

# Local Geodiversity Action Plans: A review of progress in England



**Natural England Research Report NERR027**

# **Local Geodiversity Action Plans: A review of progress in England**

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# Project details

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This report results from research commissioned by Natural England in order to review the current status and format of 23 Local Geodiversity Action Plans; to evaluate their achievements and benefits; and to identify what should happen next to assist LGAP development. The work was undertaken under Natural England contract SAE03-02-076 by the following team: David Haffey, Countrywise Consultants Ltd.

A summary of the findings covered by this report, as well as Natural England's views on this research, can be found within Natural England Research Information Note RIN027 – Local Geodiversity Action Plans: A review of progress in England.

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# Summary

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Local Geodiversity Action Plans (LGAPs) set out actions to conserve and enhance the geodiversity (the variety of rocks, fossils, minerals, soils, landforms and processes which form the landscape) of a particular area. The concept of LGAPs was developed from the Biodiversity Action Plan model and has now been adopted across the UK as a mechanism for the delivery of geoconservation. LGAPs provide a structured approach to local geoconservation delivery and aim to raise awareness and appreciation of geological sites and geoconservation.

23 LGAPs have been launched, focusing upon county or other administrative areas. Company Geodiversity Action Plans (cGAPs) are also being developed for company land-holdings, with the initial focus on the aggregates industry.

## Methodology

The purpose of this study was to review the current status and format of these LGAPs; to evaluate their achievements and benefits; and to identify what should happen next to assist LGAP development.

Background information for this research was obtained from two sources: published LGAPs and a questionnaire survey of the organisations/individuals responsible for the production and/or implementation of each LGAP. The questionnaire surveys were undertaken via telephone interviews covering a list of questions previously sent by e-mail to each interviewee.

## Results

A total of 41 LGAPs were identified and investigated. These comprised 23 launched LGAPs, 14 LGAPs in the process of development, and 4 proposed LGAPs. The majority of launched LGAPs were published over the four year period 2004 to 2007. A further six of those in development are planned for launch in 2008.

The results of this survey show that:

- LGAPs are widely seen to be a very effective mechanism for raising the profile of geodiversity with public, private and voluntary sector organisations, especially local authorities and the minerals industry, and in creating a structured approach to the delivery of geoconservation at the local level.
- A broad understanding of the geology of the LGAP area needs to exist, or be acquired, before an LGAP can be developed. Additional information can then be acquired in future years, as resources allow, and incorporated in any review of the LGAP. There is no evidence to suggest that an audit is required prior to the production of an LGAP.
- The purpose of LGAPs is to promote geodiversity and geoconservation to a wide, and sometimes inexperienced audience, especially within the public sector. If LGAPs are to be effective, they should be pitched at a level that takes account of the geological knowledge of this audience and presented in a way that can capture peoples' imagination and interest.
- Funding has been made available from a variety of sources to facilitate the production of LGAPs but it is becoming apparent that there is often a lack of resources for implementation, impacting both on budgets for specific projects and on the availability of staff time to manage the delivery process.

- Some local authorities in Devon have developed an integrated biodiversity and geodiversity action plan on the grounds this is a more intuitive approach and better reflects the interdependence between biodiversity and geodiversity interests. A down-side of such an approach is that it may lead to geodiversity issues being subsumed within a more high profile biodiversity agenda and being allocated an inadequate share of resources.

Local Geodiversity Action Plans have been launched, or are in the process of development, across many parts of England. They are widely seen as being a very effective mechanism for raising the profile of geoconservation and promoting a structured partnership approach to the protection, management and interpretation of geological features. Key problems relate to LGAP implementation, rather than production and launch, and in some cases, these are leading to disillusionment and reduced motivation. Specific concerns raised in the questionnaire responses are:

- A lack of funding and constraints on the time that people are able to devote to LGAP delivery.
- A heavy reliance on the voluntary sector and, in some areas, a lack of commitment from local authorities and other public sector bodies.
- A perceived decline in the priority that Natural England accords, at a corporate level, to its geodiversity responsibilities.

## Conclusions

Given the widespread support for the concept of LGAPs, they clearly have the potential to play an important future role in promoting and delivering geoconservation. If this potential is to be fully realised it is important for Natural England, working in close collaboration with partner organisations, to address some of the outstanding issues that are hindering progress. Specific actions could include:

- Reaching agreement with partners on the role that each should play in the development and implementation of LGAPs - this applies especially to the BGS, local authorities, local geoconservation organisations (for example RIGS Groups, Geology Trusts and geological societies), and Wildlife Trusts.
- Seeking to achieve greater coordination and integration between LGAPs and company GAPs.
- Seeking to achieve greater parity between geoconservation and biodiversity conservation, consistent with the Natural Environment and Rural Communities Act (HM Government, 2006) and Planning Policy Statement 9 (ODPM, 2005).
- Looking at ways in which LGAP partnerships might engage more closely with BAP partnerships with a view to evolving a closer or more integrated relationship that benefits both biodiversity conservation and geoconservation.
- Providing updated guidance on LGAP development and implementation.
- Establishing a consistent approach to LGAP monitoring to clearly measure progress. This is critical to demonstrating both the success and challenges faced by LGAPs and how they are making a difference.

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# 1 Introduction

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## Background

- 1.1 The concept of 'Action Plans' to guide policy and practice in environmental conservation first achieved global prominence in 1992 when over 150 heads of state and governments signed the Convention on Biological Diversity at the United Nations Conference on Environment and Development in Rio de Janeiro. Two years later, in January 1994, the UK Government produced the seminal document Biodiversity: The UK Action Plan (HM Government, 1994) which, by its own admission, was seen as a plan that would "take a lead and establish a framework" but would depend on "all of us" taking action if it was to succeed in its goal. Over the intervening thirteen years many organisations have followed this lead, with the production of Local Biodiversity Action Plans to guide and promote conservation activity at the local level. In the Biodiversity Strategy for England: Working with the Grain of Nature (Defra, 2003) stated that, at that time, over 400 species and habitat recovery plans and about 100 local biodiversity action plans had been produced.
- 1.2 In 2001, English Nature commissioned research by Cynthia Burek and Jac Potter at University College, Chester (Burek & Potter, 2004) into the feasibility of adapting the established biodiversity action planning process to the related field of geodiversity. The concept of Local Geodiversity Action Plans (LGAPs) flowed from this model and has now been widely adopted across the UK as a mechanism to support the delivery of geoconservation. Although geodiversity issues had been incorporated in a small number of biodiversity strategies published in the late 1990s, for example in Devon, work on the first free-standing LGAP, covering the Cheshire region, commenced in 2002, with the launch in September 2003. By this time, work had commenced on a number of other LGAPs (for example, Lancashire, Leicestershire and Rutland, North Pennines AONB, Tees Valley) and a workshop was convened by English Nature to review progress and identify some principles of good practice (Burek & Potter, 2004). Also, English Nature published a summary good practice guide (English Nature, 2004) and developed an LGAP website<sup>1</sup> to encourage LGAP development and to assist those embarking on the process. Summaries of the developing LGAP process can be found in Burek and Potter (2002) and in Larwood (2005).
- 1.3 LGAPs and geoconservation have increasingly been recognised in government guidance and policy documents. Planning Policy Statement 9 (ODPM, 2005) gave greater recognition to geological conservation and its supplementary guidance, Planning for Biodiversity and Geological Conservation: A Guide to Good Practice (ODPM, 2006) recommends an LGAP as "a framework upon which to audit, conserve, manage and promote characteristic geological, geomorphological and soils resources within a particular region or local authority area". In Local Sites Guidance on their Identification, Selection and Management (Defra, 2006) and most recently, as part of the biodiversity indicator for Local Authorities, in National Indicators for Local Authorities and Local Authority Partnerships: Handbook of Definitions (DCLG, 2008) LGAPs are highlighted as a mechanism for the delivery and promotion of geoconservation.
- 1.4 To date, 23 LGAPs have been formally launched, with direct financial assistance from Natural England (English Nature) and often through the Aggregates Levy Sustainability Fund (English Nature / Natural England and the Minerals Industry Research Organisation [MIRO]). A further 18 LGAPs are in the process of development or are planned. Alongside this, a small number of

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<sup>1</sup> URL: [www.english-nature.org.uk/Special/geological/lgap/lgap3.htm](http://www.english-nature.org.uk/Special/geological/lgap/lgap3.htm)

quarry and aggregate companies have made progress in developing GAPs, either at a corporate level and/or for individual sites.

## Project brief

- 1.5 The project brief for this study identified its aims as being “to review the current status of launched LGAPs and those in development in England”. More specifically, key tasks were:
- To examine the current state of known LGAPs (both launched and in development).
  - To carry out a quality assurance exercise in terms of the perceived relevance and value of the good practice guidance published by English Nature (English Nature, 2004).
  - To assess what has been delivered on the ground as a consequence of LGAPs.
  - To evaluate the benefits to an area of having an LGAP.
  - To identify what should happen next to aid LGAP development.
- 1.6 Consistent with these aims, the project brief also listed a set of questions to which the research should find answers; namely:
- The current state of known LGAPs - where are they and what stage are they at in development and delivery?
  - How well do launched LGAPs reflect the published guidance?
  - Who makes up the LGAP partnership? How diverse is the membership? Have the active partners changed since launch of the LGAP?
  - Which LGAPs have been reviewed/revised?
  - What LGAP actions have been delivered?
  - How is progress measured?
  - Has having an LGAP improved geological conservation in the area?
  - What are the benefits to having an LGAP?
  - What problems exist for LGAP delivery?

# 2 Methodology

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- 2.1 An inception meeting with Jonathan Larwood and Hannah Townley (the Project Officers) of Natural England was held on 9 October 2007. At this meeting it was agreed that the background information for this research study would be obtained from two principal sources:
- Published LGAPs - either downloaded off the internet or obtained as hard or electronic copies from the relevant organisations.
  - A questionnaire survey of the organisations/individuals responsible for the production and/or implementation of the LGAPs.
- 2.2 A preliminary list of LGAPs that Natural England understood to have been launched or to be in the process of development was included with the project brief. This included 31 LGAPs, plus a reference to the existence of an unknown number of company GAPs.
- 2.3 As a result of the research work completed as part of this study and following receipt of further guidance from Natural England staff, we have identified a total of 41 LGAPs<sup>2</sup> (excluding company GAPs) that have been launched, are in preparation, or are firm proposals.
- 2.4 Using the information provided by the Project Officers and through our own research we identified the organisations/individuals who are leading on the development and/or implementation of each LGAP and who therefore appeared to be the most appropriate contact point for further information and for completion of the questionnaire.
- 2.5 Following the inception meeting, a brief paper was prepared summarising the information that this research should seek to acquire. In the light of comments from the Project Officers, a draft was prepared of a questionnaire that would be circulated to the individuals/organisations responsible for the preparation/implementation of each LGAP. Two versions of this questionnaire were developed: one in respect of LGAPs that had been launched and one for LGAPs in development. These were circulated to the Project Steering Group<sup>3</sup> and, following receipt of comments, final drafts of the two questionnaires were prepared. Copies of both questionnaires are attached at Appendix 1 and 2.
- 2.6 Our preferred approach to completion of the questionnaire was that this should be done by telephone interview rather than by asking respondents to complete a hard/electronic copy. It was felt that this would have a number of advantages:
- It would generate better quality and more comprehensive answers.
  - It would allow more detailed questioning on specific issues of interest that arose during the interview.
  - It would increase the response rate.

