minerals and waste local plans. As previously discussed, targets from linked policy objectives may also be incorporated into the monitoring profile as a means of assessing the effectiveness of policy delivery.

DIAGRAM 2: - The wider monitoring context for the Gloucestershire Minerals & Waste AMR



Strategic Environmental Assessment / Sustainability Appraisal

15. The AMR will be integrated with the Strategic Environmental Assessment and Sustainability Appraisal (SEA / SA) process being undertaken for emerging development plan documents. Particular attention will be given to the associated SEA / SA monitoring needs. Annex 11 of ODPM's draft guidance on Sustainability Appraisals of Regional Spatial Strategies & Local Development Frameworks, provides a detailed review of the necessary monitoring requirements. The AMR monitoring system will facilitate the effective monitoring for SEA / SA's by incorporating the SEA / SA objectives, targets and indicators into the defined section of the AMR monitoring profile (see diagram 1).

Partnership working

16. Involving key monitoring stakeholders at an early stage will prove essential to the development of robust and relevant datasets and evidence bases which will underpin the AMR system. Appendix D of this report will outline the key monitoring stakeholders involved in the process and the sort of information that they can provide. To ensure accuracy, avoid duplication, and to encourage consistency regarding shared visions and approaches, a programme of ongoing and informal consultation will be undertaken with all monitoring stakeholders during the preparation stage of each AMR. In addition a 'draft' version of the AMR report will be made available for consultation with the key stakeholders and Government Office for the South West (GOSW) in autumn 2005, prior to it's submission to the Secretary of State and publication in December 2005.

CHAPTER 2: **Minerals & Waste Development Scheme Monitoring** / 2004 – 2005

17. The AMR contains information on whether the timetable and milestones of the M&W Development Scheme are being achieved. In detail the report includes:

- **A summary of 'actual' progress being made on the production of local development documents against the timetable and milestones of the approved Local Development Scheme (i.e. Gloucestershire Minerals & Waste Development Scheme) and;**
- **An assessment, where necessary, of the reasons why local development documents have not met their relevant milestones and timetable**

Summary of local development document production (2004 – 2005)

18. The Minerals and Waste Development Scheme (MWDS) was under preparation from March 2004 following consultation with technical consultees the South West Regional Planning Body, Government Office for the South West (GOSW) and the Planning Inspectorate. The MWDS was formally submitted to GOSW in March 2005 and received approval and became effective on 9th May 2005.

19. Under statutory transitional arrangements for converting from the 'old planning system' of minerals and waste local plans to a minerals and waste development framework, the following documents have been saved as part of the development plan for Gloucestershire for a minimum period of 3 years: -

- Gloucestershire Minerals Local Plan (1997 – 2006) / Adopted April 2003
- Gloucestershire Waste Local Plan (2002 – 2012) / Adopted October 2004

20. The Structure Plan (Second Review) adopted in 1999, will also form part of the development plan and will be saved for at least 3 years or until replaced by the RSS, most likely to be 2007.

21. Albeit that the Minerals Local Plan and Structure Plan were adopted prior to the commencement of the new planning system in September 2004, the Waste Local was successfully adopted by the County Council under the terms of the Town and Country Planning Act 1990 and Town and Country Planning (Transitional Arrangements) (England) Regulations 2004, in **October 2004**.

22. Preparatory work for the Statement of Community Involvement (SCI) began in October 2004 with pre-submission consultation in the form of a Minerals & Waste Newsletter and questionnaire that was distributed to over 3000 residents throughout Gloucestershire. Between 24th January and 7th March 2005 an Issues & Options Paper of the SCI was published for 6 weeks public consultation in line with Regulation 26 of the Town & Country Planning (Local Development) (England) Regulations 2004 and included a Public Forum event held at Gloucester City Council on January 31st 2005. Consultation comments arising from this consultation were considered and amendments included within the Submission SCI. The Submission document was formally submitted to the Secretary of State on 8th June 2005.

23. The Minerals and Waste Core Strategies (M&WCS's) and Waste Minimisation Supplementary Planning Document (WMSPD) are due to commence during the 2nd AMR reporting period; April 2005 to March 2006. The remaining DPD's for Development Control Policies (DCDPD) and Minerals and Waste Site Allocations (MSDPD & WSDPD) are due to commence post 2008. Diagram 3 overleaf shows in detail, the progress made on local development documents against the targets and key milestones outlined in the MWDS.

Comparative assessment for document production & key milestones

24. A detailed profile has been prepared for each development document. The profile includes key milestones for production as approved in the MWDS, identifies what production progress has been made, and incorporate comments concerning document production: -

Minerals & Waste Development Scheme (MWDS)

Key Milestones	Target Dates	Production Comments	Completion Date	Target Achieved
Commencement of MWDS	March 2004	Pre-production work, scoping and consultation with technical consultees was carried out between January and September 2004. A draft version of the MWDS was submitted to GOSW for comment in March 2004.	March 2004	✓
Submission of MWDS to Secretary-of-State	March 2005	The MWDS was formally submitted to Secretary-of-State on 18th March 2005.	March 2005	✓
Secretary of State approval of MWDS *(including a Service Level Agreement with The Planning Inspectorate)*	April 2005	GOSW formally acknowledged receipt of the submission MWDS on 24th March 2005, initiating a 4-week consideration of the MWDS by the Secretary of State. The target was not achieved due to a **holding direction issued by GOSW on 19th April 2005**, requesting more time for consideration of the MWDS. Following the completion of a Service Level Agreement on the 28th April 2005 with The Planning Inspectorate and GOSW issued an approval for the MWDS on the 9th May 2005.	May 2005	X

Statement of Community Involvement (SCI)

Key Milestones	Target Dates	Production Comments	Completion Date	Target Achieved
Commencement of SCI and early public participation	Oct 2004	Between September and November 2004 community involvement consultants were appointed to assist with the preparation of the SCI. A Minerals & Waste Newsletter including a questionnaire about future community participation was sent to over 3000 residents throughout Gloucestershire during October 2004 *(as part of Reg 25 consultation)*.	Oct 2004	✓
Public participation on Issues & Alternative Options Papers of the SCI	Jan – Mar 2005	An Issues & Alternative Options SCI was published for public 6-weeks consultation on 24th January *2005 (as required under Reg 26)* On 31st January 2005 a Public Forum Event was held at Gloucester City Council Offices to discuss the content of the SCI.	Jan – Mar 2005	✓
Preparation of Submission SCI	Mar - May 2005	A Consideration & Response Report for the representations made to the Issues & Alternative Options SCI was prepared during April 2005. The community involvement consultants also prepared two further reports covering the Public Forum Event and a peer-review assessment of the Issues & Alternative Options SCI.	Mar – May 2005	✓
Submission of SCI to Secretary-of-State and Public Participation on Submission SCI.	June – July 2005	The Submission SCI was submitted to the Secretary of State on 8th June and was published for 6-week consultation between 8th June and 21st July 2005 *(as required under Reg 28).*	June – July 2005	✓
Pre-Examination consideration of Submission SCI and submission to PINS and Secretary of State	Aug – Sept 2005	The Post Submission Consultation Statement (PSCS) was submitted to the Secretary of State (GOSW) and the Planning Inspectorate (PINS) on the 2nd August 2005. In September 2005, the Planning Inspectorate confirmed that the Examination of the SCI would be considered under 'Written representations'.	Aug – Sept 2005	✓
Examination of SCI by Planning Inspectorate (PINS)	Sept 2005	The Planning Inspectorate are currently considering the Submission SCI.	Sept – Oct 2005	-

The remaining key milestones for the SCI will be reviewed under the 2nd AMR 2005 - 2006

PLEASE DOWNLOAD PDF FILE ENTITLED *'AMR DIAGRAM 3'* FOR INCLUSION ON THIS PAGE

Summary of milestones and targets of the MWDS

25. In all but one instance, the milestones and target dates set by the Minerals & Waste Development Scheme (MWDS) were met. The key milestone, which did not attain its target date, was concerned with the approval of the MWDS. Whilst the MWDS was submitted to GOSW in accordance with the target date set for March 2005, it received a 'holding direction' by the Secretary of State for an extension of time to consider its content and resulting implications upon the timescales of delivery. The Secretary of State eventually made final approval for the MWDS in May 2005, a month beyond the original target date of April 2005.

26. By the end of the AMR monitoring period 2004 / 2005, the emerging Gloucestershire Minerals and Waste Development Framework (MWDF) incorporated an approved MWDS, and a Submission Version of the SCI, following public participation and submission to the Secretary of State and Planning Inspectorate.

27. Looking forward to the next AMR period 2005 / 2006, there will be no need to carry forward any milestones or extended target dates. As a consequence no timetable revisions are proposed to the approved MWDS. However following the publication in March 2005 of *'Best Practice Guidance on the Validation of Planning Applications'* by ODPM, there may need to be a revision to the work programme of the approved MWDS after 2005 / 2006, to incorporate a new Supplementary Planning Document (SPD). According to Section 5, page 8 of the Best Practice Guidance, planning authorities are recommended to consult upon and adopt a 'validation checklist' as an SPD to form part of their emerging Local Development Framework (i.e. MWDF). Gloucestershire County Council is presently considering the preparation of a Validation Checklist SPD, details of which will be reported upon within the next AMR 2005 – 2006.

28. In addition careful, and ongoing, consideration will need to be given to the implications of emerging national policies contained within Planning Policy Statements (PPS's) and Minerals Policy Statements (MPS's), on the future production of development plan documents for minerals and waste (MDPD's & WDPD's). The same consideration should also be given the impact this may have on the timescales of the Regional Spatial Strategy for the South West (RSS) and the strategic minerals and waste policies it may include.

CHAPTER 3: **Minerals & Waste Local Plans Policy Monitoring** / 2004 - 2005

29. The monitoring objectives of the first AMR are based upon the 'saved' polices of the adopted minerals and waste local plans. Table 1 below details the monitoring objectives that have been considered by the AMR and the respective policies of the minerals and waste local plans that have been monitored: -

TABLE 1: - Monitoring objectives and related polices of the minerals and waste local plans

Monitoring Objectives		Policies from the adopted minerals & waste local plans
General Policies		
1	To safeguard natural & historic environmental assets from the potential adverse impacts of minerals and waste development	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 development	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 taken 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 development	MLP Policies – SE3, E21 WLP Policy – 7
Minerals-specific Policies		
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-specific Policies		
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

Waste-specific Policies *Cont.*		
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

AMR OBJECTIVE 1: 'To safeguard natural & historic environmental assets from the potential adverse impacts of minerals and waste development.'

Contextual characteristics

Environmental assets and designations

30. The winning and working of minerals and the management of waste can have a significant affect on the local environment. The aim of the County Council as Minerals Planning Authority (MPA) and Waste Planning Authority (WPA) is to limit the adverse environmental impacts and where possible seek to enhance the environment in line with the principles of sustainable development.

31. International, national and local level environmental policies and legislation enable the identification and designation of a wide range of different environmental assets. In determining new minerals and waste proposals the MPA /WPA, aim to strike a balance between the social-economic needs of the proposal and the protection of environmental assets. For the purposes of the AMR environmental assets are derived from the full range of ecological, geological, landscape, and heritage designations considered within the minerals and waste local plans.

The environmental value of Gloucestershire

32. Gloucestershire covers an area of 270,454 ha. Around 70% of the county, or just fewer than 200,000 ha, is represented as an international, national, regional and / or local, environmental asset. From 2003 there were 10 sites of international status, more than 13,000 sites of national significance, and well over 20,000 regionally and / or locally important designations. Table 2 below provides a detailed breakdown of the environmental assets present within Gloucestershire.

TABLE 2: Environmental assets of Gloucestershire as of 2003

Status of Designation	Designation	No. of designations	Area coverage within Gloucestershire (ha)
International	Special Area of Conservation (SAC)	6	1454
	Special Protection Area (SPA)	2	4717
	Ramsar Sites	2	4717
National	Area of Outstanding Natural Beauty (AONB)	3	136,400
	Sites of Special Scientific Interest (SSSI)	122	8864
	National Nature Reserves (NNR)	3	433
	Scheduled Ancient Monuments (SAM)	496	1537
	Registered Historic Parks, Gardens & Battlefields	101	6109
	Listed Buildings	12860	-
	Conservation Areas	264	6233
	Green Belt	1	7030
Regional & Local	Regionally Important Geological & Geomorphological Sites (RIGS)	147	-
	Local Nature Reserves	10	240

TABLE 2: Environmental assets of Gloucestershire as of 2003 *cont.*

Status of Designation	Designation	No. of designations	Area coverage within Gloucestershire (ha)*
Regional & Local	Locally Important Archaeological Sites	23920	4965
	Key County Wildlife Sites (KWS)	696	12845
	Totals:	**38639**	**195544 ha**

** It is Important to note that hectare figure provided in this column relates to the specific coverage of the designation and not the total landtake linked to the county. In a number of cases designations may overlap each other and as such take up the same hectarage*

Output Indicators

Data collection

33. The AMR provides the first opportunity to present comprehensive monitoring data concerning the environmental designations and assets, covered within the adopted minerals and waste local plans. As required under the Good Practice Guide: *Monitoring and Annual Monitoring Reports*, the data for objective 1 has been collected for the annual period April 1st 2004 to March 31st 2005.

CORE OUTPUT INDICATORS (COI's): -

- There are no Core Output Indicators (COI's) relating to Monitoring Objective 1

LOCAL OUTPUT INDICATORS (LOI's): -

- No. of minerals and waste planning applications affecting natural environment and historic assets *
- Area *(ha)* of minerals and waste developments permitted upon designated natural environment and historic assets
- Percentage of minerals and waste developments refused, where natural environment and historic assets acted as one of the reasons for refusal

** The designated natural environment and historic assets identified for the AMR are those listed above in the contextual characteristics*

LOCAL OUTPUT INDICATOR RESULTS

LOI TABLE 1: Minerals & Waste planning proposals and environmental designations (2004 – 2005)

Nature of Development	International, National and Local Designations									
	Area of Outstanding Natural Beauty (AONB)		Sites of Special Scientific Interest (SSSI)		Scheduled Ancient Monuments (SAM)		Green Belt		Key County Wildlife Sites	
	No.~	Area (ha)	No.	Area (ha)	No.	Area (ha)	No.	Area (ha)	No.	Area (ha)
MINERALS	4	3.31ha	2	-	1	-	2	8.40 ha	1	-
WASTE	3	0.48 ha	0	-	1	-	4	5.33 ha	0	-
TOTAL *	**7**	**3.79 ha**	**2**	**-**	**2**	**-**	**6**	**13.73 ha**	**1**	**-**

*'No.' refers to the number of proposals that effect and / or fall upon a particular designation. The 'area (ha)' calculation is based **only** upon those proposals that fall upon a particular designation. In the event that a proposal has only effected a designation rather than fall upon it, an area (ha) calculation has not been provided.*

**The area in hectares refers to the total area covered by a specific designation. The total areas given do not necessarily represent a landtake figure for the county. In some instances environmental designations overlap each other in terms of their area coverage.*

LOI TABLE 2: The impact of environmental designations upon minerals & waste proposals (2004 – 2005)

Nature of Development	Total no. of applications affecting natural & historic environmental assets	Number of applications affecting natural and historic environmental assets that; *(Also as a % of the total no. of apps affecting environmental assets)*	
		Have been approved	Have been refused as a result of impacting upon an environmental asset
MINERALS	10	9	1
WASTE	8	6	2
TOTAL*	**18**	**15 *(83%)***	**3 *(17%)***

Targets

- **NO RELEVANT TARGETS SET**

Analysis & Interpretation

34. During 2004 / 2005 a total of 18 minerals and waste proposals were sited upon, and / or were deemed to have a potential impact on the natural environment and historic assets of Gloucestershire. 15 minerals and waste proposals were granted approval, whilst 3 proposals were refused wherein the potential adverse impact upon one or more of the natural environment and historic designations acted, in part, as a reason for refusal.

35. Of the 15 different international, national and local natural environment and historic designations identified within the AMR, minerals and waste proposals affected 5 different types of designation during 2004 / 2005. These included; Areas of Outstanding Natural Beauty (AONB's), Green Belt land, Sites of Special Scientific Interest (SSSI's), Schedule Ancient Monuments (SAM's) and Key Wildlife Sites (KWS's). AONB and Green Belt designations were affected the most, on 7 and 6 occasions respectively, followed by SSSI's and SAM's on 2 occasions and KWS's on one occasion.

36. For 2004 / 2005, AONB and Green Belt designations were the only environmental assets subjected to potential landtake by minerals and waste proposals. In total 17.52 hectares of designated land were scrutinised under minerals and waste planning applications. Green Belt land was subjected the highest potential landtake, a total of 13.73 ha, whilst AONB designations was subjected to 3.79 ha.

37. The concentration of potential impacts upon and / or landtake from minerals and waste developments, especially concerning the Green Belt, may result from the designation's characteristics of functionality and location.