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<sup>2</sup> Immediately prior to completion of this report we identified another LGAP - for the Dartmoor National Park. Unfortunately, it was too late to include this in the analysis

<sup>3</sup> The Project Steering Group comprised Jonathan Larwood & Hannah Townley (Natural England), Cynthia Burek (University of Chester, Cheshire RIGS and NEWRIGS), Keith Ambrose (BGS) and David Owen (Gloucestershire Geology Trust)

- 2.7 Initial telephone calls were made to each of the LGAP contacts to outline the aims and objectives of the study and to ask whether they would be prepared to participate in the questionnaire survey. No one refused.
- 2.8 A copy of the questionnaire was e-mailed to each contact in relation to LGAPs that have either been launched or are in preparation - with the appropriate version being sent according to the LGAP's current status. It was confirmed to each contact that there would be a one or two week delay before the telephone interview in order to give them time to give some prior thought to the questions raised.
- 2.9 Issues arising during the course of the questionnaire survey included the following:
- In a small number of cases (for example, Gloucestershire, Herefordshire and Worcestershire) it was found that one individual/organisation was the contact for more than one LGAP. We overcame this problem by completing a different questionnaire for each LGAP.
  - Occasionally, our initial contact suggested someone else as a more appropriate respondent to our questionnaire or as a source of additional information. So far as possible and practical, we followed up on these additional contacts.
  - Eleven respondents chose to respond via electronic completion of the questionnaire and e-mailing the response back. In all but three cases, we followed up on these e-mail returns with a phone call to clarify certain issues.
- 2.10 In the course of the survey a total of 41 people were contacted. The fact that this is the same as the number of LGAPs is coincidental in that in some cases, one contact provided us with information on a number of LGAPs (for example, Gloucestershire and Oxfordshire) and in others we contacted more than one person about a single LGAP.
- 2.11 In early December 2007, a draft report was prepared, based upon the information that had been collected to date in relation to 39 LGAPs. This was submitted to the Project Steering Group and was discussed at a meeting on 10 December 2007. Information has since been collected on a further two LGAPs (bringing the total to 41) and data on other LGAPs has been supplemented through follow-up contacts with some of the questionnaire respondents and partner organisations. At the request of the Steering Group, some background information has now also been collected in relation to company GAPs.
- 2.12 The findings and conclusions of this study are presented below in Sections three to nine of this report and are based upon both the analysis of the responses to the questionnaire and evaluation of the published LGAPs. For ease of presentation, the issues addressed in these seven sections are structured in the same sequence as they appear in the questionnaire.

# 3 Status of Geodiversity Action Plans

## Local Geodiversity Action Plans

3.1 The research showed that there are 41 existing or proposed LGAPs in England (excluding those produced by private minerals operators and quarry companies - Sections 3.6 - 3.9). These comprise:

- 23 LGAPs launched
- 14 LGAPs in the process of development
- 4 proposed LGAPs.

3.2 Appendix 3 (Table A) describes the current status of each LGAP. This information is summarised in Table 1.

**Table 1** Summary of status of LGAPs in England

LGAP	Launched, in development or proposed	Date launched (launch expected)	Reviewed
Abberley & Malvern Hills Geopark - May Hill	Launched	2005	✗
Abberley & Malvern Hills Geopark - Teme Valley	Launched	2005	✗
Abberley & Malvern Hills Geopark - S Shropshire	Launched	c.2005	✗
Black Country	Launched	2006	✗
Cheshire region	Launched	2003	✓
Cornwall and Isles of Scilly	Launched	2005	✗
Derbyshire and Peak District	Proposed	N/A	-
Devon	Launched	1998	✓
Doncaster	In development	(2008)	-
Dorset	Launched	2005	✗
Durham	In development	(?)	-
Gloucestershire - Cotswolds	Launched	2005	✗
Gloucestershire - West (Forest of Dean)	In development	(2008)	-
Gloucestershire - Severn Vale	Proposed	N/A	-
Greater Manchester	In development	(?)	-
Halton Borough (Cheshire)	Launched	2005	✓

Table continued...

LGAP	Launched, in development or proposed	Date launched (launch expected)	Reviewed
Herefordshire	In development	(2008)	-
Isle of Wight	In development	(?)	-
Lake District National Park	Proposed	N/A	-
Lancashire	Launched	2004	×
Leicestershire and Rutland	Launched	2004	×
London	Proposed	N/A	-
Malvern Hills AONB - Castlemorton Common etc	Launched	2005	×
Norfolk	In development	(?)	-
North Pennines AONB	Launched	2004	×
Northumberland National Park	Launched	2007	×
North Wessex Downs AONB	In development	(?)	-
Oxfordshire - County	Launched	2002	×
Oxfordshire - Jurassic	Launched	2007	×
Sheffield	In development	2010	-
Shropshire	Launched	2007	×
Staffordshire	Launched	2004	×
Suffolk	In development	(2008)	-
Tees Valley	Launched	2003	×
Teignbridge (Devon)	Launched	2006	×
Torbay	Launched	2006	×
Greater Warwickshire	In development	(2008)	-
Worcestershire	In development	(?)	-
Yorkshire Dales	Launched	2007	×
Yorkshire - East	In development	(?)	-
Yorkshire - West	In development	(2008)	-

3.3 In some cases the definition of an LGAP being 'in development', or having been 'launched', was open to interpretation, depending on the process of approval or adoption by the organisation responsible for its production. For example:

- In County Durham, a comprehensive site audit was prepared by BGS and was published by Durham County Council in 2004. An 'Action Points Consultation Document' was also prepared but this has never been formally approved by the County Council and has not been published. Since an audit does not constitute an LGAP, the County Durham LGAP is classified in Table 1 and Appendix 3 (Table A) as still being 'in development'.
- A draft LGAP for the North Wessex Downs AONB was produced in 2007 by the Oxfordshire Geology Trust (OGT) with funding from the AONB. This document has been through a

comprehensive consultation process and has been sent out to a wide range of stakeholders. However, it has yet to be approved by the North Wessex Downs AONB Council of Partners and has therefore not been formally launched. In practice, however, this draft LGAP is being used as a working document. Again, since this LGAP has not been formally launched by the AONB, it is classified in Table 1 and Appendix 3 (Table A) as still being 'in development'.

- 3.4 Table 1 shows that the majority (20) of the 23 launched LGAPs were published over the four year period 2004 to 2007. A further six of those in development are planned for launch in 2008. Given that most LGAPs are therefore less than four years old, it is not surprising to find that only two have been formally reviewed, those of Devon and the Cheshire region (see Potter & Burek, 2006). In a few cases (for example Black Country, Halton Borough) the Action Plan component of the LGAP may be annually updated to reflect work carried out the previous year and to confirm priority projects for the year ahead according to the time and resources that will be available. We are of the view that this is more of an update than a formal review.
- 3.5 Many respondents to the questionnaire recognised the value of periodically reviewing their LGAP but had no firm plans to do so, commenting that the acquisition of funding would be the main constraint on undertaking such a task. Concerns were also expressed that, given the lack of progress in implementing existing LGAPs (due to constraints on funding and time), there was seen to be little purpose in reviewing them. Whilst the latter sentiment is understandable, it appears to miss the point that, in such circumstances, a review of an LGAP can:
- Be an effective way of demonstrating the lack of progress, and thereby encouraging a more critical examination of why this is happening, what (if anything) can be done about it, and whether targets etc need to be adjusted to reflect current realities.
  - Provide a framework for keeping track of activity and a useful benchmark which, in the longer term, can be used to measure changes in the rate of implementation.

## Company Geodiversity Action Plans

- 3.6 At the request of the Steering Group, background information was collected on the current status of 'company GAPs' (cGAPs): this is summarised in Appendix 3 (Table B). Contact was made with five of the major quarrying and aggregates companies who were represented on the Steering Group convened by Capita Symonds for the preparation of the good practice guide *Geodiversity Action Plans for Aggregate Companies* (Thompson and others, 2006): the companies concerned were Tarmac Ltd; Aggregate Industries; Lafarge Aggregates; Hanson Aggregates; and Smiths Bletchington.
- 3.7 A key document concerning company GAPs was the 2005 Memorandum of Understanding between the Quarry Products Association, the Silica and Moulding Sands Association and English Nature, which encouraged the production of company biodiversity and geodiversity action plans within five years<sup>4</sup>. The good practice guide produced by Capita Symonds is also seen as providing useful advice and guidance on the structure and content of cGAPs, their value to the company, and the process through which they can become an integral and affordable part of a company's business planning process.
- 3.8 To date, significant progress has been made by Tarmac Ltd, Aggregate Industries and Hanson Aggregates, with work focusing primarily on the production and implementation of cGAPs for individual quarry and aggregate sites. The range of work undertaken is quite impressive, including the development of access tracks and geological trials, installation of interpretation

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<sup>4</sup> Further information on this MoU can be found at URL: [www.mineralsandnature.org.uk/howforumworks.php](http://www.mineralsandnature.org.uk/howforumworks.php)

panels and viewing platforms, production of leaflets, retention/clearing of exposures for educational and interpretive use, the provision of fossil collecting sites, and the installation of 'boulder parks' and 'rock baskets' so that visitors can see different types of rocks from across the UK.

- 3.9 It is readily acknowledged by the companies that, alongside this wide range of public benefits, the production and implementation of cGAPs can be a very useful mechanism for enhancing their own public profile, for example in relation to the achievement of high environmental standards, the adoption of a sensitive approach to planning issues, promoting sustainable development and supporting local communities.

# 4 Use of English Nature good practice guidance

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- 4.1 In 2004 English Nature published and widely circulated a leaflet *Local Geodiversity Action Plans - Sharing Good Practice* (English Nature, 2004) with the aim of using the experience that had been gained in LGAP production to encourage their adoption more widely across the country and to establish some common principles for their development and implementation. The content of this guidance note focused on summarising the components of a successful LGAP and identifying five typical LGAP objectives. Details of the level of use of this guidance in LGAP production is presented in Appendix 3 (Table C), with key findings and conclusions being summarised below.
- 4.2 In three cases (Abberley & Malvern Hills Geopark - Teme Valley; Abberley & Malvern Hills Geopark - South Shropshire; Teignbridge) it was not possible to ascertain whether the Guidance had been used because the preparation of the LGAP had been carried out by staff who had since left the organisation.
- 4.3 In four cases (Derbyshire and Peak District; Gloucestershire - Severn Vale; Lake District National Park; London) the LGAP is still a proposal or at a very early a stage of development and so it is too soon for reference to have been made to the English Nature Guidance.
- 4.4 In eighteen cases the Guidance was not used, although in eight of these the Guidance had not been published at the time that the LGAP was being developed. Of the ten other cases in which the guidance was not used, four had simply not come across it at the time of LGAP preparation - although two of these thought that it offered useful and appropriate advice. Only in six cases (equating to five respondents) was the English Nature Guidance not followed as a matter of choice, primarily because respondents felt that it was not especially useful or appropriate, or they preferred to look at other LGAP examples in deciding upon the format that they wished to adopt for their own.
- 4.5 The English Nature Guidance was used in the remaining sixteen cases, with the prevailing view being that it offered useful and sound guidance on the overall format and structure of an LGAP and provided a framework on which individual LGAPs could be built. Comments by these respondents on gaps in the guidance (which might be remedied in a future revision of the document) included:
- Advice on the types of organisation that might be involved in developing an LGAP.
  - Suggested potential sources of funding for LGAP production and implementation.
  - Guidance on how LGAPs could be integrated with other plans and strategies and how they can be used to best effect to influence local planning authorities.
- 4.6 Several respondents commented that, in thinking about the format for their LGAP, they had found it useful to look at examples that had already been launched and published. This was seen as being especially useful in deciding upon the content and layout of the LGAP and the degree of detail that it should contain, especially in relation to the findings of any audit that had been carried out. Since existing LGAPs are likely to continue to provide useful reference material for authors of future LGAPs and Natural England might wish to facilitate such background research by prospective LGAP authors, we have listed in Appendix 3 (Table C) of this report the web addresses of all LGAPs that can be downloaded off the internet.
- 4.7 The comments of some respondents (but only a minority) in relation to Question 2 reflected on the point that, whilst they can see the value of English Nature/Natural England providing advice and guidance on LGAP production, they would be uneasy about Natural England seeking to

impose an 'official' format. In practice, the English Nature guidance clearly states that LGAPs should be "tailored to suit the variation of local geology" and should "therefore differ in detail", although they often "share a common approach and underpinning philosophy". Our research suggests that the great majority of launched LGAPs do broadly conform with this approach and philosophy but there are large variations in their format, degree of detail and style of presentation. Some key variables are outlined below:

- If resources of time and funding are limited, some LGAPs have been produced on the basis of existing RIGS information about local sites of geological importance (perhaps supplemented by limited re-survey) but without a full audit. In other cases, a very comprehensive audit has been carried prior to starting on the LGAP, whilst a third approach is to carry out the audit work and prepare the action plan concurrently.
- Linked to the above issue is the fact that some LGAPs are lengthy and extremely detailed (Cornwall & Isles of Scilly, North Pennines AONB, Northumberland National Park, Leicestershire and Rutland, Staffordshire) whilst others are brief and concise (Black Country, Cheshire region and Lancashire). This variation largely reflects the fact that the lengthier LGAPs tend to include a more detailed geological audit of the area. In contrast, the brief and concise LGAPs contain little such information or, in some cases (for example, Cheshire), include none at all.
- There are variations in the approach to consultation, with some organisations engaging with partners and stakeholders at a very early stage in LGAP production, whilst others prefer to wait until they have produced a draft document before consulting with other interested parties.
- As will be outlined in Section five of this report, there are significant variations both in the range of issues covered by LGAP aims and objectives and in the priority accorded to them. For example, the Devon, Dorset and Tees Valley LGAPs set out a relatively narrow range of objectives whilst those for Herefordshire, Shropshire and Suffolk tend to cover a far broader range of objectives.

# 5 LGAP objectives and priorities

- 5.1 Information on the objectives and priorities of each LGAP were obtained from two sources:
- A review of the content of each published LGAP.
  - The views of the organisation/individual that produced the LGAP, as elicited in the respondents' answer to Question 2b of the questionnaire.
- 5.2 We have been able to obtain copies of 31 LGAPs, comprising:
- 22 (of the 23) launched LGAPs (the only one that was unobtainable was Abberley and Malvern Hills Geopark: South Shropshire).
  - 9 (of the 14) LGAPs in preparation (available as drafts or consultation documents).
- 5.3 Through an initial scoping exercise of these 31 LGAPs, we identified a total of eleven broad objectives that collectively cover the full range of proposed action. A more detailed review of these LGAPs was then carried out to identify the key objectives listed within each. It should be stressed that this exercise only looked at the top tiers of aims and objectives and did not drill down into the more detailed levels since to do so would have meant that each LGAP could probably have 'ticked the box' for each objective through some minor reference contained within the text. The findings of this exercise are presented in Appendix 3 (Table E) and are summarised in Table 2 below.

**Table 2** LGAP key objectives and priorities (Information based on published LGAP)

Theme of objective	No. of LGAPs (out of the 31 studied) in which objective is listed
Audit (for example, sites, skills, resources), research & data storage	30
Awareness, appreciation & understanding	27
Geological conservation and enhancement	23
Information, education & life-long learning	21
Improved site management - through action or advice	19
Influencing policy etc.	19
Joint working & involvement	17
Geotourism	14
Monitoring and review	14
Financial and/or organisational sustainability to ensure delivery	11
Geopark and/or WHS priorities	8

- 5.4 To provide a comparison with this data, Question 2b of the questionnaire elicited the views of respondents on their own perceptions of their LGAP's principal objectives. The questionnaire sought to simplify this evaluation by using only the five 'typical' aims and objectives identified in

the English Nature guidance [that is, geodiversity audit; communication and education (including interpretation); influencing planning; conservation and management; and resources<sup>5</sup>] rather than the above eleven. Respondents were asked to ascribe a level of priority to each of these five objectives using a score of 1 to 5 where '1 = not important' and '5 = very important'. Unfortunately this question failed to work very well, primarily because respondents found it difficult to be so precise as to the importance of each of these five objectives. Instead respondents preferred to simply identify to which objective(s) they accorded highest priority. The findings of this exercise are presented in Appendix 3 (Table F) and are summarised in Table 3 below.

**Table 3** LGAP key objectives and priorities (Information based on questionnaire responses)

Objective <sup>1</sup>	No. of respondents identifying objective as being a priority (Sample of 29)
Geodiversity audit	20
Communication and education	25
Influencing planning	15
Conservation and management	14
Resources	11

<sup>1</sup> See Section 3 of this report for a more detailed definition of these five 'Objectives'

5.5 These two sets of results are broadly similar in that:

- Greatest priority is given to issues relating to audit/data recording and communication/education/information/interpretation.
- Moderate levels of priority are given to site management and conservation issues and to influencing planning.
- Least priority is given to issues linked to resources - although this may reflect the view of some authors that the need for adequate resources is self-evident rather than being an issue which needs to be explicitly stated within the LGAP.

5.6 The findings from this section of the questionnaire are also consistent with those from a recent survey of all geoconservation groups in England, Scotland and Wales by UKRIGS, The Geology Trusts and Natural England (The Geology Trusts & UK RIGS 2006). This survey found that the three primary objectives of these groups were:

- To identify, record and designate new RIGS sites.
- To promote the need for geological conservation and undertake practical site conservation work.
- To raise public awareness.

<sup>5</sup> The definition of these objectives used by English Nature in their 'Sharing Good Practice' guidance is detailed in the footnote of Table F

# 6 LGAP partnerships

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- 6.1 Consistent with our approach to the acquisition of information on LGAP objectives and priorities, we looked at the issue of LGAP partnerships from two angles:
- Information in the published LGAP.
  - The views of the organisation/individual that produced the LGAP, as elicited in the respondent's answer to Question 3 of the questionnaire.
- 6.2 As outlined above we obtained copies of the 31 LGAPs that have either been launched or are in the process of development. In each case the LGAP indicates the composition of the LGAP partnership either by explicit statements within the text or through the inclusion of the organisations' logos on the cover. Where possible, text information was used in preference since this was considered to be more accurate; however, where this was not given, we referred to the logos on the cover. Interpretation of this information should be treated with a little caution since there are known to be a number of minor ambiguities in the way in which the information is presented:
- The logos of some funding organisations (for example, Minerals Industry Research Organisation, English Nature and some minerals/quarry companies) may be included on the LGAP cover as an acknowledgement of their financial contribution to its development.
  - Some organisations (for example, National Park Authorities, AONB Partnerships, RIGS Groups, Biodiversity Partnerships) are themselves partnerships that include a range of individuals and organisations with differing skills and expertise.
- 6.3 The findings of this exercise are presented in Appendix 3 (Table G) and summarised in Table 4. To provide a comparison with this data, Question 3 of the questionnaire sought information from respondents as to:
- The lead organisation(s) (if there was one).
  - The composition of the **core** partnership (that is, the main players in LGAP production and delivery).
  - Other **key** stakeholders (that is, organisations that made a positive contribution to LGAP production and delivery and were not merely consultees).
- 6.4 The findings are presented in Appendix 3 (Table H) and are summarised in Table 5. It should be noted that a particular organisational type may fulfil more than one role in relation to a single LGAP; for example, one local authority may have been a lead organisation whilst another local authority may have been a member of the core partnership or a key stakeholder.
- 6.5 Overall, these two tables appear to be reasonably consistent in terms of the level of contribution that they suggest is made by different types of organisation to LGAP production. The only significant discrepancy that we feel is worthy of note is that the information presented in published LGAPs, compared with the questionnaire responses, appears to understate the contribution both by museums and record centres and by educational and academic institutions.