38. The Gloucestershire Green Belt lies between the two principal urban areas (PUA's) of Gloucester and Cheltenham. These areas are characterised by heightened development pressure caused, in part, by economic and social demands for growth and urban expansion. As such these areas have been designated as Green Belt for the very purpose of preventing coalescence and restricting sprawling development. Furthermore added complexities associated with the minerals and waste industries may also be attracting increased development pressure from this sector. A number of these complexities are outlined below: -

    - Geological resource constraints *(i.e. primary mineral resources and suitable geology for waste disposal to landfill),*
    - The need to seek out cheaper brownfield and / or greenfield land due to high competition within the urban areas for more profitable land-uses *(i.e. housing, commercial and industrial developments),*
    - Potentially reduced public amenity impacts and concerns *(e.g. greater opportunities to locate further away from residential areas),* and;
    - Close locational relationship between resources and markets *(e.g. the majority of waste arisings for waste management facilities are derived from within the PUA's).*

39. In considering the location of new and / or expanded minerals and waste developments, particularly those within the Green Belt, a balance has to be struck between the continued protection of the designation and the unique development pressures associated with the sector. Whilst the adopted minerals and waste local will continue to provide a clear policy direction for dealing with new proposals under transitional arrangements, opportunities borne out of the new planning system and revised government guidance *(e.g. Planning Policy Statement 10 – Planning for Sustainable Waste Management)*, may exist to reconcile many of the conflicting 'needs'. The emerging Minerals and Waste Core Strategies (MCS & WCS) will provide the new policy framework for developing sustainable solutions for future minerals and waste land-use matters.

AMR OBJECTIVE 2: 'To safeguard local communities, public amenity and health from the potential adverse impacts of minerals and waste development'

Contextual Characteristics

Minerals Planning – public health and amenity impacts

40. Minerals Planning Statement (MPS) 2 – *Controlling and Mitigating the Environmental Effects of Mineral Extraction* provides guidance to MPA's on the potential environmental considerations, including public health and amenity impacts, resulting from new or extensions to existing minerals operations. Paragraphs 4 and 5 of MPS 2, clearly identifies the key aims and responsibilities for MPA's in respect of mineral proposals and resulting environmental considerations. In determining planning applications and reviews of planning consents (i.e. ROMPS), under the Environment Act 1995, MPA's should actively concern themselves with minimising the significant adverse environmental effects that may arise from mineral extraction, in consultation with appropriate specialist bodies such as Environmental Heath Authorities (EHA's) and relevant government agencies *(i.e. Environment Agency, Health & Safety Executive).* Paragraphs 19 – 23 of MPS 2 also provides advice on the application of planning conditions and planning obligations for mineral developments. In addition to general guidance advocated under Circular 11/95 – *The Use of Conditions in Planning Permissions* and 01/97 – *Planning Obligations,* MPA's are encouraged consider planning controls based on performance requirements and amelioration measures. Performance requirements relate to impacts that can be measured over time *(i.e. vibrations, noise etc.),* whilst amelioration measures are concerned with the specific methods employed to prevent adverse impacts *(i.e. wheel-washing, lorry sheeting etc.)*

41. Chapters 2 and 9 of the Minerals Local Plan consider the potential controls of environmental impacts resulting from mineral developments. The policies and associated commentaries included within this chapter provide a number of characteristic impacts on public health and amenity that may result from mineral operations. Whilst the size, scale, location and nature of each mineral proposal being determined, will have a major consequence on the relevance of each impact, the list below provides an initial outline of the key issues that regularly concern mineral developments: -

    - Control of noise, dust, blasting, vibration and flyrock
    - Air pollution – *including the control of emissions from smoke, fumes and gas*
    - Control of site lighting
    - Safeguarding the water environment – *including hydrological pollution*
    - Traffic restrictions – *including vehicle cleaning and lorry sheeting*
    - Land instability and subsidence

Waste Planning – public health and amenity impacts

42. As advised within (Consultation Draft) Planning Policy Statement (PPS) 10 – *Planning for Sustainable Waste Management,* the determining responsibility for all WPA's is to consider whether waste planning proposals accord with the waste planning strategy as set out in the development plan. It is not the concern of WPA's to review the technical and detailed nature of the processes, which is a matter for the relevant waste management and pollution control authorities.

43. Nevertheless in determining waste planning applications, WPA's should, where relevant, consider the likely impacts of waste developments upon the proposal site, its surroundings and the wider environment. Although the size, scale

and nature of proposals will have a significant affect upon the potential impacts, chapter 5 of Waste Local Plan identifies a number of recurring development control considerations for public health and amenity impacts: -

- The hours of operation
- Transport, traffic and access - *including HGV generation, distribution, maximum daily flows, means of access, highway safety, capacity of highway network*
- Generation of noise, vibration, odour, fumes *(e.g. air pollution)*, dust, litter, and attraction of scavengers and vermin

44. As with the use of planning conditions and / or obligations for mineral proposals, the WPA should actively consider the issue of appropriate performance requirements and amelioration measures when determining approvals for waste developments.

Output Indicators

Data Collection

45. Data regarding the use of public health and amenity conditions, imposed on minerals and waste planning approvals, has been collected on a yearly basis from April through to March for the AMR 2004 / 2005. At this stage information concerning the refusal of minerals and waste proposals based on public health and amenity conditions is unavailable. However it is envisaged that the AMR for 2005 / 2006 will provide the first opportunity to collate a full and comprehensive set of data for monitoring objective 2.

CORE OUTPUT INDICATORS (COI's): -

- There are no Core Outputs Indicators (COI's) relating to Monitoring Objective 2

LOCAL OUTPUT INDICATORS (LOI's): -

- The no. of approved minerals and waste developments that include conditions concerning the following public amenity and environmental health impacts;
  - Visual impacts
  - General pollution *(including smell, dust, noise, vibrations, odour, smoke, fumes, litter and*
  - *vermin)*
  - Water pollution *(including ground & surface water)*
  - Highway safety *(including site access)*
- Percentage of minerals and waste developments refused, where public amenity and environmental health impacts acted as one of the reasons for refusal

LOCAL OUTPUT INDICATOR RESULTS

LOI TABLE 3: Public health & amenity conditions imposed upon minerals and waste approvals (2004 – 2005)

Nature of Development	Type of public health and amenity conditions imposed			
	Visual Impacts	General Pollution	Water Pollution	Highway Safety
Minerals	5	7	4	3
Waste	21	16	16	7
TOTAL	**26**	**23**	**20**	**10**

Targets

- **NO RELEVANT TARGETS SET**

Analysis & Interpretation

The application of public health and amenity planning conditions to minerals & waste developments

46. Conditions concerning the mitigation of adverse visual impacts and general pollution impacts *(i.e. fumes, smoke, noise, dust, vermin),* from minerals and waste developments, represent the most frequently used type of conditions attached to planning approvals during the period 2004 and 2005. Conditions relating to water pollution and safeguarding water quality were the second most frequently used conditions attached to planning approvals, followed by those conditions relating to highway safety.

47. It is unsurprising that general pollution impacts play an important role in the type of planning conditions used on planning approvals for minerals and waste developments. By virtue of the size, scale and nature of the operations undertaken by minerals and waste industries, it is crucial for responsible local planning authorities to actively consider, with almost all applications, the need to impose conditional restrictions to protect and safeguard against a number of potential pollution impacts.

48. In terms of the use of visual impact conditions, the same reasoning could be concluded as for general pollution impacts. This can clearly be seen in the case of mineral developments, wherein the size, scale and nature of these operations *(i.e. extraction of primary materials)* can result in a significant visual impact upon the landscape of an area. A greater emphasis upon imposing visual impact conditions on minerals and waste proposals may also be attributed to the predominantly rural character of the county and the notable hectarage of significant nationally important landscape designations such as the Cotswold AONB. *(i.e. Cotswold AONB).*

AMR OBJECTIVE 3: 'To ensure that appropriate reclamation, re-instatement and environmental enhancement schemes has taken place for worked-out and / or discontinued mineral and waste sites'

Contextual characteristics

Reclamation

49. Minerals working and some types of waste developments are not considered to be permanent uses of land. As such careful consideration must be given to maximising the environmental opportunities and public benefit from reclamation. Depending upon variety of different and often complex factor such as; the landscape, ecology, surrounding environmental character, soil, levels of pollution and contamination, final topography, funding and local amenity, a range of reclamation schemes can be realised. Examples of appropriate after-uses resulting from reclamation include: -

    - Agriculture
    - Forestry
    - Amenity Uses
    - Nature Conservation
    - Other *(permanent)* waste management operations
    - Commercial, industrial and / or business enterprises
    - Geo-diversity / educational facilities
    - Other community / recreational activities

50. The MPA and WPA have a duty to ensure that operators take full account of site reclamation issues during the consideration of their planning proposals. In the event that unsatisfactory measures are brought forward permissions for mineral working or (where appropriate) the management of waste, should not be granted. Conditions should be attached to planning permissions and where necessary, planning obligations may need to be sought to ensure the acceptable implementation of reclamation schemes.

Reinstatement

51. Under certain circumstances, opportunities may exist to reinstate former minerals and waste sites to their previous state or landuse type (e.g. agricultural land). Good environmental standards that reflect the character of the surrounding landscape will be expected at all times. Where best and most versatile agricultural land is being restored, the methods used should enable the land to retain its longer-term capacity to be farmed to its classification potential.

Reclamation of Minerals and Waste sites in Gloucestershire

52. The Minerals and Waste Local Plans include a number of policies concerning reclamation, re-instatement, facilitating appropriate after-uses and the adoption of improved restoration techniques *(i.e. progressive restoration)*. Recent planning permissions granted by the MPA and WPA have included detailed reclamation and reinstatement schemes in accordance with the policies set out the adopted minerals and waste local plans. In addition the updating of older permissions through the Review of Old Minerals Sites (ROMPS), under the Environment Act 1995, has also required the application of modern standards and practices regarding future reclamation schemes.

Surveying of Land for Minerals Workings in England 2000

53. The 2000 Survey initiated by ODPM provided detailed information about mineral working in England including existing land take, permitted hectarage for future extraction and reclaimed land from worked-out sites as taken from the last survey in 1994. For the South West Region some 13,665 ha amounted to the total permitted area for mineral working in 2000. In terms of the area reclaimed from worked-out mineral sites, a total of 1.317 ha was deemed to have been successful reclaimed for potential after-uses between the six years, from 1994 to 2000. In Gloucestershire the total permitted hectarage for active mineral working was calculated at 208.833 ha and the area of reclaimed land between 1994 and 2000 accounted for some 129.6 ha.

54. The next periodic mineral working survey is expected to take place during 2006, although no announcement has been made as yet by ODPM in this regard. The 2006 survey will represent the first opportunity to collate countywide information on both landtake from mineral permissions and the area of land that has been successfully reclaimed. This survey will have added importance for the AMR, as it will provide both, up-to-date reclamation data and the foundations for developing an ongoing monitoring programme to satisfy objective 3 of the AMR.

Output Indicators

Data Collection

55. As required under the Good Practice Guide: *Monitoring and Annual Monitoring Reports*, future datasets for objective 3 will look to reflect the annual period, April through to March. However as discussed above, it is likely that the initial updated information, covered by the next mineral working survey in 2006, will follow the six-yearly, calendar based programme that has been carried out in the past. As the monitoring programme is advanced beyond 2006, a review will be undertaken as to the appropriateness of revising the monitoring period.

CORE OUTPUT INDICATORS (COI's): -

- There are no Core Output Indicators (COI's) relating to Monitoring Objective 3

LOCAL OUTPUT INDICATORS (LOI's): -

- The no. of minerals and waste proposals that include schemes for reclamation
- The no. of minerals and waste proposals for which conditions relating to site restoration and aftercare have been imposed
- The percentage of minerals and waste proposals that have been refused, where inadequate restoration and / or aftercare acted as one of the reasons for refusal.
- The percentage of worked out and / or dis-continued minerals and waste sites that have but have been satisfactorily restored.
- The percentage of enforcement complaints and enforcement actions, on worked out and / or dis-continued minerals and waste sites, where there has been failure to carry out an approved reclamation and / or reinstatement scheme.

LOCAL OUTPUT INDICATOR RESULTS

No data for the period 1st April 2004 – 31st March 2005 is available concerning all of output indicators.

Targets

- **NO RELEVANT TARGETS SET**

Analysis & Interpretation

56. The information provided under paragraph 53 and 54 represents the most up-to-date data concerning the reclamation, re-instatement and environmental enhancement of worked-out and / or discontinued minerals and waste sites. Although this information, and the subsequent mineral working survey proposed for 2006, will only provide data for minerals sites and reclamation, it may act as a useful facilitator and baseline for the future development of an ongoing monitoring programme for objective 3. The MPA will need to investigate an effective and efficient way for meeting all of the data requirements and for establishing appropriate and meaningful targets that are consistent with other linked strategies for minerals and waste restoration.

AMR OBJECTIVE 4: 'To encourage the more efficient use of minerals and waste materials during development and re-development'

Contextual characteristics

Efficient use of resources

57. Achieving sustainable consumption and conserving natural resources are key priority areas for achieving sustainable development throughout the UK *('securing the future' – UK Sustainable Development Strategy, March 2005).* The new planning system, through the formulation of national, regional and local planning policy, has a vital role in delivering these priorities amongst others.

58. As outlined in Planning Policy Statement (PPS) 1: - *'Delivering Sustainable Development',* local planning authorities should actively encourage the prudent use of resources, the production of less waste and the use of waste as a resource wherever possible. To deliver these policy objectives, *'Waste Minimisation'* strategies have been adopted at regional and local planning levels.

59. Policy P10.8 of the Regional Waste Strategy (RWS) for the South West: - *'From Rubbish to Resource'*, requires new development to be designed to minimise the production of waste. In determining planning applications, local planning authorities should actively seek information from developers on how waste will be minimised and / or re-used or recycled. Policy 36 of the adopted Gloucestershire Waste Local Plan (WLP) also requires the preparation of waste management statements to demonstrate how waste generated during the construction phases of a development and subsequent occupation, can be managed sustainably.

Waste Minimisation in action

60. Due to the infancy of 'Waste Minimisation' as a policy objective, there is little data available to establish any trends or to make any conclusion as to its successful implementation. Nevertheless, pro-active consultation and liaison between the county and district planning authorities has resulted in a number of good-practice examples of 'waste minimisation'. Table 5 over the page provides details of a recently approved waste minimisation programme for a mixed-use development on the outskirts of Gloucester.

TABLE 5: Details of existing waste minimisation programmes

Site location	Description of Proposal	Decision summary	Waste minimisation summary
Former RAF Quedgeley, Gloucester	Mixed-use residential, commercial and employment (B1 & B8) development over 137 ha of a former RAF storage and maintenance depot	Granted on appeal by Secretary-of-State *(20th December 2001)*	Successful negotiation by the County Council ensured the inclusion of conditional requirements for several waste minimisation strategies concerning demolition, recycling & reuse, and recycling during occupation. In 2003 detailed information was submitted by the developer in respect of the decision conditions. Following further negotiation with the County Council the following waste minimisation commitments were secured: - ▪ An on-site and off-site recycling strategy for demolition waste ▪ Green waste recycling strategy for cleared trees, hedgerows and other timber waste generated ▪ Waste reduction / recycling packs for each new residential unit ▪ A waste recycling and awareness competition ▪ Provision for a composting bin for each new residential unit Provision for a recycling box, general waste receptacle and organic waste receptacle for each residential unit ▪ Provision for a communal waste storage facility for the multiple dwelling complexes.
Gloucestershire Royal Hospital	Partial re-development of hospital	Granted permission on 9th July 2001	The County Council negotiated the use of a waste minimisation condition to ensure the adequate segregation of waste, the introduction of a waste awareness programme through staff training and the collection of better data on waste production.

Output Indicators

Data Collection

61. The 'major' development threshold as defined by ODPM's Development Control Returns data and Best Value Performance Indicator (BVPI) 109a (i.e. *'Major' development equates to 10 or more dwellings and / or an area of 0.5 ha for residential developments. For other types of development, a 'major site' is one of floorspace 1,000 sq metres or more, and / or 1 ha in area)* has been employed for monitoring waste minimisation in Gloucestershire. The thresholds have been applied in this instance due to practicalities of data collection, handling and management between the county and district planning authorities. However it is important to note that development below the threshold will still be encouraged to apply the principle of waste minimisation. This will be achieved through the use of informative leaflets.

62. The initial purpose of the monitoring programme will be to review the success of waste minimisation in influencing the planning considerations of major new and re-development proposals throughout Gloucestershire. At a later stage in the monitoring programme, a more sophisticated data collection and analysis system will be undertaken to determine the direct effectiveness of the policy in delivering waste minimisation and where it requires enforcement.