**Table 4** LGAP partners (Information based on published LGAPs)

<b>Organisation</b>	<b>No. of LGAPs (out of the 29 published to date) in which organisation is listed as a partner</b>
Multi-organisation Partnership (for example, Biodiversity Partnership)	3
Statutory Agencies	18
Local Authorities	14
Parish Councils	0
British Geological Survey	12
National Park Authorities & AONB Partnerships	10
RIGS Groups & Geology Trusts/Societies	22
Wildlife Trusts	9
Other Voluntary Groups & Charities	5
Land owners (incl. NT)	5
Minerals Industry (incl. MIRO)	8
Museums & Record Centres	7
Educational & Academic Institutions	5
Other	9

**Table 5** LGAP leads organisations, partners and stakeholders (Information based on responses to questionnaire)

Organisation	No. of respondents stating that an organisation or organisation type fulfilled a specific role in the process of LGAP production		
	Lead Organisation	Member of Core LGAP Partnership	Key Stakeholder
Statutory Agencies	0	14	12
Local Authorities	10	13	7
Parish Councils	0	0	2
British Geological Survey	4	10	6
National Park Authorities & AONB Partnerships	5	4	5
RIGS Groups, Geology Trusts etc.	23	7	5
Wildlife Trusts	1	8	5
Other Voluntary Groups & Charities	2	4	5
National Trust	0	2	6
Other landowners	0	0	8
Minerals Industry (including MIRO)	0	7	8
Museums & Record Centres	3	6	8
Educational & Academic Institutions	1	3	10
Other	1	7	9

6.6 Key conclusions that can be drawn from these tables are:

- Overall, the principal organisations involved in LGAP production are local geoconservation organisations (such as RIGS Groups, Geology Trusts and geological societies) with a lesser, but still important role being played by the statutory agencies, the BGS, National Park Authorities and AONB Partnerships, museums and record centres, and the wildlife trusts.
- Local geoconservation organisations also frequently play the lead role in LGAP production and are more important to this process than any other type of organisation.
- Other organisations often playing the lead role are local authorities, the BGS, National Park Authorities and AONB Partnerships, and museums and record centres.
- Organisations that rarely play the lead role but are often part of the core partnership or are a key stakeholder include statutory agencies, the wildlife trusts, the minerals industry, and educational and academic institutions.
- Where an LGAP covers a National Park or AONB, the Park Authority or AONB Partnership is often the lead organisation or a member of the core partnership.

6.7 In relation to other aspects of partnership working that were investigated by the questionnaire, key conclusions are:

- A small but significant number of respondents indicated that their partnership was not working very well, with the principal causes being:
  - A lack of funding for implementation, resulting in disillusionment with the LGAP process and a consequent lack of motivation.
  - A lack of commitment from the public sector and too great a reliance on enthusiasm and commitment of volunteers (for example, from RIGS Groups, Geology Trusts and geological societies).
- Few partnerships had changed in terms of their core composition, although in several cases there was a hope/expectation that more partners would come on board once the LGAP process could be shown to be making a tangible progress.
- The effectiveness of partnerships is enhanced if there is a strong commitment and input from public sector organisations since this enables geodiversity issues to be given a high profile within local or regional policy.
- The active involvement of the voluntary sector is also important in that it often has access to a wealth of geological knowledge and expertise and is able to bid for funds that cannot be accessed by local authorities and statutory agencies.

# 7 LGAP implementation

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- 7.1 None of the published LGAPs included details of progress with implementation and therefore all information on this issue was sourced from the responses to Question 4 of the questionnaire. Also, since many of the LGAPs covered by this survey are at a relatively early stage in their development and/or implementation, respondents sometimes gave only partial responses to the six parts of this question. For example, where an LGAP has been developed but has yet to be formally launched, it may be possible for a respondent to identify which organisations will lead on implementation and what will be the priorities for implementation. However, they will clearly not be able to comment on progress with implementation or on the problems encountered in doing so.
- 7.2 The central part of Question 4 relates to progress in implementing the LGAP (that is, Q4d). Consistent with our approach to the issue of LGAP objectives and priorities (see Section 5), respondents were asked to assess (on a scale of 1 - 5) the progress that had been achieved in implementing the LGAP under the five key objectives listed in the English Nature guidance (that is, geodiversity audit; communication and education; influencing planning; conservation and management; and resources). For similar reasons to those outlined in Section 5 above, this question also failed to work very well, primarily because respondents found it difficult to be so precise in measuring their achievements. Instead, respondents found it easier to comment on the relative progress that had been made under these five different headings.
- 7.3 Responses to the questionnaire indicated that some progress has been made in implementing 26 LGAPs. Full details are provided in Appendix 3 (Table I) and are summarised in Table 6. The conclusions that can be drawn from these findings are:
- Across these 26 LGAPs, progress in implementing different LGAP objectives closely mirrors the relative priority that respondents gave to those objectives (see Section 5).
  - Good progress has been made in LGAP implementation in relation to ‘communication and education’ and to ‘audit’.
  - Poor progress has been made in LGAP implementation in relation to ‘conservation and management’ and acquisition of ‘greater resources’.
  - A moderate degree of progress has been achieved in addressing the issue of ‘influencing planning’.

**Table 6** Progress in implementation of LGAP objectives

LGAP	Objective <sup>1</sup>					Other
	Audit	Communication & education	Influence planning	Conservation & management	Greater resource	
A&MH Geopark - May Hill		✓✓		✓✓		
Black Country		✓✓	✓✓✓	✓		
Cheshire region		✓✓✓				
Cornwall and Isles of Scilly	✓✓✓	✓✓	✓✓	✓✓	✓	
Devon	✓✓	✓✓✓	✓✓	✓	✓✓	
Dorset		✓✓				
Gloucestershire - Cotswolds	✓✓	✓✓				
Halton Borough	✓✓✓	✓✓		✓	✓✓	
Herefordshire	✓✓✓					
Isle of Wight	✓✓✓	✓✓				✓✓ <sup>2</sup>
Lancashire	✓✓	✓✓✓	✓✓			
Leicestershire and Rutland	✓✓✓	✓✓✓		✓✓		
Malvern Hills AONB				✓		
North Pennines AONB	✓✓✓	✓✓✓	✓✓	✓	✓✓	✓✓✓ <sup>3</sup>
North Wessex Downs						✓✓ <sup>4</sup>
Oxfordshire - Jurassic	✓✓	✓✓		✓		
Shropshire		✓✓				
Staffordshire		✓✓	✓			
Suffolk	✓✓✓	✓✓✓	✓	✓		✓✓ <sup>4</sup>
Tees Valley	✓✓✓	✓✓✓		✓		✓✓✓ <sup>5</sup>
Teignbridge	✓✓		✓✓			
Torbay		✓✓				✓✓✓ <sup>6</sup>
Greater Warwickshire		✓				
Worcestershire	✓✓✓					
Yorkshire Dales & Craven	✓✓	✓✓				
Yorkshire - West	✓✓✓	✓	✓	✓		

(Information based on responses to questionnaire - sample limited to the 26 LGAPs where some progress had been achieved)  
Where: ✓✓✓ = good progress; ✓✓ = moderate progress; ✓ = a little progress; blank = no progress

<sup>1</sup> see Section 3 of this report for a more detailed definition of these five 'Objectives'

<sup>2</sup> pursuit of European Geopark status

<sup>3</sup> promotion of geotourism

<sup>4</sup> development of the wider LGAP partnership

<sup>5</sup> designation of all RIGS sites

<sup>6</sup> designation as European Geopark and strengthening of networks and partnerships

7.4 Question 4 also addressed other aspects of LGAP implementation. Key findings from the responses received are summarised below. Where appropriate, we have indicated (in brackets) the number of respondents giving a particular answer but, in weighing up the significance of these figures, it should be born in mind that only about 26 LGAPs have got to a stage where they are being actively implemented:

- Geoconservation organisations (for example, RIGS Groups, Geology Trusts and geological societies) are the principal bodies taking responsibility for LGAP implementation (19). Other organisations playing a leading role are local authorities (5); museums (4); National Park Authorities and AONBs (3); Wildlife Trusts and Countryside Trusts (3); World Heritage Site and Geopark organisations (2); universities (1) and statutory agencies (1).
- Priorities for implementation focused primarily on the development of interpretative and educational provision (17). Other key priorities included site audit/research/ monitoring (9); site management and conservation (9); developing the LGAP partnership and getting more partners involved in delivery (7); acquiring funding (7); influencing planners and local authorities (6) and designation of RIGS sites. Of the seven cases in which funding acquisition was mentioned as a priority, four respondents commented that this was required primarily for the appointment of a project officer to coordinate LGAP development and/or delivery.
- Specifically in relation to funding issues, 19 respondents commented that they had (or expected to have) inadequate funding for implementation (Q4c), or saw funding as a current or future problem in relation to LGAP implementation (Q4e). Linked to this issue is the comment by 18 respondents that a lack of staff time or volunteer time was a problem in relation to LGAP implementation: in six of these cases, there were sufficient funds but insufficient time available to spend them.
- Twelve respondents indicated that their LGAPs are being actively monitored or that a monitoring system has been incorporated within the LGAP. In many of these cases it was acknowledged that this is not being carried out in a systematic or structured way. A lack of funding/time and the need to give priority to implementation were often cited as reasons for a lack of progress on this issue. A few respondents indicated that it would be addressed at the time that the LGAP is reviewed.

7.5 A number of respondents expressed interest in the formats that have been adopted by LGAP authors in presenting their action plans, particularly in relation to the use of text (including bullet points), tables and flow charts. The findings of an analysis of launched LGAPs, together with draft LGAPs that are in their final stages of production, is presented below in Table 7. This shows that there is a strong preference for the use of tables, although text (often as bullet points) is also commonly used. Our impression is that the former approach is preferable in terms of presenting the information in a clear, concise and user friendly manner. In two cases, colour coded flow charts have been used as a variation on a tabular theme and this certainly appears to have many advantages as mechanism for illustrating the timing and sequence of actions and the links between them.

**Table 7** Format of action plan component of launched LGAPs

LGAP	Launch date <sup>1</sup>	Presentational Style(s) Used		
		Text (for example bullets)	Tabular	Flow Chart
Abberley & Malvern Hills Geopark - May Hill	2005	✓	✓	
Abberley & Malvern Hills Geopark - Teme Valley	2005		✓	
Abberley & Malvern Hills Geopark - S. Shropshire	?			
Black Country	2006	✓		✓
Cheshire region	2004		✓	
Cornwall and Isles of Scilly	2005		✓	
Devon	1998		✓	
Dorset	2005		✓	
Gloucestershire - Cotswolds	2005		✓	
Gloucestershire - West (Forest of Dean)	(2008)			✓
Isle of Wight	(?)	✓	✓	
Lancashire	2004		✓	
Leicestershire and Rutland	2004	✓		
Malvern Hills AONB - Castlemorton Common	2005	✓		
North Pennines AONB	2004		✓	
Northumberland National Park	2007		✓	
North Wessex Downs	(?)		✓	
Oxfordshire - County	2002		✓	
Oxfordshire - Jurassic	2007		✓	
Shropshire	2007	✓		
Staffordshire	2004	✓		
Suffolk	(2008)		✓	
Tees Valley	2003	✓		
Teignbridge	2006	✓		
Torbay	2006	✓	✓	
Greater Warwickshire	(2008)		✓	
Yorkshire Dales	2007	✓	✓	

<sup>1</sup> Dates in brackets indicate that a draft is available but that the LGAP has yet to be formally launched

# 8 Lessons learnt

- 8.1 The section of the questionnaire dealing with ‘lessons learnt’ looked into two issues:
- What difference the LGAP had made to geoconservation within the area concerned.
  - Which aspects of LGAP development/implementation had worked well and which had not worked well (focusing primarily on process issues rather than on actual outputs/outcomes).
- 8.2 A total of 31 respondents answered one or both of these questions although, perhaps reflecting the ‘open’ nature of the questions, a wide range of comments were received. The key findings from these responses have been summarised below in Tables 8 and 9.