CORE OUTPUT INDICATORS (COI's): -

- There are no Core Output Indicators (COI's) relating to Monitoring Objective 4

LOCAL OUTPUT INDICATORS (LOI's): -

- The number of 'major' development & re-development proposals that include Waste Minimisation Statements
- The percentage of 'major' development & re-development proposals refused, where Waste Minimisation issues acted as one of the reasons for refusal.

LOCAL OUTPUT INDICATOR RESULTS

No data for the period 1st April 2004 – 31st March 2005 is available in respect of the local output indicators.

Targets

- **To achieve 100% submission of Waste Minimisation Statements for all 'major' development and re-development applications in Gloucestershire by 2008**

Analysis & Interpretation

63. The Gloucestershire Minerals and Waste AMR for 2005 / 2006 will be the first year to include data on the implementation of the Waste Minimisation SPD, timetabled for adoption in Summer 2006. Prior to the data collection exercise, careful consideration will need to be given to method for managing the data sets. This is due to the policy preparation & monitoring and implementation requirement being the responsibility of different local planning authorities *(i.e. preparation & monitoring and some implementation by the County Council and the majority of implementation by the District Councils).* It is proposed to carry out early consultation with the key data stakeholders *(e.g. County and District Development Control Teams)* in order to establish the most effective and efficient way of managing the monitoring requirements.

AMR OBJECTIVE 5: 'To safeguard existing and future minerals and waste resources from non-minerals development'

Contextual characteristics

Mineral resources

64. Gloucestershire has a diverse geological base of mainly sedimentary rocks that include compacted clays, silts, sands, sandstones and limestones. They provide significant deposits of minerals of actual and potential economic worth, including hard rock for aggregates and natural building materials, coal and clay. In addition these rocks (the "solid" geology) are patchily but extensively overlain, mainly in river valleys and particularly those of the Thames and Severn/Avon, by varied superficial deposits (the "drift" geology) comprising silts, clays, sands and gravels. They yield important sources of sand and gravel for the construction industry.

65. Gloucestershire may conveniently be divided into a number of physiographic areas coincident with the underlying geology, each with its own mineral resource potential:

TABLE 6: - Physiographic area and mineral types of Gloucestershire

Physiographic Areas	Mineral Type	
Cotswolds	- Clay	- Limestone (Jurassic)
Forest of Dean	- Clay	- Limestone (Carboniferous)
	- Coal	- Iron Ore
Severn Vale	- Clay	- Sand & Gravel
Upper Thames Valley	- Clay	- Limestone (Jurassic - Cornbrash)
	- Sand & Gravel	
Vale of Moreton	- Sand & Gravel	

66. Gloucestershire is an important source of minerals supply, principally for aggregate use in the construction industry. The aggregate minerals for the county comprise of Carboniferous and Jurassic limestone (commonly known as 'crushed rock') and sand & gravel.

Minerals Consultation Areas (MCAs)

67. Gloucestershire's has one delineated Minerals Consultation Area (MCA) to safeguard the sand and gravel resources of the Upper Thames Valley. The area so defined was originally drawn up in 1981 and is based upon the distribution of sand and gravel identified by the Minerals Assessment Unit of the then Institute of Geological Sciences (IGS).

68. It is important to note that the generation of MCA's does not create a commitment to grant planning permission for the working of minerals found within their boundaries, nor does it suggest a general presumption in favour of minerals development. The purpose of MCA's is to provide a safeguarding mechanism against surface developments that could potentially sterilise areas of underlying, exploitable mineral resources.

Waste Resources

69. According to 2002/2003 data provided by the Environment Agency, there are over 600 waste sites in Gloucestershire. These sites, whether operational or dormant, play an important role in maintaining the necessary infrastructure for managing Gloucestershire's waste and for providing future opportunities to increase capacity and / or enable the diversification of wastes types being handled. Unfortunately many of these waste sites are vulnerable to other 'higher-value' development proposals or from non-compatitable land-uses planned nearby. In adopting a safeguarding policy, the Waste Planning Authority (WPA) must ensure that appropriate consultation and consideration, with all determining local planning authorities in Gloucestershire, is given to maintaining the potential of existing waste management sites.

Preferred sites for future waste management facilities

70. The WLP has identified twenty-one preferred sites for future waste management facilities throughout Gloucestershire. These sites have been sub-divided into schedules based upon the size and scale of the waste management operations that can potentially be accommodated. Schedule 1, known as 'Strategic Sites' includes six sites, while Schedule 2, described as 'Local Sites' includes fifteen sites. A 50,000 tonne annual capacity has been adopted as the threshold for distinguishing between Local and Strategic Sites. A detailed review of the site selection system and individual site profiles has been included within Chapter four of the WLP. Information concerning preferred waste sites can be located under monitoring objective 10 of this report.

Output Indicators

Data Collection

71. There is little data available from previous monitoring programmes to establish any trends or to make any conclusion regarding the successful implementation of safeguarding policies for minerals and waste resources. However it is proposed for future AMR's to present a detailed and comprehensive dataset. Starting with the preparation of the AMR for 2005 / 2006, it is envisaged that closer working between the county and district planning authorities will enable accurate information to be collated concerning non-minerals and waste developments; their relationship with existing minerals and waste resources, allocated sites within the adopted plans, and the existing Mineral Consultation Area (MCA). As required under the Good Practice Guide: *Monitoring and Annual Monitoring Reports*, any resulting data for monitoring objective 5 will need to be prepared for the annual period April 1st to March 31st.

CORE OUTPUT INDICATORS (COI's): -
▪ There are no Core Output Indicators (CIO's) relating to Monitoring Objective 5

LOCAL OUTPUT INDICATORS (LOI's): -

- The no. of planning applications for non-minerals and waste developments submitted upon sites occupied by existing mineral sites or waste management facilities and preferred areas and sites as identified within the MLP and WLP
- The percentage of non-minerals and waste developments refused, where safeguarding minerals and waste resources acted as one of the reasons for refusal.
- The percentage of planning applications for non-minerals and waste developments received within the Mineral Consultation Area (MCA), which required a safeguarding consultation.
- The percentage of non-minerals and waste developments received within the Mineral Consultation Area (MCA) refused, where safeguarding minerals resources acted as one of the reasons for refusal.

LOCAL OUTPUT INDICATOR RESULTS

No data for the period 1st April 2004 – 31st March 2005 is available in respect of the local output indicators.

Targets

- **NO RELEVANT TARGETS SET**

Analysis & Interpretation

72. As discussed previously the AMR for 2005 / 2006 will be the first year to include data on the implementation of safeguarding policies for minerals and waste resources. During the data collection exercise, careful consideration will need to be given to management of the different datasets of minerals and waste resources and non-minerals & waste development proposals. As the monitoring of safeguarding policies will require information from both the county and district planning authorities, a reliable and accurate data system will need to be devised for future AMR's. Early consultation with the key data stakeholders *(e.g. county and district planning authorities)* will prove necessary in order to establish an effective and efficient way of managing these monitoring requirements.

AMR OBJECTIVE 6: 'To ensure the consistent supply and appropriate landbank provision of aggregates in line with the regional guidelines set out in MPG 6'

Contextual characteristics

Maintaining a supply of aggregates – government guidance for aggregate provision

73. Government guidance for aggregate provision in England is contained in Minerals Planning Guidance Note 6 "Guidelines for Aggregate Provision in England" (MPG6). These guidelines, published in 1994, provide advice to both Mineral Planning Authorities (MPAs) and the minerals industry on how to ensure an adequate and steady supply of construction material at the best balance of social, environmental and economic cost whilst ensuring mineral extraction is consistent with the principles of sustainable development.

74. Regional guidelines annexed to MPG6, identifies the forecast demand of aggregates over a 15-year period between 1992 and 2006, broken down for each planning region in England. The Guidelines identified that 715 mt of primary aggregates *(610 mt of crushed rock and 105 mt of sand and gravel)* would be required from the Southwest Region. These figures were apportioned by the South West Regional Aggregate Working Party (SWRAWP) between the constituent MPAs of the Region to provide a context of supply for the preparation of MLPs. This was used in preparation of the Gloucestershire Minerals Local Plan, which was adopted in 2003.

75. The sub-regional (or county) apportionment resulted in a requirement for Gloucestershire to contribute 19.4 mt of sand and gravel and 47.6 mt of crushed rock over the period 1992 - 2006. The annual expression of the sub-regional apportionment equated to 1.29 mt per annum of sand and gravel and 3.17 mt per annum of crushed rock. Table 7 outlines in detail the sub-regional apportionment for Gloucestershire over the period 1992 – 2006.

76. In June 2003 the government published revised national and regional guidelines for the provision of aggregates. The revisions represent an updated 15-year forecast period from 2001 to 2016 inclusive and a new set of forecast demand figures for aggregates. The revised guidelines identified that approximately 680 mt of aggregates *(453 mt of crushed rock, 106 mt of sand and gravel, and 121mt of alternatives)* would be required from the Southwest Region. Although the new guidelines indicated a reduction in the overall provision, the requirement for sand and gravel has remained largely unchanged and a greater emphasis has been placed upon aggregates provision from alternative sources such as recycled construction and demolition wastes. Table 7 includes the revised sub-regional apportionment for Gloucestershire, which has emerged though work undertaken by the RPB for the period 2001 – 2016 inclusive and the associated annual expression of these requirements.

TABLE 7: Sub-Regional Apportionment of Aggregates for Gloucestershire (1992 – 2006) and revised figures (2001 – 2016)

Aggregate Mineral	Sub-regional apportionment for Gloucestershire (1992 – 2006)	Annual Expression (1992 – 2006)	Revised sub-regional apportionment for Gloucestershire (2001 – 2016)	Annual Expression (2001 – 2016)
Crushed Rock	47.6 mt	3.17 mtpa	39.09 mt	2.44 mtpa
Sand & Gravel	19.4 mt	1.29 mtpa	18.18 mt	1.14 mtpa

77. Detailed consideration of the revised guideline figures will be undertaken as part of the revised minerals section for the Southwest Regional Spatial Strategy (RSS) and will form a key element of the emerging Gloucestershire Minerals & Waste Development Framework, as part of the Minerals Core Strategy (MCS). Pre-production work into the MCS has commenced as of June 2005 as timetabled in the approved Minerals and Waste Development Scheme. For monitoring purposes the first AMR 2004 / 2005 will be concerned with assessing the aggregate provision as set out in the guidelines for the period 1992 to 2006.

Maintaining an aggregate landbank

78. In addition to the requirement to ensure an adequate supply of aggregates, there is a requirement to maintain a landbank of reserves. A landbank is a stock of planning permissions for mineral development. MPG6 identifies that landbanks in the Southwest should reflect the sub-regional apportionment of the Guidelines figure. The landbank requirement is based on maintaining a landbank of at least 7 years for sand and gravel and crushed rock throughout and, at the end of plan period. Para 3.3.7 of the adopted minerals local plan explains the methodology used for calculating the aggregate landbank for Gloucestershire.

79. As set out in Table 2 of the Minerals Local Plan (MLP) a potential shortfall in the provision of Gloucestershire's aggregate landbank from existing reserves has been identified. As a consequence preferred areas for future mineral working have been proposed to maintain provision for the future supply of aggregates. Whilst Chapter 3 and Chapter 10 of the MLP include detailed information on the preferred areas for future mineral extraction of aggregates, it is noted that the landbank calculation for crushed rock has been sub-divided on a 70:30 basis between Carboniferous limestone from the Forest of Dean and Jurassic limestone in the Cotswolds. This subdivision is likely to be discussed in detailed during the preparation of the Minerals Core Strategy (MCS). Table 8 below identifies the preferred areas for future mineral extraction in Gloucestershire: -

TABLE 8: Preferred Areas for future mineral extraction in Gloucestershire as set out in the MLP

Preferred Area	**Site Area** *(in hectares)*	**Potential Aggregate Mineral to be Extracted**	**Estimated Mineral Yield *** *(in million tonnes)*
Stowehill / Clearwell	40.9 ha	'Crushed Rock' – Carboniferous limestone	8 mt
Drybrook	11 ha	'Crushed Rock' – Carboniferous limestone	4.5 mt
Stowfield	14.5 ha	'Crushed Rock' – Carboniferous limestone	10.2 mt
Daglingworth	18 ha	'Crushed Rock' – Jurassic limestone	9 mt
Huntsmans	62 ha	'Crushed Rock' – Jurassic limestone	7.5 mt
TOTAL ESTIMATED MINERAL YIELD FOR 'CRUSHED ROCK' FROM MLP PREFERRED AREAS			**39.2 mt**
Dryleaze Farm	37 ha	Sand & gravel	1.75 mt
Cerney Wick	16.5 ha	Sand & gravel	0.5 mt
Horcott / Lady Lamb Farm	100 ha	Sand & gravel	3.0 mt
Kempsford / Whelford	185 ha	Sand & gravel	6.0 mt
TOTAL ESTIMATED MINERAL YIELD FOR SAND & GRAVEL FROM MLP PREFERRED AREAS			**11.25 mt**

** The estimated Mineral Yields provided in the MLP are based upon the initial assessment work carried out as part of the plan preparation process. The yields do not represent actual production figures for each area and may be subject to change (i.e. + or -) dependant upon detailed assessments of economic viability, site engineering, environmental sensitivity and amenity impacts. All of these matters would be robustly assessed at any subsequent application stage.*

Secondary / Recycled aggregates – increased importance for meeting provision

80. In addition to the national provision of aggregates prescribed within MPG6, government guidance also included a regional provision of aggregates from alternative sources such as marine-won sand & gravel and secondary and recycled sources. Over the 15-year period between 1992 and 2006, this equated to some 75 mt from the southwest region. A further division of this figure advises some 15 mt from marine dredged sources and 60 mt from secondary and recycled material. The revised aggregate guidelines, for the period 2001 to 2016, have also identified a provisional requirement for aggregates from alternative sources. Over the 15-year period, some 121 mt from secondary and recycled sources has been identified for the southwest region.

81. Due to limited availability of regular and accurate and data concerning recycled and secondary aggregate sources, a sub-regional (or county) apportionment exercise has not been undertaken for the southwest. It is envisaged that the regional guidance contained within the Waste Strategy (RWS) and the policies contained within the minerals and waste chapters of the emerging Southwest Regional Spatial Strategy (RSS) will provide the steer to achieve the regional guidance figure for recycled and secondary aggregates.

82. To assist with the regional monitoring of recycled and secondary aggregates, the annual aggregate report prepared by the SWRAWP does include a limited breakdown of secondary aggregates; sourced from china clay waste in Cornwall and Devon and ball clay waste in Devon, and recycled aggregates; sourced from road planing from the local highways authorities throughout the region. A more detailed and comprehensive monitoring programme, particularly concerning the varied sources of recycled aggregates *(i.e. construction and demolition wastes)* is presently under investigation by the constituent MPA's and WPA's of the region in conjunction with the SWRAWP. Future Gloucestershire Minerals and Waste AMR's propose to introduce a series of detailed datasets for recycled aggregates as and when information becomes available.

Aggregate minerals supply trends and landbank for Gloucestershire

83. The Annual Minerals Monitoring Report 2003 provides details on the average supply of primary aggregates over a ten-year period to 2003, and the aggregate landbank for Gloucestershire. The supply of sand and gravel equated to an average of 0.79 mtpa between 1994 and 2003. Over the same period the average crushed rock supply amounted to 2.11mtpa. The sub-division of crushed rock aggregates in Gloucestershire between Carboniferous limestone from the Forest of Dean and Jurassic limestone from the Cotswolds has also been calculated in terms of supply and reserves.