**Table 8** Impact of the LGAP on geoconservation (see Q.5a)

<b>Comment: The LGAP has....</b>	<b>No. of responses</b>
raised awareness/the profile of geodiversity	19
.....(especially with local authorities)	(8)
.....(especially with the minerals industry)	(2)
provided a focus for activity and/or a structured approach for delivery of geoconservation	7
demonstrated the linkage between geodiversity and other elements of the landscape (for example, buildings, land use, industry, soils etc.) that is, an holistic approach	6
demonstrated the importance of geoconservation	4
been useful in garnering support for funding applications	4
raised the profile of the organisations developing/implementing the LGA	4
encouraged partnership working	4
demonstrated the importance of volunteers in getting things done	4

**Table 9** LGAP successes and failures (process related issues - see Q.5b)

<b>Successes</b>	<b>No. of responses</b>
Adopting an integrated approach between biodiversity and geodiversity has been very effective in raising profile of geodiversity	5
Producing an attractive and simple brochure/leaflet alongside the LGAP (useful in capturing the interest of non-geologists and explaining the purpose of the LGAP)	4
Engaging with stakeholders only when you have something to show them (ie not too early in the LGAP development process)	2
A pragmatic approach to LGAP implementation (according to resources available) has been more appropriate than regarding the LGAP as a straight jacket	2

Table continued...

Failures	No. of responses
Difficulties in raising funding/support/interest in LGAP development/implementation - a linked problem is that the production of the LGAP can give rise to unrealistic expectations as to what will be achieved	10
To find adequate funding/time for LGAP development/implementation	3
LGAP was too detailed - should have been simpler and clearer	2

8.3 These findings, when set alongside some of the more detailed comments provided by questionnaire responses, offer useful and informative insights into some important aspects of the perceived strengths and weaknesses of LGAPs.

## Impact of LGAPs on geoconservation

8.4 LGAPs are widely seen to be a very effective mechanism for raising the profile of geodiversity with public, private and voluntary sector organisations, especially local authorities and the minerals industry, and in creating a structured approach to the delivery of geoconservation at the local level. The strength of this view is demonstrated by the fact that this opinion was expressed even by respondents who felt that their LGAP had not been especially successful in other respects. A noteworthy facet of this 'profile raising' role is that LGAPs can be a very useful means of highlighting the links that geology has to many other elements of the world in which we live, such as soils, vegetation, agriculture, landscape, local industry, building materials, architecture etc. In turn, it was felt that these links could be useful in generating a wider interest in geology and in showing that it is about far more than just 'boring old rocks'.

## The role of geological audits

8.5 There were significant differences of opinion as to the relationship between an audit of geological resources within an area and the production of an LGAP for that same area. The Sharing Good Practice guidance (English Nature, 2004) states that a geodiversity audit is one of the five key objectives of an LGAP, indicating that an LGAP can be produced without an audit having first been undertaken. Some respondents, and especially those from the BGS, argued that an audit is a pre-requisite for the production of an LGAP since one cannot specify the actions that need to be undertaken without first having a good knowledge and understanding of the resources to which those actions relate.

8.6 In practice, the approach that has commonly been adopted has followed a middle course. In many cases, there is sufficient pre-existing geological knowledge and site records held by RIGS Groups, Geology Trusts, museums or geological societies to allow an LGAP to be produced. If possible, additional geological survey work may be undertaken to provide supplementary information but there are rarely sufficient funds to allow a complete and comprehensive audit of the whole area, such as those completed for the North Pennines AONB or Leicestershire and Rutland. In such cases, the LGAP will highlight the inadequacies of existing data and incorporate, as one of its primary objectives, the need to undertake additional site survey/audit as and when resources allow.

8.7 A broad understanding of the geology of the LGAP area needs to exist, or be acquired, before an LGAP can be developed. Additional information can then be acquired in future years, as resources allow, and incorporated in any review of the LGAP. There is no evidence to suggest that an audit is required prior to the production of an LGAP.

# The accessibility of LGAPs

- 8.8 The purpose of LGAPs is to promote geodiversity by reaching out to an audience that includes the public at large, those attending educational and academic institutions, landowners, and, perhaps most importantly of all, decision makers in local and central government. However, the great majority of such people are not geologists and see geology as a rather esoteric and complicated subject - a view that is confirmed by the abundance of words that are seen to be long, incomprehensible and unpronounceable. To succeed, LGAPs must therefore be pitched at a level that their intended audience will be able to understand. This is not to suggest that they should be 'dumbed down' but rather that they should be written in a way which reflects the audience's likely level of geological knowledge and expertise and is able to capture their imagination and interest.
- 8.9 As part of the process of making LGAPs more accessible, we would suggest that detailed audits should not form part of the main text but should be attached as an Appendix - possibly with a summary in the text. The action plan itself should also be kept brief and concise, using tables, bullet point lists and flow charts where appropriate to convey key information. They should preferably be written by geologists, working in partnership with non-geological specialists such as environmental interpreters and graphic designers, so that the messages are presented in as clear and as accessible a way as possible.

## Resources

- 8.10 There is a strong and consistent view that LGAPs are a useful and effective mechanism for raising the profile of geoconservation and for coordinating action by public, private and voluntary sector partners. This is seen as being especially important in encouraging planning authorities and other statutory agencies to give greater regard to geodiversity issues in the development and implementation of their own policy and practice. The principal down-side to this positive message is that there is often a lack of resources for implementation, impacting both on budgets for specific projects and on the availability of staff time to manage the delivery process. This is leading to some disillusionment and a concern that the LGAPs that have been launched are proving, in practice, to be more aspirational than realistic.
- 8.11 As indicated above in Section 7, local geoconservation organisations, such as RIGS Groups, Geology Trusts and geological societies are the principal bodies taking responsibility for LGAP implementation. These organisations often have very limited resources and external funding is frequently ring fenced for specific projects, rather than being available for the employment of core staff or for mainstream activities such as local liaison, site survey and management or general geodiversity promotion. This may mean that greater reliance has to be placed upon volunteers to undertake such work. Whilst volunteers are often very knowledgeable and committed, there is a limit as to what they can achieve given that most are just helping out in their spare time. Furthermore, volunteers will be less well placed than people in, say, local authorities or statutory agencies, to persuade decision makers to give greater priority to geoconservation.
- 8.12 These findings support those of a recent survey of geoconservation groups (Geology Trusts & UKRIGS 2006) which found that the main problems these organisations experienced in achieving these objectives, were:
- a lack of funding for both staff and projects
  - a lack of time and resources
  - difficulty in recruiting both voluntary and paid staff, whether professional or unskilled.

# An integrated approach to biodiversity and geoconservation?

- 8.13 A very different approach to LGAP development has been taken across the county of Devon, with geodiversity and biodiversity being integrated within a single policy document. This process was started by the County Council in the late 1990s and has also been adopted by Teignbridge Council, Torbay Council, and Dartmoor National Park.
- 8.14 Key advantages identified by the proponents of this approach are:
- It is seen as being “natural and intuitive” and fits well with the philosophy of Planning Policy Statement 9: Biodiversity and Geological Conservation (ODPM, 2005) in which it is advocated that biodiversity and geodiversity interests are considered jointly when regional planning bodies and local planning authorities are assessing the potential impacts of planning decisions.
  - Geodiversity can be brought to a wider audience and it can help to overcome the perception that geodiversity is a rather esoteric subject best left to geologists.
  - It offers an effective means of promoting involvement in geoconservation in that the range of individuals and organisations (especially local authorities) who are involved in an LBAP will also automatically get involved in the LGAP.
  - It simplifies consultation processes, by avoiding separate consultation on biodiversity and geodiversity issues.
- 8.15 Conversely, many of those who have been involved in the production of LGAPs (as separate documents from BAPs) point to a number of potential problems with such an approach:
- The high profile enjoyed by biodiversity conservation may lead to geodiversity issues being given little attention or, at worst, being completely ignored.
  - In the absence of ring-fenced funding for geoconservation, an integrated approach will almost inevitably lead to biodiversity issues cornering the lion’s share of available resources.
  - It can put geodiversity in a very vulnerable position in that the interests and expertise of the person responsible (often with a bias towards biodiversity) can profoundly influence the relative priority accorded to biodiversity and geodiversity.
- 8.16 The relative merits of these two approaches offer an interesting subject for discussion and might benefit from further research and evaluation. In parallel with this, it would also be useful to look at ways in which LGAP partnerships might engage more closely with BAP partnerships with a view to evolving a closer or more integrated relationship that benefits both geoconservation and biodiversity conservation.

# 9 The future

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9.1 The section of the questionnaire dealing with ‘the future’ looked into three issues:

- Whether the absence of a UKGAP has impacted on LGAP development.
- How Natural England could be most helpful in taking forward LGAP development and implementation.
- Whether there are any other organisations that could have a central role in LGAP development and implementation and, if so, what role that should play.

9.2 A total of 32 respondents answered one or more of these questions and, as with Question 5, a very wide range of comments were received. The views of respondents have been summarised below in Tables 10, 11 and 12. Key conclusions that can be drawn from these comments are set out below in Sections 9.3 to 9.10.

**Table 10** Has the absence of a UKGAP impacted on local LGAP development and implementation? (see question 6a, Appendix 1)

Comment	No. of Responses
Yes, would have been/will be useful in providing national context/strategic direction	14
No impact on LGAP, but can see that would be good idea to do it and could be useful	9
No impact at all - not relevant	7
Yes, could be a mechanism for attracting funding for LGAPs at local level	3
Yes, offers potential to influence national/regional government	2
No, too late and can't provide national context retrospectively	1
No, example of NE wanting to impose its will on everyone else	1

**Table 11** In what ways could Natural England be most helpful in future LGAP development and implementation? (see question 6b, Appendix 1)

Comment	No. of Responses
Provide more/dedicated/secure funding for LGAP development and/or implementation at local level - and simplified application procedures	15
Provide more help/guidance on LGAP development (for example, collation/dissemination of examples of good practice; promote information sharing; hold an annual conference). Potential subjects included partnership development, funding acquisition, stakeholder engagement	11
Be more proactive; more promotional; adopt higher profile in relation to geodiversity; provide more of a strategic lead	8
Continue to promote development of regional geodiversity partnerships (but 2 other respondents were opposed to these partnerships without funding for them)	7
Should seek to get geodiversity on same statutory status as biodiversity (for example, by promoting concept of 'natural diversity') - should seek to establish parity and equal priority	5
Should seek to get geodiversity on same statutory status as biodiversity (for example, by promoting concept of 'natural diversity') - should seek to establish parity and equal priority	5
Concerned that geodiversity declining as a priority within NE and what this bodes for the future, especially <i>re</i> funding	4
Develop LGAP website with database of LGAPs, contacts, consultants, contractors etc	4

## The production of a UKGAP

9.3 The views of respondents on this subject were rather mixed and, although a majority thought that it was a good idea in principle, only about 50% felt that one would have been useful (or will be useful) to the production of their own LGAP. Its principal value was seen to be in providing the national context for LGAPs or giving a lead as to the strategic direction that LGAPs should follow. Concerns were expressed, however, that it would have been preferable, and more useful, for a UKGAP to have been produced at the start of the process of LGAP development (that is, in about 2004/2005) rather than some years later. On the other side of the coin, this approach would have led to lengthy delays in the development of LGAPs, pending the publication of a UKGAP, and would have run contrary to the 'bottom-up' approach that is so often advocated in relation to conservation policy and practice. See Burek and others (2007) for information on the progress of the UKGAP.