84. The aggregate landbank *(as taken on the 31st December 2003)* was calculated at 9.41mt for sand and gravel and 27.85mt for crushed rock. Tables 9, 9a and 10 over the page, identify in detail the primary aggregate supply for Gloucestershire between 1994 and 2003, and the aggregate landbank taken on the 31st December for each year, over an eight year period between 1996 and 2003: -

TABLE 9: Annual aggregate supply for Gloucestershire between 1994 and 2003

Aggregate Mineral	Annual supply of aggregates between 1994 – 2003 *(in Million tonnes per annum – mtpa)*										
	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	94-03 Ave
Crushed Rock	2.44	2.30	2.05	2.35	1.92	1.97	2.12	2.19	2.04	1.75	**2.11 mtpa**
Sand & Gravel	0.89	0.84	0.72	0.77	0.66	0.70	0.83	0.88	0.94	0.70	**0.79 mtpa**

TABLE 9a: Annual crushed rock aggregate supply sub-divided by the two resource areas of Gloucestershire

Crushed Rock Resource Areas	Annual supply of crushed rock aggregate between the two resource areas of Gloucestershire 1999 – 2003 *(in Million tonnes per annum – mtpa) (Including a % split of supply from the two resource areas)*											
	1999	% Split	2000	% Split	2001	% Split	2002	% Split	2003	% Split	5-year Ave	5-year % Split
Forest of Dean	1.18	62.1%	1.40	66%	1.44	65.7%	1.42	69.6%	1.23	70.3%	**1.33**	**66.5%**
Cotswolds	0.72	37.9%	0.72	34%	0.75	34.3%	0.62	30.4%	0.52	29.7%	**0.67**	**33.5%**

TABLE 10: Estimated aggregate landbank for Gloucestershire between 1994 and 2003

Aggregate Mineral	Estimated aggregate landbank between 1996 – 2003* *(as per 31st Dec for each year) (in Million tonnes – mt)*							
	1996	1997	1998	1999	2000	2001	2002	2003
Crushed Rock	36.7 mt	36.88 mt	30.7 mt	32.95 mt	27.8 mt	31.3 mt	28.9 mt	27.85 mt
Sand & Gravel	12.8 mt	13.9 mt	13.1 mt	12.6 mt	12.3 mt	11.8 mt	10.5 mt	9.41mt

** It is important to note that the aggregate landbank can increase as well as decreased over time. This is as a direct consequence of new aggregate reserves being granted permission by the MPA, the lapse of a mineral permission(s) or the re-evaluation of existing estimated reserves by a minerals operator(s).*

Output Indicators

Data Collection

85. Aggregate survey data collected by MPA's, has historically been collected on a calendar basis *(i.e. January – December)* to inform the strategic and national level assessment of aggregate provision. In most years the data on sales and reserves has been formally published in the late summer or autumn of each year. To ensure a consistent approach to this wider ongoing monitoring system, the AMR will continue to collect aggregate data on a calendar basis. As a consequence aggregate data for the AMR will reflect the earlier calendar year of each report. For example, the AMR 2004 – 2005 will include aggregate data for the whole of 2004 only.

CORE OUTPUT INDICATORS (COI's): -

- Annual production of primary land won aggregates
- Annual production of secondary / recycled aggregates *(see paragraph 87 for more details)*

CORE OUTPUT INDICATOR RESULTS

86. No mineral sales or reserve information is current available for the period 2004. This is as a result of potential administrative complications borne out of the Freedom of Information Act (2000), which came into force on 1st January 2005. The trade bodies, including the Quarry Products Association (QPA) are assessing the implications of the Act before providing data to MPA's. It is anticipated that a workable resolution to information collection and subsequent data use will be agreed between the relevant representatives of the minerals industry, The Office of the Deputy Prime Minister (ODPM) and minerals planning authorities, in time for the AMR 2005 – 2006.

87. As discussed previously, very limited information is currently available concerning the production and usage of secondary / recycled aggregates. Whilst a programme of monitoring is being investigated by the MPA, in conjunction with the Regional Planning Body and SWRAWP, detailed data may not be available for some time. Nevertheless a capacity indicator for recycled aggregates is presently being looked at, through a countywide survey of mobile crushing plants. Data from this project will be made available for the AMR 2005 –2006.

LOCAL OUTPUT INDICATORS (LOI's): -

- Aggregate landbank for Gloucestershire *(as of 31st December 2004)*
- Applications submitted upon future preferred areas of mineral extraction, as set out in the MLP

LOCAL OUTPUT INDICATOR RESULTS

88. Due to the lack of mineral sales and reserves data for the period 2004, as explained previously, an assessment of the county's aggregate landbank cannot be carried out for the AMR 2004 – 2005. The most up-to-date landbank figures are provided for 2003, within Table 10 of this AMR. Nevertheless information regarding preferred areas for future mineral extraction, taken from 2003 through to the end of the AMR period, is available below within LOI Table 5.

LOI TABLE 6: Minerals proposals submitted upon preferred areas of the MLP from 2003 to March 2005

MLP AREA PREFFERED INFORMATION: -			**PROPOSAL INFORMATION: -**			
MLP Preferred Site	**Area** *(in ha)*	**Estimated Yield** *(in million tonnes)*	**Proposal** *(Incl. submission date)*	**Proposal Area** *(in ha)*	**Estimated Yield** *(in million tonnes)*	**Decision** *(Approved / Refusal / or Pending)*
Stowe Hill / Clearwell	40.9 ha	8 million tonnes	Extension of Stowe Hill Quarry and consolidation of existing consents *(26/02/2003)*	28 ha	8.7 million tonnes	Approval – *subject to legal agreement*
Dryleaze Farm	37 ha	4.5 million tonnes	Extension of Shorncote Quarry to extract sand & gravel from land at Dryleaze Farm and restore to agricultural use, lakes and rural amenity *(29/05/2003)*	27.4 ha	1.35 million tonnes	Approval - *subject to legal agreement*
Horcott / Lady Lamb Farm *(Part of Preferred Area)*	100 ha	3.0 million tonnes	Extension to Horcott Pit for sand & gravel extraction and low level restoration (*29/07/04)*	12 ha	0.4 million tonnes	Approval - *subject to legal agreement*
TOTAL AREA & ESTIMATED YIELD	**177.9 ha**	**15.5 million tonnes**	**TOTAL AREA & ESTIMATED YIELD** ***(Also a % of the total available preferred area & total estimated yield)***	**67.4 ha** *(37.9 %)*	**10.45 million tonnes** *(67.4%)*	

Targets

- **Make provision for the regional apportionment guidelines of 19.4mt of Sand & Gravel and 47.6mt of Crushed Rock (Limestone) between the period 1992 and 2006***
- **Make provision for a landbank of aggregate reserves throughout and at the end of the plan period of at least 7 years for Sand & Gravel and Crushed Rock (Limestone)**

** It is likely that the regional apportionment guidelines will change through the preparation of the MCS and emergence of draft RSS in 2006, to reflect the new guidelines and subsequent new apportionment through to 2016 (see paragraph 76 and Table 7).*

Analysis & Interpretation

89. In the absence of mineral sales and reserve data for 2004, it has not proved possible to provide an analysis and interpretation for a number of the output indicators for monitoring objective 6 beyond the information provided up to 2003 (see Table 9 and 10). Nevertheless information concerning the submitted applications upon the preferred areas of the MLP has been provided.

90. From 2003 through to March 2005, the end of the AMR period, a total of 3 proposals for future mineral extraction upon preferred areas identified within the MLP, were received by the MPA. These proposals cover an area of 67.4 ha, and represent close to 40% of the total available area identified for each of the preferred areas within the MLP. In terms of the estimated yields of extracted mineral, the 3 proposals sites account for 67.4% of the projected tonnages. As a tonnage figure the sites are envisaged to yield 10.45 million tonnes of mineral over the life of their permissions.

91. Although the submitted proposal represent only 30% of the total number of preferred areas identified within the MLP, this should not be seen in isolation when undertaking a review of the implementation of preferred areas identified within the MLP. The realisation of preferred areas must be considered in the context of the wider aim of the plan, which is to identify specific resources to meet the provisional requirements set by regional aggregate guidelines and thus ensure a supply of minerals throughout and beyond the plan period, 1997 to 2006. As a calculated contribution to the length of total aggregate landbank for Gloucestershire, based upon the annual expression of the local apportionment of current Regional Guidelines, the three proposals represent an addition of 2.7 years for crushed rock and 1.3 years for sand & gravel. This would represent 3.6 years for crushed rock and 1.5 years for sand and gravel if applying the revised local apportionment set out in Table 7.

AMR OBJECTIVE 7: 'To facilitate the continued and sustainable supply of locally required natural building stone materials'

Contextual characteristics

Natural building stone resources in Gloucestershire

92. As well as being an important source of aggregates, the geological resources of Gloucestershire also provide locally important sources of natural building stone materials *(i.e. walling, tiling, paving, block stone and dimension stone).* The mineral types used for these purposes include limestone and sandstone.

93. Natural building stone occurs in two distinct areas of the Gloucestershire, namely the Forest of Dean and the Cotswolds. In Forest of Dean natural building stone sources are derived from Carboniferous limestones and sandstones; whilst in the Cotswolds it is exclusively from limestones of the Jurassic period.

94. The working of natural building stone occurs in a range of different scales and intensities when compared with the larger scale working and production of aggregate minerals. A number of the larger limestone aggregate workings also supply natural building stone, as the occurrence of this resource is similar in both mineral type and distribution. Depending upon the specification, volume of material and market requirements, the production percentages of aggregate and natural building stone can vary considerably. In addition there are a number of specialist operations, particularly for the working of sandstone and Jurassic limestone, which supply a variety of natural building stone products such as walling, tiling, rockery, paving and dimension stone. The intensity of these operations is also heavily influenced by the specification, availability and market requirements of the stone. As a result production trends for natural building stone can vary considerably from site-to-site and from year-to-year, and are subject to greater supply variations than the county's aggregate resources.

Operational Sites

95. During 2003, twenty mineral sites supplied natural building stone products. Twelve sites based in the Cotswolds and eight sites located in the Forest of Dean. In addition a further twenty-one sites have been identified as inactive and dormant, wherein the potential for supplying natural building stone may exist in the future. Appendix B of the AMR provides an updated list of natural building stone quarries in Gloucestershire as of March 2005.

Natural building stone supply trends and landbank for Gloucestershire

96. The supply of natural building stone for Gloucestershire as of 2003 was calculated at 55,101 t. A significant majority (89.5%) was derived from the limestone sources of the Cotswolds and Forest of Dean, and a much smaller amount (10.5%) from sandstone origins of the Forest of Dean. Unfortunately insufficient data is available to provide meaningful trends for the supply of natural building stone. However improvements in the survey and monitoring programme over time will hopefully resolve this issue.

97. A detailed breakdown of the landbank reserves exclusively for natural building stone is also currently unavailable for 2004, due to the current methodology applied to the annual minerals survey programme of the MPA. carried out by the MPA. Nevertheless a much broader dataset concerning all non-aggregate limestone and sandstone reserves for county has been collated. As non-aggregate limestone and sandstone in Gloucestershire is primarily used for natural

building stone and agricultural purposes *(i.e. agricultural lime)*, this information acts as an initial baseline indicator of landbank reserves that can be applied for natural building stone. Tables 11 and 12, below provide a summary of the annual supply of building stone in Gloucestershire for 2003 and a breakdown of the non-aggregate limestone and sandstone landbanks.

TABLE 11: Annual production of building stone in Gloucestershire for 2003

Physiographic Areas	**Mineral type**	**Annual Production** *(in tonnes)* **for 2003**	**As a percentage of the total building stone produced**
Cotswolds	Limestone	47220 t	85.7%
Forest of Dean	Limestone	2075 t	3.8%
	Sandstone	5806 t	10.5%
	Total	**55101 t**	

TABLE 12: Estimated (non-aggregate) landbank for Gloucestershire as of Dec 2003

Physiographic Areas	**Mineral type**	**Estimated (Non-aggregate) Landbank including agricultural uses** (*As of 31st December 2003 / in million tonnes)*	**As a percentage of the total (non-aggregate) landbank**
Cotswolds	Limestone	2.96 mt	63.7%
Forest of Dean	Limestone	1.11 mt	23.9%
	Sandstone	0.58 mt	12.4%
	Total	**4.65 mt**	

Output Indicators

Data Collection

98. Natural building stone survey data has historically been collected by MPA's under the category of 'non-aggregates'. As with the aggregate data it has also been prepared on a calendar basis *(i.e. January – December)* so as to inform the strategic and national level monitoring of mineral working throughout the UK. To ensure a consistent approach to the wider monitoring exercise, the AMR will continue to collect non-aggregate information on a calendar basis in a similar fashion to that of aggregate data.

CORE OUTPUT INDICATORS (COI's): -
▪ There are no Core Output Indicators (COI's) relating to Monitoring Objective 7

LOCAL OUTPUT INDICATORS (LOI's): -

- Annual supply of natural building stone
- Non-aggregate landbank for Gloucestershire *(as of 31st December 2004)*

LOCAL OUTPUT INDICATOR RESULTS

99. As previously advised under monitoring objective 7, no mineral sales and reserves data is current available for the period 2004. However it is anticipated that this situation will be resolved in time for the next AMR. A two-year dataset for minerals covering 2004 and 2005 is proposed for the AMR 2005 – 2006.

Targets

- **NO RELEVANT TARGETS SET**

Analysis & Interpretation

100. In the absence of mineral sales and reserve data for natural building stone during 2004, it has not proved possible to provide an analysis and interpretation for the output indicators for monitoring objective 7. It is however envisaged that the AMR 2005 - 2006 will provide a detailed review of the county's natural building stone figures for the two-year period, 2004 and 2005.

101. The emergence of government guidance contained within the Consultation Draft to the Annexes for Minerals Planning Guidance 1, may have significant impact on the future monitoring of non-aggregate resources within Gloucestershire. As discussed under paragraphs 2.3.1 and 3.4.1 of the draft guidance, MPA's should consider the need to make future provision for non-aggregates such as natural building and brick clay. In order for appropriate assessments of provisional need to be carried out, there will need to be a more sophisticated and detailed monitoring programme for non-aggregates reserves. This will be particularly pertinent bearing in mind the variability in type, use and viability of economic reserves of non-aggregate building stones in the Cotswolds and Forest of Dean. It is envisaged that future AMR's will include more detailed Output Indicators concerning the supply of building stone and future permissions of new reserves.

AMR OBJECTIVE 8: 'To facilitate the continued and sustainable supply of clay minerals'

Contextual characteristics

Clay resources in Gloucestershire

102. Gloucestershire's clay resources are used for a variety of purposes including the manufacture of bricks, tiles and piping systems, as bulk fill for construction projects, site cover at waste disposal sites, and for various flood defence works.

103. The county's clay resources predominantly occur in four physiographic areas, namely; The Severn Vale, Vale of Moreton, Upper Thames Valley and the Forest of Dean Coalfield, and represent three different clay resource types; Lower Lias Clays, Oxford Clays and Upper Coal Measures Clays.

Operational Sites

104. As of 2003, only three sites were recorded as producing a saleable clay product (See Appendix B). All three sites were directly linked to commercial brickmaking works, which collectively produced over 17 million bricks during the year. In total these sites contributed some 70,000 tonnes of clay to the local brickmaking industry. It is unknown how significant this contribution has been to Gloucestershire's brickmaking, as different specifications *(i.e. colour, texture, durability, etc.)* coupled with market demand, can heavily influence the amount of imported clay needed from year-to-year. Table 13 below provides a breakdown of clay extraction in Gloucestershire during 2003: -

TABLE 13: Clay extraction in Gloucestershire during 2003

Mineral type	**Annual Production** *(in tonnes) for* **2003**	**Estimated clay Landbank** (*As of 31st December 2003 / in million tonnes)*
Clay	70,000 t	1 mt

105. In addition to clay extraction for brickmaking, a number of sites also have extant permissions for the working of clay. In the majority of cases conditional restrictions have been imposed by the MPA to prevent the onward of sale of the extracted materials. Examples include clay extraction to provide engineering material *(i.e. cap and lining)* for existing waste disposal facilities, and as a means of accessing an underlying reserve *(i.e. underlying sand & gravel resources in the Upper Thames Valley)*. Due to the on-site nature of these operations there is no recordable data on the amount of clay extracted for these purposes.

Output Indicators

Data Collection

106. Survey data on clay extraction has historically been collected by MPA's under the category of 'non-aggregates'. As with the aggregate data it has also been prepared on a calendar basis *(i.e. January – December)* so as to inform the strategic and national level monitoring of mineral working throughout the UK. To ensure a consistent approach to the wider monitoring exercise, the AMR will continue to collect non-aggregate information on a calendar basis in a similar fashion to that of aggregate data.

CORE OUTPUT INDICATORS (COI's): -

- There are no Core Output Indicators (COI's) relating to Monitoring Objective 8

LOCAL OUTPUT INDICATORS (LOI's): -

- Annual supply of Clay
- Clay landbank for Gloucestershire *(as of 31st December 2004)*

LOCAL OUTPUT INDICATOR RESULTS

107. As previously advised under monitoring objective 7, no mineral sales and reserves data is current available for the period 2004 although best available data covering 2003 can be found in Table 13. However it is anticipated that this situation will be resolved in time for the next AMR. For the 2005 / 2006 AMR report it is proposed to produce a two-year dataset for minerals covering both 2004 and 2005.

Targets

- **NO RELEVANT TARGETS SET**

Analysis & Interpretation

108. In the absence of mineral sales and reserve data for clay during 2004, it has not proved possible to provide an analysis and interpretation for the output indicators for monitoring objective 8. However the 2003 data found in table 13 would suggest that sufficient reserves are available to sustain 14 years worth of clay working. Subject to completion of the annual mineral survey for 2004, it is envisaged to provide a two-year dataset for 2004 and 2005 within the 2nd AMR 2005 / 2006.

109. As discussed under monitoring objective 7, a more detailed and sophisticated monitoring programme may need to be considered in the future. This is borne out of the emerging government guidance contained within the consultation draft Annexes for Minerals Planning Guidance 1, which discusses the need for MPA's to make provision for a number of non-aggregate minerals.

AMR OBJECTIVE 9: 'To ensure all new waste management facilities make a positive contribution towards developing an integrated and sustainable waste management system'

Contextual characteristics

The waste management system in Gloucestershire

110. Based on 2002/2003 information supplied by the Environment Agency Gloucestershire's waste management system comprised of 166 licensed waste management sites and over 450 registered exempt waste management operations. A full list of licensed waste management facilities can be viewed in appendix C of the AMR.

111. Table 14, below provides a detailed breakdown of the number of different types of licensed waste management facilities in Gloucestershire as of February 2003. Similar information regarding registered exempt waste management operations has not been updated from some time (i.e. August 2001), and as such has not been included within table 14.As of August 2001, 447 exempt waste sites were located throughout Gloucestershire. For the purposes of the AMR, the types of facilities that have been identified are based upon definitions used by the Environment Agency and within the adopted Gloucestershire Waste Local Plan. It is also important to note that a number of waste sites are multi-functional, in the operations that they carry out. Consequently the number of waste operations in table 14 below exceeds the total number of licensed waste management sites recorded.

TABLE 14: Number of waste management operations by facility type as of February 2003

	Waste management facilities by type										
									Landfill / Landraise Operations		
	Materials Recycling / Recovery and treatment Facility	Composting Facility	End-of-life Vehicle Dismantling & Metal Recycling Facility	Household Recycling Centre (HRC)	Waste Transfer Stations*	Sewage Treatment Facilities / Operations ~	Hazardous waste Treatment Facility	Incinerators	Hazardous	Non-hazardous *(Bio-degradable) Landfill*	Non-Hazardous *(Inert Landfill*
No. of Waste Operations *(as of Feb 03)*	5	3	27	5	31	87	1	2	1	7	12

** Waste Transfer Stations (WTS) includes all Household, Commercial & Industrial WTS's, Special WTS's and Clinical WTS's*

~ - Sewage Treatment Facilities / Operations includes all Sewage Treatment Works, Pumping Stations and Water Recycling Works

112. The distribution of licensed waste management sites have been divided into the county's six administrative districts (see table 15 over page):

TABLE 15: The distribution of licensed waste management sites throughout Gloucestershire by District Council

District authorities of Gloucestershire	No. of licensed waste management sites
Cheltenham Borough	5
Cotswold District	43*
Forest of Dean District	41*
Gloucester City	20
Stroud District	21
Tewkesbury Borough	36*

** - At least 50% of these sites related to the county's sewage treatment infrastructure. This includes Treatment Works (TW), Pumping Stations (PS) and Water Recycling Works (WRW)*

113. It is also proposed to include an annual capacity assessment for the handling of waste, by facility type within the AMR Report. As at present this exercise is incomplete, although a full data set is envisaged for the AMR 2005 / 2006.

Developing sustainable waste management for Gloucestershire

114. Sustainable waste management is concerned with reducing the amount of waste produced. Where waste is generated, it should be dealt with in a way that actively contributes towards economic, social and environment protection and enhancement. In terms of land use decision-making for waste management, the key planning objectives are: -

- Consider waste as a resource and look at disposal as the last option
- Whilst making appropriate provisions for disposal, seek to drive waste up the Waste Hierarchy
- Ensure communities take more responsibility for their own waste
- Ensure that sufficient and timely provision is made for waste management facilities to meet the needs of the community
- Help to meet the obligations set by European legislation and the supporting targets included within the national waste strategy
- Ensure that the design and layout of new developments support sustainable waste management
- Strike an appropriate balance between protecting Green Belts and recognising their potential for waste management facilities to support sustainable waste management
- Reflect the concerns and interests of communities
- Help secure the recovery or disposal of waste without endangering human health and without harming the environment
- Ensure that waste disposal occurs at one of the nearest appropriate installations to its arising

115. The AMR programme will reflect these key objectives and methodologies, which will assist in the monitoring of progress towards a more sustainable waste management system for Gloucestershire.

Regional Self Sufficiency assessment – Gloucestershire's waste inputs and outputs

116. Table 16 provides information on the passage of waste through Gloucestershire's licensed waste management sites. It includes a breakdown of arisings and the destinations of waste following handling / treatment by waste management facilities. It is important to note that these figures only represent waste that has passed through

Gloucestershire's waste facilities and does not include waste that which has been transported directly out of the county.

117. The data provided by the Environment Agency covers the period 2002 / 2003. For the purposes of monitoring regional self-sufficiency, the data has have been grouped into the English regions, Wales and outside of the UK to demonstrate regional movements of waste. The percentage for each of the regional groupings has been calculated for both inputs and outputs into waste facilities.

118. Table 16 shows that 81% of all waste managed by Gloucestershire's licensed waste facilities arise from the south west region. Following processing / handling 62.5% is sent on to other facilities also located within the southwest region.

TABLE 16: The sources and destinations of handled / treated waste through Gloucestershire by region during 2002 / 2003

WASTE INPUTS *Sources of waste (waste arisings) to be handled / treated through the Gloucestershire (licensed) waste management system*		**WASTE OUTPUTS** *Destination for waste that has been handled / treated through the Gloucestershire (licensed) waste management system*	
Inputs by Region	**% of total inputs**	**Outputs by Region**	**% of total outputs**
South-West Region *(Includes Gloucestershire & all WA's in the South-West)*	81 %	South-West Region *(Includes Gloucestershire and all WA's in the South-West)*	62.5 % ~
All other English Regions	4.29 %	All other English Regions	20.5 %
Wales	> 0.5%	Wales	9.6 %
Outside of the UK	0 %	Outside of the UK	6.9 %
Unknown arisings*	14.71 %	Unknown outputs *	0.5 %

~ - From the EA 2002/2003 dataset all waste outputs with a defined end-use as 'landfill' and an output destination 'unknown' have been included in the South West (intra –regional category). An assumption has been made that this waste, which is to be landfilled, is likely to be of the lowest value and would therefore is unlikely to be transported out of the region for disposal.

** From the EA 2002/2003 dataset a proportion of the waste has not been identified an 'input' source / arising or an 'output' destination. For completeness this unknown fraction of the data has been included in the AMR.*

Waste hierarchy assessment – waste management options at waste sites in Gloucestershire

119. Table 17 below provides information on how the waste management operations in Gloucestershire during 2003 reflect the waste hierarchy *(i.e. the framework for disposal, recovery, re-use, reduction).* The purpose of the hierarchy is to encourage the development of new facilities higher up the sustainability framework. An annual assessment of waste management operations against the waste hierarchy will provide useful trend data that can be used to assess the progress towards a more sustainable waste management system in Gloucestershire. Future years will need to be assessed against this baseline and any indicative capacities, which may emerge in the RSS.

TABLE 17: Gloucestershire's waste management system in relation to the Waste Hierarchy (as of 2003)

The Waste Hierarchy	Waste Management operations in Gloucestershire as of 2003
REDUCTION	0*
RE-USE	5
RECOVERY	154
DISPOSAL	22

** As reducing the amount of waste produced in the first place, is the objective of 'REDUCTION' licensed waste management facilities will be unable to achieve this position within the hierarchy. Nevertheless it is proposed to include data within future Gloucestershire Minerals and Waste AMR reports, concerning the growth in Home Composting (recorded from the sales figures of Home Composting Bins by the Disposal and Collection Authorities in Gloucestershire). Although this does not represent the full range of reduction options, it will provide an insight into the development of an important waste reduction method, being practiced throughout the County.*

Output Indicators

Data Collection

120. The collation and analysis of waste monitoring data is the responsibility of the Environment Agency (EA). Information is collected by the EA from waste operators under the requirements of the licensing (WML) and / or Pollution Permit (IPPC) regime. Data is collected on an annual basis from April to March of each year.

CORE OUTPUT INDICATORS (COI's): -

- The annual capacity of waste management facilities by waste type

CORE OUTPUT INDICATOR RESULTS

121. Previous surveys concerning waste management facilities in Gloucestershire have been focused upon the records held by the EA. However in light of the new requirements set out under the AMR system, the Waste Planning Authority (WPA) are in the process of producing a planning database of waste management facilities throughout the county. This information will reflect the capacity requirements set out in the core output indicator and will also provide baseline data for the emerging Waste Management Core Strategy (WMCS). It is proposed that the first dataset concerning the core output indicator for monitoring objective 9 will be included in the next AMR for 2005 / 2006.

LOCAL OUTPUT INDICATORS (LOI's): -

- The number of new waste management facilities by management type*
- The distribution of waste management facilities by district authority
- The percentage of waste arisings (inputs) from within and from outside of the South West region
- The percentages of waste by destination following management (outputs) for within and for outside of the South West region
- The number of new waste management facilities that are operational within the higher tiers of the waste hierarchy

** - The categories of management type are defined as per the table 14 from the contextual characteristics for monitoring objective 9*

LOCAL OUTPUT INDICATOR RESULTS

122. No data is presently available for the period 1st April 2004 – 31st March 2005 in respect of the local output indicators. The Environment Agency is in the process of reviewing its data services in light of government guidance contained with PPS10. It is envisaged that up-to-date and accurate information will be available for 2005 / 2006. It is proposed for the AMR 2005 – 2006 will include a full dataset for the two-year period 2004 to 2006.

Targets

123. The targets included for AMR objective 9 are derived from the Regional Waste Management Strategy 2004 - 2020 (RWMS). This strategy has been prepared by the RPB as a lead document to inform the emerging waste policies, which are to be included within the Regional Spatial Strategy for the South West (RSS). As set out in government guidance contained within Planning Policy Statement (PSS) 10 *'Planning for Sustainable Waste Management'* the RSS is to have a pivotal role in determining the future requirements for the management of waste by waste sector and for the making the provision for the management of waste by sub-regional (i.e. waste planning authority) for the next 15 to 20 years. As a consequence the calculated waste figures, included in the appendices for the RWMS, have been applied to the AMR so as to facilitate the monitoring of appropriate data for the emerging Waste Core Strategy (WCS) and subsequent Waste Sites Allocations Development Document (WSADD) for Gloucestershire.

- **Ensure the provisional capacity to handle (i.e. recycle, reuse and / or recover) 83% of all managed Commercial and Industrial waste* in Gloucestershire by 2020**
- *(In accordance with RWMS policies P7.4 and P7.5)*

- **Ensure the provisional capacity to handle (i.e. recycle, reuse and / or recover) 180,000 tpa of all managed Inert* and Construction and Demolition waste* in Gloucestershire by 2020**
- *(In accordance with RWMS appendix C, Table 3 - Page 78)*

- **Ensure the provisional capacity for the landfilling* of 380,000 tpa of waste in Gloucestershire by 2020 *(of which 180,00 tpa is to be bio-degradable and 210,00 tpa is to be inert)***
- *(Subject to the provisions of the LATS Scheme)*

**- The definition of these waste types is provided under Monitoring Objective 11.*

Analysis & Interpretation

124. In the absence of up-to-date waste data it has not proved possible to provide an analysis and interpretation for monitoring objective 9. However it is envisaged that the AMR 2005 - 2006 will provide a detailed two-year review for 2004 - 2006.

AMR OBJECTIVE 10: 'To facilitate the development of a strategic and local network of waste management facilities in line with the provision identified in the Waste Local Plan'

Contextual characteristics

A network of waste management facilities for Gloucestershire

125. The Waste Local Plan (WLP) identifies a number of 'Preferred Sites' and 'Areas of Search' for locating waste management facilities. These are the cornerstone of the Plan's provision, and a principle mechanism for guiding Gloucestershire towards sustainable waste management.

126. The allocations are divided into two groups, 'Strategic' and 'Local', according to their potential capacity and the area they are likely to serve. A benchmark capacity of 50,000 tonnes per annum, based upon the likely requirements for Environmental Impact Assessment (EIA) when planning permission is sought, is used to distinguish between 'Strategic' (50,000 tonnes and above) and 'District' (or 'local') (below 50,000 tonnes) sites. Table 18 below provides a detailed breakdown of the allocations identified in the WLP: -

TABLE 18: Preferred WLP sites and areas of search for future waste management facilities

Preferred Sites / Areas of Search	**Site Area**	**Strategic Site** *(+50,000 tpa capacity)* **or Local Site** *(-50,000tpa capacity)*
Wingmoor Farm (West)	66.1 hectares	Strategic
Wingmoor Farm (East)	48.7 hectares	Strategic
Sudmeadow	142 hectares	Strategic
Former Moreton Valence Airfield	11.2 hectares	Strategic
Sharpness Docks *(Sites A & B)*	Site A – 17.2 hectares Site B – 8.4 hectares	Strategic
Reclaimed Canal Land at Netheridge	1 hectare	Strategic *(As an ancillary facility to potentially Sharpness Docks)*
Gloucester Business Park	15 hectares	Local
Moreton-in-Marsh *(Sites North & South)*	North – 5.3 hectares South – 4.5 hectares	Local
Phoenix House, Elmstone Hardwicke	0.02 hectares	Local
Land at the Rear of Dowty, Staverton	5 hectares	Local
The Railway Triangle, Gloucester	7.7 hectares	Local
Land adjacent to Sudmeadow	6.5 hectares	Local
Forest Vale Industrial Estate, Cinderford *(Sites A & B)*	Site A – 1.2 hectares Site B – 1.2 hectares	Local
The Canal Works, Lydney	1.0 hectares	Local

TABLE 18 *(CONT)*: Preferred WLP sites and areas of search for future waste management facilities

Preferred Sites / Areas of Search	Site Area	**Strategic Site** *(+50,000 tpa capacity)* **or Local Site** *(-50,000tpa capacity)*
Wilderness Quarry	0.5 hectares	Local
Wingmoor Farm (South-East)	22.3 hectares	Local
Foss Cross Industrial Estate	6.4 hectares	Local
Former Moreton Valence Airfield	2 hectares	Local
Land adjacent to Gasworks, Bristol Rd	3.4 hectares	Local
Netherhills Pit, Frampton-on-Severn *(North Parcel & Two Southern Parcels)*	North – 7.25 hectares South – 6 hectares	Local

127. The objective of the WLP allocations, as identified above, is to facilitate a range of waste management facilities that are the best practicable environmental option for Gloucestershire. As no one process can deliver sustainable waste management, a combination of facilities and sites will be required in order to meet future demands. The allocations in the WLP retain a degree of flexibility as to the style and type of waste facilities and technologies that may be acceptable. This seeks to ensure appropriate provision can made for present and future waste demands.

128. Nevertheless the WLP provides an indication of what might be acceptable at individual sites, based upon waste management options, capacity and the likelihood of adverse impacts being mitigated. For each of the sites a list of potential operations and a detailed site profile has been prepared (see Chapter 4 of the WLP).

129. To assess the ability of the WLP to promote and realise it's provision for future waste management facilities, the AMR programme will undertake a review of all new applications submitted upon the preferred waste sites of the WLP. The review will consider whether or not waste proposals have been granted permission, the type and nature of the development and the associated planning restrictions imposed upon the operation by condition or legal agreement.

Output Indicators

Data Collection

130. Data concerning the allocations in the WLP has been collected since its adoption in October 2004. For the first AMR, information is presented from October 2004 through the end of the monitoring period, 31st March 2005. Subsequent AMR's will be based upon an annual monitoring period of April 1st through to March 31st.