**Table 12** Other organisations that could have a role in LGAP development and implementation (see questions 6c and 6d, Appendix 1)

Organisation	Potential Role	No. of responses
BGS	Could make geological information that it holds more freely available - staff very helpful but institutionally is more protective of its interests. Also serious concerns that BGS, as an organisation, appears to have an unfair commercial advantage due to its semi-governmental status and by “hiking up the price of geodiversity” it can be “a hindrance to geoconservation at the local level”.	7
Minerals Industry	Could be more active - especially in relation to educational use of sites and could give greater weight to geodiversity in site management and restoration.	6
Wildlife Trusts	Too focused on biodiversity and could give greater weight to geodiversity, although may require greater expertise in geodiversity to fulfil this role.	5
Local Authorities	Give too low a priority to geoconservation - especially given responsibilities under PPS9. Should do far more to ensure that planning policies protect geodiversity in an holistic sense.	5
Local Geological Groups/ Trusts etc	Should be more active in promoting LGAPs within their various activities and through their membership and at public events - although acknowledge that are constrained by funding and reliance on volunteers.	4
Geology Trusts and UK RIGS	Should provide more support to local groups and strengthen relationship with Defra	3
Statutory Agencies	Have responsibilities for geoconservation that they are not adequately fulfilling (for example, EA, EH and FC)	3
Landowners incl. NT and CLA and WCs	Land management plans could pay greater regard to geoconservation	3
RDAs and RAs	Could do more to including geodiversity in regional planning strategies and to influence local planning authorities to do the same.	3

## Role of Natural England

- 9.4 The most frequent suggestion as to the role of Natural England in promoting LGAPs was - rather predictably - that it should provide more dedicated and secure funding, especially for LGAP implementation. In particular, there was concern and disappointment at the lack of available funds from Natural England for the implementation of LGAPs. The impact, and potential long term consequences of a lack of such funding from Natural England or from other sources, has been addressed in Sections 8.10 - 8.12.
- 9.5 A significant number of respondents (c 30%) also felt that Natural England could fulfil a useful role in providing more help/guidance on LGAP development, for example through the collation/dissemination of examples of good practice and promoting information sharing. A suggestion from several respondents was that Natural England could convene an LGAP conference (possibly annually) which could cover subjects such as partnership development, funding acquisition, and stakeholder engagement processes.

- 9.6 Several respondents expressed interest in the findings and conclusions of this study and suggested that Natural England could usefully circulate copies. The interest shown by respondents in looking at examples of LGAPs also led to our decision to include in Appendix 3 (Table C) a list of the website addresses of all downloadable LGAPs.
- 9.7 Finally, it should be mentioned that concerns were frequently expressed about the low priority that is seen to be being given by Natural England to geodiversity issues both at a strategic/corporate level and within individual regions. It was suggested that this problem is being compounded by two factors: first, that geodiversity is being accorded a far lower priority than biodiversity, and secondly, that both geodiversity and biodiversity are collectively being given a low priority relative to Natural England's other statutory duties.
- 9.8 In support of these assertions, respondents referred to their own experiences at local and regional levels, which suggested that, in comparison with its predecessor, Natural England had fewer personnel with geological expertise, less funding for geodiversity (and biodiversity) work, and fewer staff available to deal with both biodiversity and geodiversity issues. To support their case for a more balanced distribution of resources, some respondents referred to Natural England's statutory duties, as set out in the Natural Environment and Rural Communities Act (2006). The Act states at section 2(2) that its five "general purposes" include "promoting nature conservation and protecting biodiversity", with 'nature conservation' being defined at section 30(2) as "the conservation of flora, fauna or geological or physiographical features". It was argued that this wording gives equal weight to biodiversity and geodiversity issues yet this is not being manifest in Natural England's policy or practice.
- 9.9 It has been suggested that this balance may be being redressed, at least in part, through the setting up of regional geodiversity partnerships, for example in the North West and West Midlands. As shown in Table 11, there was quite good support for Natural England's work in promoting the development of these partnerships and it was felt that they may well help to raise the profile of geoconservation and to encourage greater collaboration and cooperation between key players.

## Potential role of other organisations

- 9.10 A broad range of views were expressed as to the other organisations (that is, other than Natural England) that could fulfil a role in developing or implementing LGAPs. The views that were most commonly expressed are set out below and offer some useful pointers as to ways in which Natural England might seek to encourage these organisations to become more actively involved in geoconservation:
- **British Geological Survey** - there were quite widespread, and sometimes strongly expressed concerns, about the role of the BGS in geoconservation. In particular, there was unease about the lack of clarity and transparency between its role as a 'public sector organisation' that is a 'component'<sup>6</sup> of NERC and its commercial consultancy activities. Whilst individual BGS staff were often found to be approachable and extremely helpful, it was felt that the BGS could do a lot more, as an organisation, to assist and encourage public and voluntary sector bodies involved in geoconservation, through the provision of advice and guidance and by offering better access to the geological information and records that it holds.
  - **Minerals Industry** - in Section 3 of this report we described how minerals and aggregate companies are playing an active role in developing company GAPs (cGAPs) and in section 6 we showed that the minerals industry has been involved, either as a partner or stakeholder, in about 30% of published LGAPs. However, there appear to be virtually no linkages between

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<sup>6</sup> see BGS website home page at URL: [www.bgs.ac.uk/About/whoWeAre.html](http://www.bgs.ac.uk/About/whoWeAre.html)

LGAPs and cGAPs, with the production and implementation of these two types of GAP following separate, but parallel tracks, both at a policy/strategy level and at a more local level where they cover the same geographical areas or relate to the same geological strata. There is therefore a strong case for improved partnership working between the private, public and voluntary sectors so that there is a far more integrated approach to GAP production and implementation.

- **Wildlife Trusts** - concerns were expressed that many county Wildlife Trusts are progressively reducing their interest and involvement in geoconservation. This is being manifest in a reduction in the number of geologists employed by local trusts and in a lower priority being given to the protection of sites of geological importance - a trend that is seen to reflect parallel changes at a national level within both government and the Royal Society of Wildlife Trusts (RSWT). Although no suggestions were put forward as to how this problem should be addressed, it is an issue that Natural England may wish to pursue through their established contacts with RSWT.
- **Local Authorities** - widely seen as being vital to geoconservation through their control of the local planning system (especially in relation to the minerals industry) and their influence on regional planning bodies, environmental agencies and other parts of central government - a role that has been strengthened through PPS9. Whilst it is acknowledged that local authorities are under severe financial pressures, it was felt that many could make better use of their existing regulatory powers and that perhaps Natural England could assist this process by providing guidance on how the principles enshrined in PPS9 could be applied in practice to benefit geoconservation.
- **Local geoconservation organisations** (for example, RIGS Groups, Geology Trusts and geological societies) - these organisations already play a very strong lead role in the development and implementation of LGAPs but there was feeling amongst some respondents that they could be more proactive in promoting LGAPs through their other activities, such as public events, and by raising awareness and understanding amongst their membership.

# 10 Conclusions and recommendations

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- 10.1 Local Geodiversity Action Plans have been launched, or are in the process of development, across many parts of England. They are widely seen as being a very effective mechanism for raising the profile of geoconservation and promoting a structured partnership approach to the protection, management and interpretation of geological features. Key problems relate to LGAP implementation, rather than production and launch, and in some cases, these are leading to disillusionment and reduced motivation. Specific concerns raised in this survey are:
- A lack of funding and constraints on the time that people are able to devote to LGAP delivery.
  - A heavy reliance on the voluntary sector and, in some areas, a lack of commitment from local authorities and other public sector bodies.
  - A perceived decline in the priority that Natural England accords, at a corporate level, to its geodiversity responsibilities.
- 10.2 Given the widespread support for the concept of LGAPs, they clearly have the potential to play an important future role in promoting and delivering geoconservation. If this potential is to be fully realised then there is a need for Natural England, working in close collaboration with partner organisations, to address some of the outstanding issues that are hindering progress. Potential actions could include:
- Reaching agreement with partners on the role that each should play in the development and implementation of LGAPs - this applies especially to the BGS, local authorities, local geoconservation organisations (for example, RIGS Groups, Geology Trusts and geological societies), and Wildlife Trusts.
  - Seeking to achieve greater coordination and integration between LGAPs and cGAPs.
  - Seeking to achieve greater parity between geoconservation and biodiversity conservation, consistent with the NERC Act 2006 and PPS9.
  - Looking at ways in which LGAP partnerships might engage more closely with BAP partnerships with a view to evolving a closer or more integrated relationship that benefits both biodiversity conservation and geoconservation.
  - Providing updated guidance on LGAP development and implementation including:
    - Circulation of this report and publication of the list of downloadable LGAPs at Appendix 3 (Table C).
    - Advising on potential sources of funding for LGAP production and implementation.
    - Advising on approaches and procedures for developing realistic and achievable targets and for monitoring progress in LGAP implementation (possibly linked to any monitoring scheme incorporated within the UKGAP).
    - Identifying mechanisms through which LGAPs can be integrated with other plans and strategies and how they can be used to best effect to influence local and regional planning authorities.
    - Circulating reference details (for example, website addresses) for existing LGAPs to enable prospective LGAPs authors to review practice from elsewhere across the country.
    - Convening an annual/biennial conference to facilitate the exchange of information, experience and best practice.
    - Establishing a consistent approach to LGAP monitoring to clearly measure progress. This is critical to demonstrating both the success and challenges faced by LGAPs and how they are making a difference.