CORE OUTPUT INDICATORS (COI's): -

- There are no Core Output Indicators (COI's) relating to Monitoring Objective 10

LOCAL OUTPUT INDICATORS (LOI's): -

- The following detailed information, concerning waste planning proposals submitted and / or determined upon preferred sites / areas of search for future waste management as defined within the WLP: -

  - Proposal description,
  - Proposal site area,
  - Approval, refusal or pending decision,
  - Planning restrictions imposed by condition or Section 106 legal agreement

- The number and percentage of all waste planning proposals submitted and / or determined on preferred sites / areas of search identified within the WLP

LOCAL OUTPUT INDICATOR RESULTS

LOI TABLE 5: Proposed submitted upon preferred areas / areas of search of the WLP during 2004 - 2005

WLP PREFERRED SITE / AREAS OF SEARCH INFORMATION: -			**PROPOSAL INFORMATION: -**			
WLP Preferred Site / Areas of Search	**Area** *(in ha)*	**Site type** *(Strategic or Local)*	**Proposals**	**Proposal Area** *(In ha) and (as % of Preferred Area)*	**Decision**	**Planning Restrictions^ / Refusal Reasons**
Wingmoor Farm West (Site A) **WLP SITE 1**	66.1 ha	Strategic	Temporary storage of end-of-life Fridges & Freezers *(Until April 2010)*	0.25 ha *(Less than 1%)*	Undecided as of 31/03/05	-
Wingmoor Farm East **WLP SITE 2**	48.7 ha	Strategic	Additional silos for existing ash conditioning plant	<0.1ha *(Less than 1%)*	Withdrawn by applicant	-
Forest Vale Industrial Estate **WLP SITE 13**	1.2 ha	Local	Installation and re-positioning of end-of-life vehicle (ELV) depollution rig	<0.1ha *(Less than 1%)*	Approved	No operational restrictions other than those of existing ELV facility
Lydney Industrial Estate (Site C) **WLP SITE 15**	22 ha	Local	Recycling Facility with associated storage and ancillary activities	0.15ha *(Less than 1%)*	Approved	Restricted vehicle movements Restricted to 27,000 tpa throughput Restricted to 2,000 tpa of tyre waste

LOI TABLE 5: Proposed submitted upon preferred areas / areas of search of the WLP during 2004 – 2005 *cont.*

WLP PREFERRED SITE / AREAS OF SEARCH INFORMATION: -			PROPOSAL INFORMATION: -			
WLP Preferred Site / Areas of Search	**Area** *(in ha)*	**Site type** *(Strategic or Local)*	**Proposals**	**Proposal Area** *(In ha) and (as % of Preferred Area)*	**Decision**	**Planning Restrictions^ / Refusal Reasons**
Wingmoor Farm (South-East) **WLP SITE 17**	22.3 ha	Local	Erection of MRF *(Materials Recycling Facility)*	2.9 ha *(13 %)*	Refused	REASON: - Failure to demonstrate how the site can satisfactorily operate above and beyond the considered threshold and failure to demonstrate BPEO
Foss Cross Industrial Estate **WLP SITE 18**	6.4 ha	Local	Change of Use from vehicle storage yard to Pet Crematorium *(Incinerator)*	0.3 ha (4.7%)	Approved	Restricted to 300 tpa throughput

TOTAL AREA	**166.7 ha**	**TOTAL AREA** *(as % of Preferred Areas)*	**3.8 ha** *(2.2%)*	

^ - Restrictions in this instance only relate to those that have been imposed on a planning permission and does not include any further restrictions that may or may not be imposed under the EA licensing regime

LOI TABLE 6: Types of locations for submitted waste proposals during 2004 - 2005

Number of Waste Proposals submitted / determined	Number of proposals upon: - *(Also as a % of the total no. of waste proposals submitted/ determined)*		
	WLP Preferred Sites	Non preferred sites	
		Existing Waste Facilities	New Waste Facilities
44	6 *(13.6%)*	29 *(66%)*	9 *(20.4%)*

Targets

- **NO RELEVANT TARGETS SET**

Analysis & Interpretation

131. During the period 2004 and 2005 a total of 6 waste planning proposals were submitted and / or determined upon 6 preferred areas / areas of search as identified by the WLP. 2 of the proposal were sited upon strategic preferred areas / areas of search, whilst 4 proposals were located upon local preferred areas / areas of search. In total the area coverage of these waste proposals was approximately 3.8 ha. This represents just over 2% of the total hectarage

available from the 6 preferred areas, for which the waste proposals had been submitted and / or determined upon. In terms of receiving planning permission upon preferred areas / areas of search, 3 of the proposals gained an approval during 2004 and 2005. Of the remaining 3 proposals, 1 was refused, 1 remained undecided, and 1 was withdrawn by the applicant.

132. As a percentage of the total number of waste proposals for 2004 and 2005, those sited upon preferred areas / areas of search accounted for just under 14%. The remaining 86% of proposals were located upon land not allocated by the WLP. Of these proposals, 66% were located on existing waste facilities and operations and 20% represented new sites for waste management usage.

133. Albeit that the number of waste proposals upon the preferred areas / areas of search of the WLP is seen as being relatively low compared with the number of preferred areas identified, this should be seen in the context of the longer term aim of the WLP to make provision for future waste management facilities throughout the life of the plan. As the WLP plan period is for 10 years from 2002 through to 2012, the number and type of preferred sites / areas of search have been selected to reflect the projected capacity requirements to meet the future demand for waste management right through to the end of the plan period and not just the immediate need for new waste facilities.

134. The total hectarage taken up by waste proposals upon preferred areas / areas of search is also seen as being relatively low when compared with the total hectarage afforded to the affected allocations. This is likely to be a result of the type and nature of the proposals received during the annual period (see LOI Table 6). In addition this may also demonstrate the degree of flexibility that has been adopted by the WLP in terms of the type and nature of future waste management options that may be brought forward. It is envisaged that through providing for a mix of different sized allocations, greater opportunities will be available to develop a diverse network of waste facilities to handle a wide range of different waste types as technology and other circumstances change over time.

AMR OBJECTIVE 11: 'To facilitate the development of an integrated and sustainable waste management system'

Contextual characteristics

Waste in Gloucestershire

135. For the period 2002/2003 approximately 1.2 million tonnes of waste was managed in Gloucestershire. Over nine hundred thousand tonnes was disposed of to landfill, whilst the remainder, nearly three hundred thousands tonnes, was composted, recycled or treated. Table 19 below provides a detailed breakdown of the tonnages and percentages of Gloucestershire's managed waste for 2002/2003: -

TABLE 19: Gloucestershire's managed waste for 2002/2003

Method of management	Figures in tonnes	As a percentage of total waste managed
Landfilled	958,211 t	78 %
Composted	12,377 t	*Composted & Recycled* – 20 %
Recycled	250,922 t	
Treated *(C&I, Metals & Hazardous waste only)*	9463 t	Treated 3 %
TOTAL	**1,234,136 t**	

136. A breakdown of 2002/2003 waste data by waste type has also been carried out. To ensure that this information is presented in a consistent and compatible manner for use by other key waste management bodies *(i.e. Environment Agency (EA), Waste Collection Authorities (WCA's) and Waste Disposal Authority (WDA))* five clearly defined waste types and two waste sub-categories, have been applied to the waste data. Table 20 below identifies the waste types and associated definitions.

TABLE 20: Waste types, categories and definitions

Waste types	Definition of waste types	Waste sub-category and definitions
Commercial & Industry Waste (C&I)	Waste that is derived from factories, utility operators such as water, electricity, gas and sewerage providers, trade establishments, miscellaneous businesses, sports & recreation centres and entertainment premises. It excludes waste generated by agricultural businesses, mines and quarry operators.	**BIODEGRADABLE WASTE:** Waste that is capable of undergoing anaerobic or aerobic decomposition, such as food and garden waste, paper and paperboard. A proportion of C&I and MSW waste will be of a biodegradable nature.
Municipal Solid Waste (MSW)	Municipal solid waste (MSW) is made up of household waste and other wastes collected by a waste collection authority or its contractors, such as municipal parks and gardens waste, beach cleansing waste and any commercial and industrial waste for which the collection authority takes responsibility.	

TABLE 20: Waste types, categories and definitions *cont.*

Waste types	Definition of waste types	Waste sub-category and definitions
Inert Waste	Waste that is non-biodegradable or decompostable *(or will only do so at a very slow rates)* and is chemically inert. Examples include; clay, sand, brick, stone, silica and glass	**NON-BIODEGRADABLE WASTE:** Waste that does not undergo anaerobic or aerobic decomposition. It includes glass, plastic, non-combustables and ferrous and non-ferrous metals. Non-biodegradable includes a proportion of C&I and MSW waste and incorporates all Inert, Metal and Special Waste types.
Metal Waste	Waste that is derived from metal processing such as off-cuts, stampings, turnings and grindings. It is also incorporates the metaliferous fraction of end-of-life vehicles *(e.g. scrapped cars etc.)* and dismantled industrial plant, railway rolling stock and rail tracks.	
Special / Hazardous Waste *	Waste as defined by the Special Waste Regulations (1996). It is described as toxic, very toxic, harmful, corrosive, irritant or carcinogenic and is considered to be either hazardous or dangerous to handle. Examples include; wood preservatives, solvents, adhesives and pesticides * Revised definition and name change for special waste based upon 2005 Regulations - *Hazardous wastes are those, which pose particular risks to health and the environment. Examples include: oil contaminated materials; some household items (televisions, computer monitors, fluorescent lighting); wood preservatives, solvents, incinerator fly ash, batteries, adhesives and pesticides.*	

**- On 16 July 2005 the Hazardous Waste (England and Wales) Regulations and the List of Wastes (England) Regulations come into force replacing the Special Waste Regulations. As a consequence the waste type 'special waste' has became obsolete. For future Glos Minerals and Waste AMR's the 'special waste' category will be replaced with 'hazardous waste' in order to reflect the changes in definition as set out in the 2005 regulations.*

Waste in Gloucestershire by type

137. For the period 2002/2003, commercial and industrial (C&I) waste contributed around 364,400 tonnes to the total amount of managed waste for Gloucestershire. This equates to almost 30% of all managed waste. The second largest fraction of waste was derived from inert sources (mainly construction & demolition), which accounts for approximately three hundred and thirty thousand tonnes. Municipal solid waste (MSW), comprising just less than three hundred thousand tonnes. The remainder was made up of metals and special waste, which together contributed near to two hundred thousand tonnes. Table 21 over the page provides a detailed breakdown of managed waste in Gloucestershire for 2002/2003 by waste type: -

TABLE 21: Gloucestershire's managed waste for 2002/2003 by waste type

Waste types	Figures in tonnes	As a % of the total managed waste for Glos.
Commercial & Industry Waste (C&I) *	364,255 t	30 %
Construction & Demolition Waste (C&D)	404, 264 t	33 %
Municipal Solid Waste (MSW)	283,124 t	23 %
Metal Waste	140, 251 t	11 %
Special / Hazardous Waste	42,242 t	3 %
TOTAL FOR ALL WASTE TYPES	**1,234,136 t**	

** - Although a Commercial and Industrial Waste (C&I) managed figure is not required to be demonstrated in this AMR, it is shown here for indicative purposes. The final figure is still awaiting clarification from the Environment Agency as to certain aspects of its calculation.*

Municipal Waste in Gloucestershire

138. A detailed breakdown of municipal waste data by management method has also been prepared for the period 2002/2003. Of the total amount of managed municipal solid waste in Gloucestershire (283,739 t), eighty-three percent was disposed of to landfill. A further twelve and a half percent was recycled and nearly four and a half percent was composted. Table 22 below identifies in detail the management of municipal solid waste in Gloucestershire for 2002/2003.

TABLE 22: Gloucestershire's managed Municipal Solid Waste (MSW) for 2002/2003

Waste management method	Figures in tonnes per annum (tpa)	As a % of the total amount of MSW		As a % of the total managed waste for Glos.
Deposited of to Landfill	235,802 tpa	83 %		18 %
Recycled	34,945 tpa	13 %	*Composted & Recycled 17 %*	3 %
Composted	12,377 tpa	4 %		1 %
TOTAL MSW	**283,124 tpa**			**22 %**

Output Indicators

Data Collection

139. The collation and analysis of waste monitoring data is the responsibility of the Environment Agency (EA) and Waste Disposal Authority (WDA). Relevant information is collected by the EA from waste operators under the terms of their waste management licences (WML's) and / or Pollution Permits (IPPC's). Data is collected on an annual basis from April to March of each year. The Waste Disposal Authority (WDA) also collects annual waste data, although this only relates to the management of municipal waste. Annual waste data from both the EA and WDA will be included within the AMR.

CORE OUTPUT INDICATORS (COI's): -

- Amount of municipal waste arising, and managed by management type, and the percentage each management type represents of the waste managed

CORE OUTPUT INDICATOR RESULTS

COI TABLE 1: Gloucestershire's managed Municipal Solid Waste (MSW) for 2003/2004 and 2004/2005

Waste management method	Figures in tonnes per annum (tpa)		As a % of the total amount of MSW		As a % of the total managed waste for Glos.
	03 / 04	04 / 05	03 / 04	04 / 05	
Deposited of to Landfill	228,415 tpa	228,321 tpa	78 %	74 %	*These percentages are unknown as non-municipal data is unavailable for 03/04 and 04/05 (see COI Results commentary above)*
Recycled	46,103 tpa	61,630 tpa	16 %	20 %	
Composted	17,430 tpa	19,548 tpa	6 %	6 %	
TOTAL MSW	**291,948 tpa**	**309,499 tpa**			

LOCAL OUTPUT INDICATORS (LOI's): -

- Total amount of waste managed in Gloucestershire, and as a breakdown by waste type *(i.e. C&I, Inert, MSW, Metals and Special / Hazardous)*
- The amount of waste managed in Gloucestershire by management method *(i.e. landfill, recycling, composting)*

LOCAL OUTPUT INDICATOR RESULTS

140. No data for other waste streams is presently available for the period 1st April 2004 – 31st March 2005 in respect of the local output indicators. As advised above, the EA is in the process of reviewing their data services before up-to-date and accurate information can be provided. It is envisaged that this will be available for 2005 / 2006. The next AMR for 2005 – 2006 will include a full dataset for the two-year period 04/05 and 05/06 for the local output indicators for monitoring objective 11.

Targets

- **NO RELEVANT TARGETS SET**

Analysis & Interpretation

141. Due to the re-organisation of data collection and delivery services within the Environment Agency, limited data is presently available concerning all of the managed waste in Gloucestershire during 2004 / 2005. Nevertheless the WDA has been able to provided up-to-date and detailed municipal waste data for the two-year period 2003 - 2005.

142. Although the amount of municipal solid waste (MSW) managed in Gloucestershire increased between 2002/03 and 2004/05 by some 26,375 tonnes, the amount finally disposed of to landfill remained fairly constant at around 230,000 tpa. In respect of recycling and composting of MSW over the same period, these waste management methods were both subject to an increase of approximately 26,700 tonnes and 7000 tonnes respectively.

143. Of most significance is the percentage change between the different management methods and the overall amount of MSW that has been managed. Between the baseline data for MSW of 2002 / 2003 (see Table 22) and the most recent data of 2004 / 2005 (see COI Table 1) there has been a notable reduction of 9% in rate of MSW being disposed of to landfill. During the same period the rate of recycling has increased by some 7%, as has composting, which has risen from 4% to 6%.

144. The present trend in increased recycling and composting and reduced disposal to landfill for Gloucestershire's MSW appears to follow the wider European Union and national government aim to reduce the reliance upon landfilling as a means of dealing with waste. Through European legislation, and more specifically national legislation and central government targets, waste disposal and collection authorities have a statutory responsibility to delivery ongoing improvements in the level of recycling and composting.

145. For Gloucestershire, nationally set statutory targets for the recovery of municipal waste has been in place since 1989 / 1999. As stated within the current Gloucestershire Municipal Waste Management Strategy published in 2002, the county must look to achieve a combined recycling and composting rate of 30% by 2005 / 2006. When this is compared to the figures presented within the AMR for 2003 - 2005 (see COI Table 1) it appears to show that significant progress has been made towards meeting the 2005 / 2006 statutory target.

146. The Waste Local Plan (WLP) has crucial role in assisting the WDA as they attempt to achieve greater levels of recycling and composting. As set out in pages 7 and 8 of the WLP, there is clear responsibility upon the plan to provide the policy framework for better and more integrated waste management decisions, governed by the principles of sustainability. The review of the WLP and subsequent production of new Waste Development Documents (WDD's) will need to continue to seek to provide a clear policy framework for the waste management including MSW, in-line with ongoing developments in land-use planning and technological improvements towards achieving greater levels of sustainability.

APPENDIX A: Glossary

AFTERCARE	-	The treatment of land following restoration [as defined below] to bring it up to the required standard for use for agriculture, forestry or amenity. Such treatment may include planting, cultivating, fertilising, watering, draining or otherwise treating the land [MPG7]
AFTER-USE	-	The ultimate use after mineral working for agriculture, forestry, amenity, industrial and other development [MPG7]
AGGREGATE	-	Inert particulate matter which is suitable for use [on its own or with the addition of cement or bituminous material] in construction as concrete, mortar, finishes, roadstone, asphalt or drainage course, or for use as constructional fill or railway ballast [DETR]
ANCILLARY DEVELOPMENT	-	Part 19 of Schedule 2 to the Town and Country Planning (General Permitted Development) Order 1995 gives mineral operators some rights to erect or alter buildings and plant required for extraction related activities. It also provides for the removal of ancillary development after mineral operations have permanently stopped (MPG1)
ANNUAL MONITORING REPORT (AMR)	-	Assesses the implementation of the LDS and extent to which the policies in LDDs are being achieved
APPORTIONMENT	-	The division of the Regional Guidelines [contained in Annex A of MPG6] between the individual MPA areas comprising each region. Also referred to as the sub-regional apportionment
AREA ACTION PLAN (AAP)	-	Provide a planning framework for areas of change and areas of conservation
AREAS OF OUTSTANDING NATURAL BEAUTY (AONB's)	-	Areas designated by the Countryside Commission subject to confirmation by the Secretary of State for the Environment, under National Parks and Access to the Countryside Act 1949 - the primary objective of the designation is conservation of the natural beauty of the landscape [PPG7]
BIO-DIVERSITY	-	Biodiversity is the variability among living organisms from all sources including, inter alia, terrestrial, marine, and other aquatic ecosystems and ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems ("Biodiversity" – The UK Action Plan 1994)
CARBONIFEROUS	-	The period of geological time from 354 to 292 million years ago. So named because of the globally extensive occurrence of coal and limestone ($CaCO_3$) that was formed during this time. In the UK marine sediments dominate the Lower Carboniferous. Upper Carboniferous rocks are almost entirely fresh-water and lacustrine sediments. The bulk of coal deposits in the UK occur in Upper Carboniferous strata
CEMENT	-	Substance made by calcing lime and clay, mixed with water and sand to form a mortar or used in concrete
CIVIC AMENITY SITES	-	Facility where the public can dispose of household waste and also often containing recycling points. Local authorities can often describe these sites as Household Recycling Centres (HRC's).
COMMERCIAL & INDUSTRIAL WASTE	-	Waste that is derived from factories, utility operators such as water, electricity, gas and sewerage providers, trade establishments, miscellaneous businesses, sports & recreation centres and entertainment premises. It excludes waste generated by agricultural businesses, mines and quarry operators
COMMUNITY STRATEGY	-	The Local Government Act 2000 requires local authorities to prepare a Community Strategy. It sets out the broad vision for the future of the local authority's area and proposals for delivering that vision
CONCRETE	-	Composition of gravel, sand, cement and water used for building
CONSTRUCTION & DEMOLITON WASTE	-	Waste generated from construction, renovation, repair, and demolition of houses, large building structures, roads, bridges, piers, and dams. C&D waste is made up of wood, steel, concrete, gypsum, masonry, plaster, metal, and asphalt
CORE STRATEGY	-	Sets out the long-term spatial vision for the local planning authority area and the strategic policies and proposals to deliver that vision
CONCRETE BATCHING PLANT	-	Plant which produces ready-mixed concrete for construction purposes
CRUSHED ROCK	-	Hard rock, often limestone or granite, fragmented and graded for use as an aggregate
DEVELOPMENT CONTROL POLICIES	-	A set of criteria-based policies required to ensure that all development within the area meets the vision and strategy set out in the core strategy
DEVELOPMENT PLAN DOCUMENT	-	See the definition of Minerals & Waste Development Plan Document below

ENGAGEMENT	-	Entering into a deliberative process of dialogue with others, actively seeking and listening to their views and exchanging ideas, information and opinions. Unlike 'mediation' or 'negotiation' engagement can occur without there being a dispute to resolve
ENERGY FROM WASTE	-	Energy recovery of post recycling waste residue - an alternative to landfill
ENVIRONMENT AGENCY	-	The leading public body for protecting and improving the environment in England and Wales
ENVIRONMENTAL IMPACT ASSESSMENT	-	An Environmental Assessment is a technique for drawing together, in a systematic way, expert quantitative analysis and qualitative assessment of proposals environmental effects. The need for an EA is determined under the Town and Country Planning (Environmental Impact Assessment) Regulations 1999
ENQUIRY BY DESIGN	-	This process helps reach agreement between groups that would normally hold differing aspirations by bringing them together and focusing on the sustainability and quality of the urban environment itself. All concerns - technical, political, environmental and social – are tested and challenged by the design itself, so that design leads rather than follows the process
INERT WASTE	-	Waste that is non-biodegradable or decompostable *(or will only do so at a very slow rates)* and is chemically inert. Examples include; clay, sand, brick, stone, silica and glass
INSEPCTOR'S REPORT	-	This will be produced by the Planning Inspector following the Independent Examination and will be binding on the County Council
HAZARDOUS WASTE	-	Hazardous wastes are those, which pose particular risks to health and the environment. Examples include: oil contaminated materials; some household items (televisions, computer monitors, fluorescent lighting); wood preservatives, solvents, incinerator fly ash, batteries, adhesives and pesticides
JURASSIC	-	The period of geological time from about 195 million years ago through to 135 million years ago (Penguin - Dictionary of Geology)
LANDBANK	-	A stock of planning permissions for the winning and working of minerals (refer paragraph 62 - 66, MPG6)
LANDFILL	-	A landfill is a carefully designed structure built into or on top of the ground in which rubbish is isolated from the surrounding environment (groundwater, air, soil). Landfills are not designed to break down waste, merely to bury it
LOCAL DEVELOPMENT DOCUMENT (LDD)	-	A document that forms part of the Local Development Framework. Can either be a Development Plan Document or a Supplementary Planning Document
LOCAL DEVELOPMENT FRAMEWORK (LDF)	-	Comprises a portfolio of local development documents that will provide the framework for delivering the spatial planning strategy for the area
LOCAL DEVELOPMENT SCHEME (LDS)	-	Sets out the programme for the preparation of the local development documents. Must be submitted to Secretary of State for approval within six months of the commencement date of the Act regardless of where they are in terms of their current development plan
LOCAL STRATEGIC PARTNERSHIP (LSP)	-	Non-statutory, non-executive body bringing together representatives of the public, private and voluntary sectors. The LSP is responsible for preparing the Community Strategy
MATERIALS RECYCLING FACILITY (MRF)	-	A facility for sorting and packing recyclable waste.
MINERALS LOCAL PLAN (MLP)	-	A Minerals Local Plan is a written statement formulating the authorities detailed policies for their area in respect of development consisting of the winning and working of minerals or involving the depositing of mineral waste [TCPA 1990]
MINERALS PLANNING AUTHORITY (MPA)	-	Any Local Authority with responsibility for planning control over mineral working. Outside Greater London, metropolitan areas and the Unitary Authorities, MPAs comprise County Councils and National Park authorities [MPG1]
MINERALS PLANNING GUIDANCE (MPG)	-	MPGs provide practical information and advice about planning policies, best practice and the legislation relating to minerals planning in a simple and accessible form. The Department of the Environment will have regard to this guidance in dealing with development plans, appeals and planning applications and it is expected that local planning authorities will also have regard to it in the exercise of their planning functions, including the preparation of Structure and Local Plans. The contents of individual MPGs range from general planning and procedure guidance to advice on specific issues and proposals [MPG1]
MINERALS PLANNING STATEMENT	-	Minerals Planning Statements are published by the Office of the Deputy Prime Minister. Minerals Planning Statements will eventually replace Minerals Planning Guidance Notes

MINERALS & WASTE DEVELOPMENT PLAN DOCUMENT (M&WDPD)	-	Spatial minerals and waste related planning documents that are subject to independent examination. There will be a right for those making representations seeking change to be heard at an independent examination
MINERALS & WASTE DEVELOPMENT FRAMEWORK (MWDF)	-	Comprises a portfolio of minerals and waste development documents, which will provide the framework for delivering the spatial minerals and waste planning strategy for the area
MINERALS & WASTE DEVELOPMENT SCHEME (MWDS)	-	Sets out the programme for the preparation of the minerals and waste development documents. Must be submitted to Secretary of State for approval within six months of the commencement date of the Act regardless of where they are in terms of their current development plan
MUNICIPAL SOLID WASTE (MSW)	-	Solid waste, which is collected by local authorities. This is mainly composed of household waste but also includes waste from household recycling centres, street sweepings and local authority collected commercial and industrial waste
NATURAL BUILDING STONE	-	For the purpose of this Plan, natural building stone includes building stone, walling stone, masonry stone, dimension stone, tilestone, rockery and paving stone
OFFICE OF THE DEPUTY PRIME MINISTER (ODPM)	-	Government department that brings together regional and local government (including regional Government Offices), housing, planning and regeneration along with the social exclusion unit and neighbourhood renewal
PRIMARY AGGREGATE	-	Naturally occurring bulk minerals worked primarily for aggregate purposes [DETR]
PLANNING POLICY GUIDANCE NOTES (PPG's)	-	PPG's set out the Governments policies on different aspects of planning. They range from key objectives, operational principles to guidance and advice on more specific issues. It is expected that local planning authorities must take their content into account in preparing structure and local plans [PPG1]
PLANNING POLICY STATEMENTS (PPS's)	-	Issued by central government to replace the existing Planning Policy Guidance notes in order to provide greater clarity and to remove from national policy advice on practical implementation, which is better expressed as guidance rather than policy
PREFERRED AREAS	-	These are areas of known resources where planning permission might reasonably be anticipated by industry [MPG 6]
PUBLIC CONSULTATION	-	A process through which the public is informed about proposals fashioned by a planning authority or developer and invited to submit comments on them
QUARRYING	-	The extraction of rock from an open pit site
RECLAMATION	-	Operations which are associated with the winning and working of minerals and which are designed to return the area to an acceptable environmental condition, whether for the resumption of former land-use or for a new use. Reclamation includes both restoration and aftercare as defined under the Town and Country Planning Act 1990 [MPG7]
RECYCLING	-	The reprocessing of waste either into the same product or a different one
RECOVERY	-	Value can be recovered from waste by recovering materials through recycling, composting or recovery of energy
REGIONAL GUIDELINES	-	These are guidelines found in Annex A of MPG6. They indicate how provision for the supply of aggregates should be made in each region of England to meet anticipated needs to 2006
REGIONALLY IMPORTANT GEOLOGICAL & GEOMORPHOLOGICAL SITES (RIGS)	-	Designated sites of importance for educational and geological/geomorphological value within the region, designated by the Gloucestershire Geo-Conservation Trust
REGIONAL SPATIAL STRATEGY (RSS)	-	A strategy for how a region should look in 15 to 20 years time and possibly longer. The Regional Spatial Strategy identifies the scale and distribution of new housing in the region, indicates areas for regeneration, expansion or sub-regional planning and specifies priorities for the environment, transport, infrastructure, economic development, agriculture, minerals and waste treatment and disposal. Most former Regional Planning Guidance is now considered RSS and forms part of the development plan. Regional Spatial Strategies are prepared by Regional Planning Bodies
RESERVES	-	Geological deposits which are the subject of valid planning permissions for extraction
RESOURCES	-	Geological deposits where economically workable minerals may prove to be present but remain as areas without planning permission

RESTORATION	-	The treatment of an area after operations for the winning and working of minerals have been completed by the spreading of any or all of the following:- topsoil, subsoil and soil making material [MPG7]
REVIEW OF OLD MINERALS PLANNING PERMSSIONS (ROMP)	-	Review of Mineral Planning Permission under Section 96 of the Environment Act 1995. MPAs are required to undertake a 'rolling' review of all existing planning permissions for winning and working of minerals or the deposition of mineral waste. This provides for the updating of planning conditions and old planning permissions
SCHEDULED ANCIENT MONUMENT (SAM)	-	Designated site of national archaeological importance, which appears on the Schedule of Ancient Monuments register compiled by the Secretary of State for Culture, Media and Sport (CMS)
SECONDARY AGGREGATE	-	Other materials usable as aggregate, which are the by-products of quarrying and mining and industrial processes [e.g. colliery waste or minestone, blastfurnace slag, power station ash, china clay sand, slate waste, demolition and construction wastes including road planings, but excluding chalk and clay/shale worked primarily for aggregate purposes] [DETR]
SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI)	-	Designated by English Nature under the provision of the Wildlife and Countryside Act 1981 to protect flora, fauna, geological or physiographical features. All sites of national or international nature conservation interest are notified as SSSIs [PPG 9]
SOUTH WEST REGIONAL AGGREGATE WORKING PARTY (SWRAWP)	-	One of ten Regional Aggregates Working Parties [RAWPs] in England and Wales that provide advice to the Secretary of State in relation to the supply of, and demand for, aggregate minerals. They were established in the early 1970s to identify and consider likely problems in the supply of aggregate minerals Each RAWP is chaired by a County Planning Officer or the equivalent, and draws members from the MPAs, the aggregates industry [by representation from the trade federation, Quarry Products Association], and the Department of the Environment/Welsh Office, along with the Department's regional offices, other Government bodies, e.g. MAFF, and other appropriate interested parties [MPG6]
STATEMENT OF COMMUNITY INVOLVEMENT (SCI)	-	The County Council must produce a local development document, which sets out how and when the community can get involved in the preparation of DPDs. It should also set out the LPA's vision and strategy for community involvement, how this links to other initiatives such as the community strategy, and how the results will feed into DPD preparation. The SCI be subject to independent examination
STERILISATION	-	Development on or near mineral bearing land that prevents the mineral resource from being worked.
STRUCTURE PLAN	-	Structure Plans set out the broad framework for planning at the local level and provide a strategic policy framework for planning and development control locally, ensuring provision for development is realistic and consistent with national and regional guidance. Structure Plans should secure consistency between local plans for neighbouring areas [PPG 12] Under the new planning system set out within the Planning and Compulsory Purchase Act 2004, the function of the Structure Plan has been subsumed within the regional planning function and now forms part of the Regional Spatial Strategy
SUPPLEMENTARY PLANNING DOCUMENT (SPD)	-	Policy guidance to supplement the policies and proposals in development plan documents. They will not form part of the development plan or be subject to independent examination. (Formally known as Supplementary Planning Guidance SPG)
SUSTAINABLE DEVELOPMENT	-	General: Sustainable Development is development which meets the needs of the present generation without compromising the ability of future generations to met their own needs.....[Bruntland 1987]. In the context of the MLP - "In Gloucestershire sustainable development is about the regulation of human behaviour in order to control the use of natural resources, ensure the protection and enhancement of the environment including amenity and maintain biodiversity" [Minerals Local Plan Policy Panel -21st February, 1996].
WASTE	-	Waste is unwanted or undesired material left over after the completion of a process. "Waste" is a human concept: in natural processes there is no waste, only inert end products
WASTE COLLECTION AUTHORITY (WCA)	-	A local authority that has a duty to collect household waste. They also have a duty to collect commercial waste if requested to do so and may also collect industrial waste. (The waste collection authority may differ from the waste disposal authority)
WASTE DISPOSAL AUTHORITY (WDA)	-	A local authority responsible for managing the waste collected by the collection authorities and the provision of household waste recovery centres
WASTE LOCAL PLAN (WLP)	-	A statutory development plan prepared (or saved) by the waste planning authority under transitional arrangements, setting out polices in relation to waste management and related developments
WASTE TRANSFER STATION (WTS)		A site to which waste is delivered for sorting or baling prior to transfer to another place for recycling, treatment or disposal
WASTE HIERARCHY	-	Hierarchical ranking of waste management options based on their relative environmental benefits, reduction, re-use, recovery, disposal

WRITTEN REPRESENTATIONS	-	A procedure by which representations on planning appeals, development plans and Development Plan Documents can be dealt with without the need for a full public inquiry or informal hearing

APPENDIX B: Minerals Sites in Gloucestershire (2004 – 2005)

QUATERNARY DRIFT DEPOSITS – *'Sand & Gravel' Aggregate*

QUARRY NAME	OPERATOR / OWNER	LOCATION *(Grid Reference)*	OPERATING STATUS	DISTRICT AREA
BISHOPS CLEEVE	Huntsmans Quarries Ltd	394600, 227200	Active	Tewksbury
BROMSBERROW (NORTH)	Allstones Trading Co. Ltd	373855, 233050	Active	Forest of Dean
CERNEY WICK	Hills Minerals & Waste Ltd	407650, 195300	Inactive	Cotswold
COTSWOLD COMMUNITY	Hills Minerals & Waste Ltd	403160, 196210	Active	Cotswold/North Wiltshire
HORCOTT PIT	Hansons Aggregates	414750, 199680	Active	Cotswold
MANOR FARM	Aggregate Industries UK Ltd	417105, 197650	Active	Cotswold
NETHERHILLS	Moreton C. Cullimore (Gravels) ltd	376500, 206800	Active	Stroud
OAKTREE FIELDS	Hills Minerals & Waste Ltd	406460, 195795	Inactive	Cotswold
SHORNCOTE	Hills Minerals & Waste Ltd	403070, 196885	Active	Cotswold
SHOWBOROUGH COMMON	Unknown	390790, 238400	Inactive	Tewkesbury
SPATSGATE LANE	Glos. Sand & Gravel Co.	402395, 195830	Active	Cotswold
STUBBS FARM	Earthline Ltd	416700, 196825	Active	Cotswold
THORNHILL FARM	Hanson Aggregates	418120, 199280	Active	Cotswold
L FARM	Hanson Aggregates	418120, 199280	Active	Cotswold

JURASSIC LIMESTONES – *'Crushed Rock' Aggregate & Non-aggregate uses (incl. Natural Building Stone)*

QUARRY NAME	OPERATOR / OWNER	LOCATION *(Grid Reference)*	OPERATING STATUS	DISTRICT AREA
BROCKHILL	Cotswold Stone Quarries	413520, 223835	Active	Cotswold
COTSWOLD COMMUNITY	Hills Minerals & Waste Ltd	403160, 196210	Active	Cotswold/North Wiltshire
COTSWOLD HILL	Cotswold Hill Stone & Masonry Ltd	408180, 229150	Active	Cotswold
DAGLINGWORTH	Hanson Aggregates	400050, 206160	Active	Cotswold
FARMINGTON	Farmington Natural Stone	413200, 216840	Active	Cotswold
GRANGE HILL	The Natural Stone Market	411490, 224420	Active	Cotswold
GUITING	Hanson Aggregates	407950, 217900	Active	Cotswold
HAPPYLANDS	Oil Tank Supplies	412920, 235880	Inactive	Cotswold
HORNSLEASOW	Huntsmans Quarries Ltd	413145, 232250	Inactive	Cotswold
HUNTSMANS	Huntsmans Quarries Ltd	411910, 225445	Active	Cotswold
OATHILL	Corpus Christi College	410260, 228920	Active	Cotswold
OXLEAZE FARM	Cotswold Building Stone Ltd	405640, 222620	Active	Tewkesbury