# 11 References

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- BUREK, C.V. and POTTER, J.A. 2002. Minding the LGAPs. A different approach to the conservation of local geological sites in England? *Geoscientist*, 12, (9), 16-17.
- BUREK, C. and POTTER, J. 2004. *Local Geodiversity Action Plans Sharing Good Practice Workshop, Peterborough*, 3 December 2003. Peterborough: English Nature.
- BUREK, C., CAMPBELL, S., LARWOOD, J., & STANLEY, M. 2007. Moving towards a National GAP. *Earth Heritage*, 28, 18-19.
- Defra (Department for Environment, Food and Rural Affairs). 2003. *Biodiversity Strategy for England: Working with the Grain of Nature*. Defra, London.
- Defra (Department for Environment, Food and Rural Affairs). 2006. *Local Sites - Guidance on their Identification, Selection and Management*. Defra, London.
- DCLG (Department for Communities and Local Government). 2008. *National Indicators for Local Authorities and Local Authority Partnerships: Handbook of Definitions. (Indicator NI 197: Improved local biodiversity - active management of local sites)*. London: HMSO. See URL: [www.communities.gov.uk/publications/localgovernment/finalnationalindicators](http://www.communities.gov.uk/publications/localgovernment/finalnationalindicators) [Accessed 4 November 2008].
- English Nature. 2004. *Local Geodiversity Action Plans - Sharing Good Practice*. Peterborough: English Nature.
- HM Government. 1994. *Biodiversity: The UK Action Plan*. Cm 2428. London: HMSO.
- HM Government. 2006. *Natural Environment and Rural Communities Act*. London: HMSO.
- Larwood, J. 2005. Local Geodiversity Action Plans. *Teaching Earth Science* 30, (4), 18-20.
- ODPM (Office of the Deputy Prime Minister). 2005. *Planning Policy Statement 9: Biodiversity and Geological Conservation*. London: HMSO.
- ODPM (Office of the Deputy Prime Minister). 2006. *Planning for Biodiversity and Geological Conservation: A Guide to Good Practice*. London: HMSO.
- POTTER, J. and BUREK, C.V. 2006. The first Local Geodiversity Action Plan (LGAP): Evaluating the Cheshire region LGAP. *Teaching Earth Science* 31, (1), 19-21.
- THOMPSON, A., POOLE, J., CARROLL, L., FOWERAKER, M., HARRIS, K., and COX, P. 2006. *Report to the Mineral Industry Research Organisation. Geodiversity Action Plans for Aggregate Companies: A Guide to Good Practice*. East Grinstead: Capita Symonds Ltd.
- The Geology Trusts and UK RIGS Association. 2006. Report for Natural England. Local Geological Site Conservation Review Project. Unpublished.

# Appendix 1 Local Geodiversity Action Plans questionnaire 1

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## Questions concerning LGAPs in development

### 1 Status

- a) When did development commence and what is the expected date of launch?

### 2 English Nature Guidance

- a) Was the EN Good Practice Guidance (published 2004) used?

If 'No' - why not?

If 'Yes' - how useful was it?

- what do you see as its main strengths and weaknesses?

- b) Of the five LGAP objectives identified in the EN Guidance (that is, audit, communication and education, influencing planning, conservation and management, greater resources), what level of priority will the LGAP give to each?

(These should be scored 1 -> 5 where '1 = not important' and '5 = very important').

### 3 LGAP Partnership

- a) What is the composition of the **core** partnership that is producing the LGAP?
- b) Which is (are) the lead organisation(s)? - if there is one!
- c) Is the partnership working well?

If 'Yes' or 'No' - in what way?

- d) Has the composition and lead organisation(s) changed?

If 'Yes' - how has it changed?

- why did this change occur?

- e) What other organisations are key stakeholders in the LGAP?

Please just give a Y/N response to following 15 categories:

- 1) statutory agencies
- 2) local authorities
- 3) Nat'l Park Auths/AONB Part'ships
- 4) parish councils
- 5) British Geological Survey
- 6) RIGS Gps/Geological Societies etc
- 7) Wildlife Trusts
- 8) other voluntary groups
- 9) National Trust
- 10) other landowners
- 11) minerals industry

- 12) other industries (please specify)
- 13) museums
- 14) educational institutions
- 15) other (please specify)

#### **4 Implementation**

- a) (If known) Which organisation(s) will lead on implementation?
- b) (If known) What will the priorities be for implementation?
- c) (If known) Will adequate funding be in place for implementation?

At what level will this be and what will be the source?

#### **5 Lessons Learnt**

- a) What difference has the LGAP made to geoconservation in your area?
- b) Reflecting on your LGAP experience what have been the key successes and what has not worked?

#### **6 The Future**

- a) Has the absence of a UK or English GAP had any impact on your partnership's ability to develop an LGAP?

If 'Yes - Why?

- b) In what ways could Natural England be most helpful to you in the future development and implementation of the LGAP?
- c) Are there other organisations that could have a central role in the development and implementation of the LGAP? (national, regional or local level)
- d) What are the key actions that need to be undertaken by these organisations?

# Appendix 2 Local Geodiversity Action Plans questionnaire 2

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## Questions concerning LGAPs that have been launched

### 1 Status

- a) Date of publication
- b) Has it been reviewed/updated since launch?

If 'Yes' - give details?

### 2 English Nature Guidance

- a) Was the EN Good Practice Guidance (published 2004) used?

If 'No' - why not?

If 'Yes' - how useful was it?

- what do you see as its main strengths and weaknesses?

- b) Of the five LGAP objectives identified in the EN Guidance (that is, audit, communication and education, influencing planning, conservation and management, greater resources), what level of priority does the LGAP give to each?

(These should be scored 1 -> 5 where '1 = not important' and '5 = very important').

- c) Have these priorities changed since launch of the LGAP?

If 'Yes' - in what way?

### 3 LGAP Partnership

- a) What is the current composition of the **core** LGAP partnership?
- b) Which is (are) the lead organisation(s)? - if there is one!
- c) Is the partnership working well?

If 'Yes' or 'No' - in what way?

- d) Has the composition and lead organisation(s) changed?

If 'Yes' - how has it changed?

- why did this change occur?

- e) What other organisations are **key** stakeholders in the LGAP?

Please just give a Y/N response to following 15 categories:

- 1) statutory agencies
- 2) local authorities

- 3) Nat'l Park Auths/AONB Part'ships
- 4) parish councils
- 5) British Geological Survey
- 6) RIGS Gps/Geological Societies etc
- 7) Wildlife Trusts
- 8) other voluntary groups
- 9) National Trust
- 10) other landowners
- 11) minerals industry
- 12) other industries (please specify)
- 13) museums
- 14) educational institutions
- 15) other (please specify).

#### 4 Implementation

- a) Which organisation(s) is leading on implementation?
- b) What are the priorities for implementation?
- c) Is adequate funding in place for implementation?

At what level will this be and what will be the source?

- d) How would you rate the progress that is being made in implementing the LGAP's key objectives, as outlined in section 2 above?

(These should be scored 1 -> 5 where '1 = very poor' and '5 = very good'.)

- e) What problems are being encountered?
- f) Is progress in implementing the LGAP being monitored?

If 'No' - why not?

If 'Yes' - how?

#### 5 Lessons Learnt

- a) What difference has the LGAP made to geoconservation in your area?
- b) Reflecting on your LGAP experience what have been the key successes and what has not worked?

#### 6 The Future

- a) Has the absence of a UK or English GAP had any impact on your ability to develop and implement an LGAP?

If 'Yes' - Why?

- b) In what ways could Natural England be most helpful to you in the future development and implementation of the LGAP?
- c) Are there other organisations that could have a central role in the development and implementation of the LGAP? (national, regional or local level)
- d) What are the key actions that need to be undertaken by these organisations?

# Appendix 3 Data tables

**Table A** Current status of Local Geodiversity Action Plans in England

LGAP Name	Status	Summary Detail
Abberley and Malvern Hills Geopark - May Hill Inlier	Launched	<p>One of 3 'trial' or 'pilot' LGAPs prepared for the Abberley and Malvern Hills Geopark (see also 'Teme Valley' and 'South Shropshire').</p> <p>LGAP covers only five sites that demonstrate the diversity of the geology and landscape of this part of the Geopark.</p> <p>Produced by the Gloucestershire Geoconservation Trust (now known as the Gloucester Geology Trust) on contract to the Abberley and Malvern Hills Geopark. Launched in 2005.</p> <p>It is understood that this LGAP has not been implemented.</p>
Abberley and Malvern Hills Geopark - Teme Valley	Launched	<p>One of 3 'trial' or 'pilot' LGAPs prepared for the Abberley and Malvern Hills Geopark (see also 'May Hill' and 'South Shropshire').</p> <p>LGAP covers only four sites, chosen to represent the geodiversity of the area.</p> <p>Produced by Hereford and Worcester Earth Heritage Trust (HWEHT) on contract to the Abberley and Malvern Hills Geopark. Launched in 2005.</p> <p>It is understood that this LGAP has not been implemented.</p> <p>Proposed by HWEHT that actions will be incorporated in the Worcestershire LGAP currently in development.</p>
Abberley and Malvern Hills Geopark - South Shropshire	Launched	<p>One of 3 'trial' or 'pilot' LGAPs prepared for the Abberley and Malvern Hills Geopark (see also 'Teme Valley' and 'May Hill').</p> <p>LGAP covers only five sites that demonstrate the diversity of the geology and landscape of this part of the Geopark.</p> <p>Produced by Denise Instone, a member of the Shropshire Geological Society Trust on contract to the Abberley and Malvern Hills Geopark. Denise Instone is no longer a member of the Society and could not be contacted.</p> <p>Launch date not known.</p> <p>It is understood that this LGAP has not been implemented</p>

Table continued...

LGAP Name	Status	Summary Detail
Black Country	Launched	<p>LGAP was started in October 2003 and published in July 2006. A limited audit (of aggregates sites) was carried out as part of the LGAP production process: in other respects it was considered that adequate information was already available. It is proposed that a full audit would be carried as part of any review.</p> <p>A revised set of 'agreed priorities' (in loose leaf format) is appended to the LGAP each year to provide an action plan for the coming year according the resources (time and budgets) available.</p> <p>It is not expected that the full LGAP will need to be reviewed for a number of years.</p>
Cheshire region	Launched	<p>Audits undertaken in c. 1994 and reviewed in c. 2003. LGAP first published in September 2003, then republished in August 2004. Currently subject to major review with revised version including more background geological information and being presented as 'themes with community actions' rather than as 'objectives'.</p>
Cornwall and Isles of Scilly	Launched	<p>Published in 2005.</p> <p>Has not been reviewed - awaiting publication of England GAP to provide benchmark.</p>
Derbyshire and Peak District	Proposed	<p>Preparation of the LGAP is being taken forward by Derbyshire RIGS Group (Chair is Peter Jones who is based at Derby University). Meeting planned for early 2008.</p> <p>National Stone Centre may also play a key role.</p> <p>Awaiting publication of England GAP to provide context for Derbyshire LGAP.</p>
Devon	Launched	<p>LGAP for Devon is embedded in their BAP 'The Nature of Devon'. BAP was published in July 1998. Revised in spring of 2005 by the Devon Biodiversity Partnership. Both included two specific action plans concerned with geological features plus a larger number of habitat action plans which included references geodiversity issues where appropriate.</p> <p>BAP is currently being updated in 2007 with the specific aim of building up the geodiversity elements of the plan: this will include expanding the two existing geological action plans; incorporating more geodiversity information within existing habitat action plans; and preparing three new geodiversity action plans.</p>
Doncaster	In development	<p>Audit undertaken January to June 2006. Looked at quality and quantity of sites.</p> <p>Development of LGAP started January 2007 and expect to be finished by March/April 2008.</p> <p>Draft LGAP currently out to consultation with the LGAP Partnership. Following revision, draft will be send out to wider consultation.</p>

Table continued...