PARK FARM (AMPNEY CRUCIS)	Cotswold Stone & Tile Ltd	406020, 203440	Inactive	Cotswold
PRESTON FOLLY	Duchy of Cornwall	390610, 195295	Inactive	Cotswold
SHENBERROW	Huntsmans Quarries Ltd	408245, 233900	Inactive	Cotswold

JURASSIC LIMESTONES CONT. – *'Crushed Rock' Aggregate & Non-aggregate uses (incl. Natural Building Stone)*

SOUNDBOROUGH	Mr Wills/Priory Construction Ltd	405235, 221600	Active	Cotswold
STANLEYS	Stanley's Quarry	414980, 236250	Active	Cotswold
SWELLWOLD	Cotswold Stone Quarries	414820, 226790	Active	Cotswold
SYREFORD	Cotswold Stone Quarries	402500, 220630	Active	Cotswold
THREE GATES	Huntsmans Quarries Ltd	408100, 229480	Inactive	Cotswold
TINKERS BARN	Cotswold Stone Quarries	411315, 225880	Active	Cotswold
VEIZEYS	Stone Supplies (southern)	388140, 194440	Active	Cotswold
WESTINGTON	Atlas Stone Products Ltd	413990, 236730	Inactive	Cotswold

CARBONIFEROUS LIMESTONES – *'Crushed Rock' Aggregate & Non-aggregate uses (incl. Natural Building Stone)*

QUARRY NAME	OPERATOR / OWNER	LOCATION *(Grid Reference)*	OPERATING STATUS	DISTRICT AREA
DRYBROOK	Hanson Aggregates	364010, 217900	Active	Forest of Dean
PERSERVERANCE	Forest Enterprises	365125, 211165	Inactive	Forest of Dean
ROGERS	Tarmac (Western) Ltd	355870, 211170	Inactive	Forest of Dean
SHAKEMANTLE	Mr & Mrs Waters	365320, 211355	Inactive	Forest of Dean
STOWEHILL/CLEARWELL	Clearwell Quarries Ltd	356500, 206500	Active	Forest of Dean
STOWFIELD	Tarmac (Western) Ltd	355500, 211175	Active	Forest of Dean

CARBONIFEROUS & JURASSIC CLAYS – *Various non-aggregate uses*

QUARRY NAME	OPERATOR / OWNER	LOCATION *(Grid Reference)*	OPERATING STATUS	DISTRICT AREA
BROADMOOR BRICKWORKS	Broadmoor Brickworks Ltd	265250, 215250	Active	Forest of Dean
ROYAL F.O.D BRICKWORKS (HAWKWELL GREEN)	Coleford Brick & Tile Co Ltd	364490, 215270	Active	Forest of Dean
WELLACRE	Northcot Brick Ltd	418040, 237030	Active	Cotswold

DEVONIAN, CARBONIFEROUS & PERMIAN SANDSTONES – *Non-aggregate uses (incl. Natural Building Stone)*

QUARRY NAME	OPERATOR / OWNER	LOCATION *(Grid Reference)*	OPERATING STATUS	DISTRICT AREA
ASTONBRIDGE	Mr E. S Morris	362047, 215873	Inactive	Forest of Dean
BIRCH HILL	Mr Martin	359655, 208625	Active	Forest of Dean
BIXHEAD/BARNHILL	Forest Enterprises	359710, 210890	Active	Forest of Dean
COPES STONE	Mr Bull & Forest Enterprises	365570, 207490	Active	Forest of Dean
GREAT BERRY	Wilderness (Haulage) Ltd	361655, 215055	Inactive	Forest of Dean

MEEZY HURST	Forest Enterprises	364120, 208950	Inactive	Forest of Dean
MINETRAIN	Mr Tainton	360150, 210120	Active	Forest of Dean
MONUMENT	Mr M. Bradley	360100, 209900	Inactive	Forest of Dean
DEVONIAN, CARBONIFEROUS & PERMIAN SANDSTONES CONT. – *Non-aggregate uses (incl. Natural Building Stone)*				
NAILBRIDGE	Wilderness (Haulage) Ltd	364460, 216160	Inactive	Forest of Dean
PUDDLEBROOK	Forest Enterprises	364630, 218275	Inactive	Forest of Dean
OLD FLOUR MILLS	Mr. G.E Morgan	360500, 206670	Inactive	Forest of Dean
WILDERNESS	Wilderness (Haulage) Ltd	367185, 218700	Active	Forest of Dean
WIMBERRY	Forest Enterprises	359415, 212115	Inactive	Forest of Dean

APPENDIX C: Waste Facilities in Gloucestershire (2004 – 2005)

MATERIALS RECYCLING / RECOVERY & TREATMENT FACILITIES

SITE NAME / ADDRESS	OPERATOR	DISTRICT
Myers Road, Gloucester	Allstone Sands & Gravels Aggregates Trading Company Ltd	Gloucester City
Monk Meadow Dock, Gloucester	Complete Utilities Ltd	Gloucester
Huntsmans Quarry, Buckle Street, Naunton	Huntsmans Quarries Ltd	Cotswold
Unit 46a Harbour Lane Industrial Estate, Lydney	Hemmings Waste Management Ltd	Forest of Dean
Unit 48 Lydney Industrial Estate, Lydney	Lydney Sand and Gravels Ltd	Forest of Dean
Netherhills Transport Depot, Fromebridge	Moreton C Cullimore Ltd	Stroud
Moreton Valence, Near Whitminster	Smiths (Gloucester) Ltd	Stroud
Babdown Airfield, Tetbury	Valley Trading Limited	Cotswold

COMPOSTING FACILITIES

SITE NAME / ADDRESS	OPERATOR	DISTRICT
Welsh Way Treatment	Agricultural Supply Co (Fairford) Ltd	Cotswold
Birwood Villa Farm, Huntley	A G King	Forest of Dean
Rose Hill Farm, Dymock	Cory Environmental (Glos.) Ltd	Forest of Dean
Fretheme, Near Saul	Fretheme Nurseries	Stroud
Thistledown Farm, Tinkley Lane, Hypsfield	John Rhodes	Stroud
Dawn Field, Blakeney	Ms Rebekah Hoyland	Forest of Dean
Bradley Farm, Wotton-Under- Edge	Tree Management Ltd	Stroud

END-OF-LIFE VEHICLE DISMANTLING & METAL RECYCLING FACILITIES

SITE NAME / ADDRESS	OPERATOR	DISTRICT
Ashville Works, Bristol Road, Gloucester	Avon Metals	Gloucester City
Bladchall, Berkeley Road, Berkeley	B A J Reece & Stubbs	Stroud
Downwood Mill, Stroud	B&K Dismantlers	Stroud
Hayricks Wharf, Tewkesbury Road	Burke Brothers (Cheltenham) Ltd	Cheltenham
Withylade Estate, Highleadon	Caps UK Ltd	Forest of Dean
232a Bristol Road, Gloucester	Cleave Motor Salvage	Gloucester City
Empire House, Empire Way, Gloucester	CMS Group Ltd	Gloucester City
Byard Road, Gloucester	Coopers (Metals) Ltd	Gloucester City
Eastern Ave, Gloucester	City Auto Salvage	Gloucester City
Berkeley Road, Dursley	Dursley Auto Dismantlers	Stroud
Sharprness Docks, Berkeley	E L G Haniel Metals Ltd	Stroud

END-OF-LIFE VEHICLE DISMANTLING & METAL RECYCLING FACILITIES *CONT.*

SITE NAME / ADDRESS	OPERATOR	DISTRICT
Broadmoor Road, Cinderford	FAB Recycling Ltd	Forest of Dean
Forest Vale Industrial Estate, Cinderford	Forest Auto Salvage	Forest of Dean
Unit G2, High Orchard Road, Gloucester	Gloucester Motor Spares	Gloucester City
Abbey Works, Hempsted Lane, Gloucester	Hayes Metals	Gloucester City
Golden Valley, Gloucester Road	Henry Raymond Buckland	Tewkesbury
Hawkwell Green, Cinderford	J Woodward Autospares	Forest of Dean
91 Ryecroft Street, Gloucester	Jessop Motors Vehicle Dismantler	Gloucester City
Eastern Ave, Gloucester	Jim's Auto Parts	Gloucester City
Cambridge Mills, Cambridge	John Keedwell	Stroud
Eastern Ave, Gloucester	JC Autos	Gloucester City
Forest Vale Industrial Estate, Cinderford	M F Freeman Ltd	Forest of Dean
Ryecroft Industrial Estate, Stonehouse	M, MS, MT, MP Burford	Stroud
Evesham Road, Bishop's Cleeve	Mitchell Vehicle Dismantling	Tewkesbury
Bath Road Farm, Nympsfield	M & N Motor Services	Stroud
Unit 8, Broadway Trading Estate, South Cerney	Never Despair Breakers	Cotswold
Springhill Industrial Estate, Moreton-in-Marsh	Oil Tank Supplies	Cotswold
7 Parliament Street, Stroud	Osbornes	Stroud
Unit 1, Ward Industrial Estate, Lydney	P S W Metals	Forest of Dean
160b Barton Street, Gloucester	R & B Middleton	Gloucester City
Chase Lane, Gloucester	South West Salvage	Gloucester City
Unit 7 & 48, Forest Vale Industrial Estate, Cinderford	Simms Metal UK Ltd	Forest of Dean
Tewkesbury Road, Twigworth	Twigworth Breakers Ltd	Tewkesbury
Old Brick Works, Stonehouse	Whittakers	Stroud
Central Engineering Works, Lydbrook	Wyeside Spares	Forest of Dean

HOUSEHOLD RECYCLING CENTRES (HRC's)

SITE NAME / ADDRESS	OPERATOR	DISTRICT
Fosse Cross, Calmsden	Cory Environmental (Glos.) Ltd	Cotswold
Pyke Quarry, Nr. Horsley	Cory Environmental (Glos.) Ltd	Cotswold
Swindon Road, Cheltenham	Cheltenham Borough Council	Cheltenham
Oak Quarry, Coleford	Cory Environmental (Glos.) Ltd	Forest of Dean
Sudmeadow, Hempsted	Cory Environmental (Glos.) Ltd	Gloucester City
Wingmoor Farm, Bishop's Cleeve	Cory Environmental (Glos.) Ltd	Tewkesbury

WASTE TRANSFER STATIONS - *including all household, commercial & industrial, special / hazardous and clinical wastes*

SITE NAME / ADDRESS	OPERATOR	DISTRICT
Myers Road, Gloucester	Allstone Sands & Gravels Aggregates Trading Company Ltd	Gloucester City
Bourton Industrial Park, Bourton on the Water	Aztec Phoenix Ltd	Cotswold
Former Coal Wharf, Hawkwell, Drybrook	Bell Waste	Forest of Dean
Canal Works, Harbour Lane, Lydney	Bendalls of Lydney	Forest of Dean
Elliot Road, Cirencester	Cory Environmental (Glos.) Ltd	Cotswold
Phoenix House, Stoke Road, Elmstone Hardwicke	Cory Environmental (Glos.) Ltd	Tewkesbury
Wingmoor Farm, Stoke Road, Stoke Orchard	Cory Environmental (Glos.) Ltd	Tewkesbury
Stubbs Farm, Kempsford	Earthline Ltd	Cotswold
Valley Road, Cinderford	Englehard Industries Ltd	Forest of Dean
Eastern Ave. Depot, Gloucester	Gloucester City Council	Gloucester City
Great Western Road, Gloucester	Gloucestershire Royal Hospital	Gloucester City
Unit 46a Harbour Lane Industrial Estate, Lydney	Hemmings Waste Management Ltd	Forest of Dean
Buckle Street, Honeybourne, Evesham	HT Waste Recycling Ltd	Cotswold
Hempsted Lane, Gloucester	Keyway (Gloucester) Ltd	Gloucester City
7 Honeyborne Road, Evesham	MPH Europe Ltd	Cotswold
Ham Villa, Charlton Kings	Mr B Stevens & Mr R Stevens	Cheltenham
Old Quarry Works, Chedworth	Mr Richens & Mr Wright	Cotswold
Sharpness Docks, Berkeley	Plasmega (Sharpness) Ltd	Stroud
Banfurlong Depot, Golden Valley, Gloucester Road	Ringway Highway Services Ltd	Tewkesbury
Cannop Depot, Vallets Wood, Cannop	Ringway Highway Services Ltd	Forest of Dean
Moreton Valence, Near Whitminister	Smith's (Gloucester) Ltd	Stroud
Newtown Industrial Estate, Northway Lane, Tewkesbury	Smith's (Gloucester) Ltd	Tewkesbury
Abbey Road, Hempsted	Speedy Skips	Gloucester City
Lower Lode Depot, Lower Lode Lane	Tewkesbury Borough Council	Tewkesbury
The Old Post Office, Newport	Tony's Skip Hire Recycling & Waste Management Ltd	Stroud
Old Station Yard, Chalford	Valley Trading	Stroud
Shannon Place, Shannon Way, Ashchurch	Vetspeed Ltd	Tewkesbury
E A J Davis, Monkmeadow, Hempsted	West Oils	Gloucester City
Wilderness Quarry, Mitcheldean	Wilderness (Haulage) Ltd	Forest of Dean

SPECIAL / HAZARDOUS WASTE TREATMENT FACILITIES

SITE NAME / ADDRESS	OPERATOR	DISTRICT AREA
Wingmoor Farm, Stoke Road, Bishop's Cleeve	Grundon Waste Management Ltd	Tewkesbury

INCINERATORS

SITE NAME / ADDRESS	OPERATOR	DISTRICT AREA
Cricklade Road, Cirencester	Fosse Dogotel & Cattery	Cotswold
Limekiln Farm, Middle Lypiatt	Andrew & Caroline Uys	Stroud
Foss Cross Industrial Estate, Calmsden	Mr G Jackson	Cotswold

NON – HAZARDOUS BIO-DEGRADABLE LANDFILL

SITE NAME / ADDRESS	OPERATOR	DISTRICT AREA
Sudmeadow, Hempsted, Gloucester	Cory Environmental (Glos.) Ltd	Gloucester
Wingmoor Farm, Stoke Road, Bishop's Cleeve	Cory Environmental (Glos.) Ltd	Tewkesbury
Perry Way, Frampton-on-Severn	Hales Waste Control Ltd	Stroud
Wingmoor Farm, Stoke Road, Bishop's Cleeve	Grundon Waste Management Ltd	Tewkesbury
Westonbirt School, Tetbury	Westonbirt School	Cotswold

NON – HAZARDOUS INERT LANDFILL

SITE NAME / ADDRESS	OPERATOR	DISTRICT AREA
Nympsfield, Stroud	A R Smith	Stroud
Whitehouse Farm, Sling, Coleford	Clays Wood Reclamation	Forest of Dean
Ebley, Stroud	Cotswold Canal Trust	Stroud
Little Washbourne, Tewkesbury	Enterprise Inns Plc	Tewkesbury
Tutnalls, Lydney	Federal Mogul	Forest of Dean
Sling, Coleford	Fred Watkins Engineering Ltd	Forest of Dean
Plummers Farm, Naas Lane, Lydney	G Liddington	Forest of Dean
Perry Way, Frampton-on-Severn	Hales Waste Control Ltd	Stroud
Showborough Common, Twyning	Twyning Parish Council	Tewkesbury
Cotstone Quarry, Saintsbury	W R Haines	Cotswold

HAZARDOUS LANDFILL

SITE NAME / ADDRESS	OPERATOR	DISTRICT AREA
Wingmoor Farm, Stoke Road, Bishop's Cleeve	Grundon Waste Management Ltd	Tewkesbury

APPENDIX D: **Key Monitoring Stakeholders for AMR preparation**

The following organisations have been catergorised as key monitoring stakeholders for the purposes of the AMR. A draft copy of the AMR was made available to each of these organisations for consultation during late November / early December 2005. Information that has been collected and, or will be collected in the future, is likely to be dependant upon continued close working and partnership between each of these organisations and Gloucestershire County Council : -

- Cheltenham Borough Council
- Cotswold District Council
- Countryside Agency
- Environment Agency
- English Heritage
- English Nature
- Forest of Dean District Council
- Gloucester City Council
- Government Office for the South West (GOSW)
- Highways Agency
- South West Regional Assembly (SWRA)
- Stroud District Council
- Tewkesbury Borough Council