LGAP Name	Status	Summary Detail
Dorset	Launched	<p>Launched in January 2005 but has not been reviewed since then.</p> <p>LGAP deals primarily with inland sites in county. Coastal sites are covered by the World Heritage Site.</p> <p>LGAP is largely 'stalled' (except for a few small projects being taken forward by local RIGS Group) and, since publication, there has been little progress in implementation due to lack of staff, funding and other resources.</p>
Durham	In development	<p>Audit prepared by BGS and Durham County Council (DCC) and launched in 2004. A draft list of 'Action Points' was also prepared at the same time as a 'Consultation Document' for Durham County Council but it is understood that this has never been formally approved by DCC and is currently on hold and is likely to remain so.</p>
Gloucestershire - Cotswolds	Launched	<p>LGAP prepared by Gloucestershire Geology Trust (also known as the Gloucester Geology Trust) and published in 2005. LGAP has not been reviewed since then.</p> <p>Priority is now to appoint an LGAP Officer to take forward a number of projects including production of interpretation/trail guides; recording of RIGS sites; and development of the LGAP for West Gloucestershire (see below).</p>
Gloucestershire - West (Forest of Dean)	In development	<p>Gloucestershire Geology Trust has produced an outline LGAP which is currently out to consultation.</p> <p>An audit is being undertaken concurrently.</p> <p>LGAP is due for publication in 2008</p>
Gloucestershire - Severn Vale	Proposed	<p>LGAP Is currently only a proposal. Project is being led by Gloucestershire Geology Trust</p>
Greater Manchester	In development	<p>Rough draft of LGAP prepared by Greater Manchester RIGS Group between late 2005 and mid 2006. Since then no progress has been made due to lack of funding and limited number of personnel available to assist.</p> <p>Some funding recently pledged by Greater Manchester local authorities to help Greater Manchester Geological Unit take LGAP development forward.</p>
Halton Borough Council, Cheshire	Launched	<p>The LGAP was first produced in 2005 and is linked to a statement within the Borough Council's Natural Assets Strategy 2007 - 2012 'to promote all aspects of geodiversity in partnership with the Cheshire region GAP Action Group'.</p> <p>The Halton LGAP is essentially a document that takes the 'Objectives' from the Cheshire region GAP and then applies them to the Halton Borough as a framework for developing local 'targets', 'actions' and 'timescale'. This is updated each year to indicate the actions that have been completed.</p>

Table continued...

<b>LGAP Name</b>	<b>Status</b>	<b>Summary Detail</b>
Herefordshire	In development	<p>First phase was undertaken in 2006/07 with the production by Hereford and Worcester Earth Heritage Trust (H and WEHT) of a consultation draft document and the establishment of an LGAP partnership. Consultation on the draft is nearly complete and has been very successful with many responses being received.</p> <p>HandWEHT currently undertaking an audit: this should be complete by 2008.</p>
Isle of Wight	In development	<p>An audit was produced in 2004 and a draft LGAP published in 2005. The LGAP has not been reviewed or updated since then. Cutbacks in budgets, with the consequent loss of staff, has been a major constraint on implementation. One of key outcomes of the LGAP process was a decision to apply for Geopark status but this has also stalled.</p> <p>Martin Munt due to leave post in late November 2007.</p>
Lake District National Park	Proposed	<p>Lake District National Park Authority is in discussion with the BGS with a view to the BGS undertaking an audit of the National Park. It is understood that the BGS has submitted a funding bid to NERC to undertake this work.</p>
Lancashire	Launched	<p>'Draft Version' published in April 2004. This version has been adopted without significant amendments. (The version on the website is still the 'Draft Version').</p> <p>LGAP is for 5 year period and will be formally reviewed at the end of that time. However, a flexible approach has been adopted which means that aspects will be reviewed in the intervening period if this is seen to be necessary.</p>
Leicestershire and Rutland	Launched	<p>LGAP launched in 2004. It has not been reviewed since then.</p>
London	Proposed	<p>A 'London Geodiversity Project' has recently been launched. A Steering Committee has been formed (the 'London Geodiversity Partnership') and the project will be managed by the BGS. Key objectives of the project including undertaking a geodiversity audit of London and producing a draft Geodiversity Audit and outline Action Plan (GAP) for Greater London.</p>
Malvern Hills AONB - Castlemorton Common, Hollybed Common and Coombe Green Common	Launched	<p>LGAP was published in autumn 2005 but has not been reviewed since then. The LGAP was produced by the Hereford and Worcester Earth Heritage Trust.</p> <p>LGAP covers only four sites, chosen to represent the geodiversity of the area. It therefore relates to only a part of the AONB and was seen as a pilot to see if it would be worthwhile undertaking an LGAP for the whole of the AONB. It has since been decided not to extend LGAPs to the rest of the AONB.</p>
Norfolk	In development	<p>Decision in principle taken in April 2007 to prepare an LGAP for Norfolk. In September 2007 the decision was taken to commission a geological consultant to start work on the Norfolk LGAP.</p>

Table continued...

LGAP Name	Status	Summary Detail
North Pennines AONB	Launched	LGAP launched in March 2004. Comprises an audit and an action plan and refers to designation of area's Geopark status. It is proposed to review the LGAP but, to date, this has not been progressed.
Northumberland National Park	Launched	LGAP launched in 2007. Comprises an audit and an action plan.
North Wessex Downs AONB	In development	Draft produced in 2007 by the Oxfordshire Geology Trust (OGT) with funding from the AONB. This document has been through a comprehensive consultation process and has been sent out to a wide range of stakeholders. However, it has yet to be approved by the North Wessex Downs AONB Council of Partners and has therefore not been formally launched. In practice the draft LGAP is being used as a working document.
Oxfordshire (County)	Launched	Produced in 2002 by the Oxfordshire RIGS Group (primarily by Mike Windle who is now with the North East Yorkshire Geology Trust). The LGAP was initially incorporated as the 'Habitat Action Plan for Geological Diversity' as one of 18 Habitat Action Plans in the Oxfordshire Biodiversity Action Plan with the lead partner being the Oxfordshire Geology Trust (OGT). Development and implementation of the BAP has been taken forward by the Oxfordshire Nature Conservation Forum (ONCF), who indicated that the LGAP has recently been removed from the BAP and is now a stand-alone document managed directly by OGT - although OGT appeared to know nothing about this!!
Oxfordshire (Lower and Middle Jurassic)	Launched	Produced by the Oxfordshire Geology Trust (OGT). First draft published in June 2006. Launched in March 2007. Most of the work on the LGAP was undertaken when Jane Worrall was Director of OGT.
Sheffield	In development	Discussion started in September 2007. Launch expected 2009 - 2010, depending on success of funding applications.
Shropshire	Launched	Launched in September 2007. A meeting of the LGAP Partnership is to be held in November 2007 to decide upon the next steps.
Staffordshire	Launched	Launched 2003/04. Included an audit and an action plan. A review is planned but this is dependent on funding. Published version not been reviewed but LGAP Steering Group has amended some action plan elements - this has only been done only since publication. LGAP Partnership has been dissolved and LGAP process now being led by the Staffordshire RIGS Group.

Table continued...

LGAP Name	Status	Summary Detail
Suffolk	In development	Draft produced in March 2006 by GeoSuffolk (that is, the Suffolk RIGS Group). Discussion document to guide initial actions and provide framework for NE to provide funding to help take it forward. No other organisations were involved in its development. GeoSuffolk is now trying to establish an LGAP Partnership to develop the final version of the LGAP and then collaborate in its launch
Tees Valley	Launched	LGAP launched in 2003. LGAP has not been reviewed but is still valid. Acknowledge that it was one of the first LGAPs to be published and can see that it could be improved, especially in terms of formatting and inclusion of timetable.
Teignbridge	Launched	Biodiversity Action Plan initially produced in 2005. BAP was approved by Council with proviso that should be immediately reviewed and should include geodiversity element: that revised version, including a section on 'pits quarries and cuttings', was published in February 2006.
Torbay	Launched	'The Nature of Torbay - A Local Biodiversity and Geodiversity Action Plan 2006 - 2016' was published in February 2007. In common with the Devon BAP this document uses a format that integrates biodiversity and geodiversity elements. Torbay has been granted European Geopark status and area is now referred to as the 'English Riviera Geopark'
Greater Warwickshire (including Warwickshire, Solihull, Coventry and parts of West Midlands)	In development	Early work coordinated by Warwickshire Museum. Started process in 2002 with pilot LGAP project: this subsequently led to the production in 2004 of 'a mini LGAP' for Permian and Triassic Fossil sites but this was not formally launched. Subsequent work coordinated by the Warwickshire Geological Conservation Group. In 2006 started production of county LGAP with a view to slotting 2004 'mini LGAPs' underneath. 1 <sup>st</sup> draft now nearly complete with view to going out to consultation by Xmas 2007. Hope to launch in 2008 if funding available.
Worcestershire	In development	A 'Consultation Document' for the Worcestershire GAP was published in December 2006 to provide an overview of the proposed GAP and a mechanism for consulting upon the GAP's proposed aims, actions and targets. An audit is currently being undertaken in preparation for starting on the Action Plan in 2008. Audit should be completed by March 2008. Action Plan will start after that provided funding is available.
Yorkshire Dales and Craven Lowlands	Launched	Produced first draft version in October 2005 and finally published in May 2007.

Table continued...

LGAP Name	Status	Summary Detail
Yorkshire (East) (incl. Redcar, Cleveland and North York Moors National Park)	In development	Process started in about 2003 but, due to internal fractures within the Partnership, primarily between the NEYGT and the local authorities, LGAP production has ground to a halt.
Yorkshire (West)	In development	<p>Draft LGAP currently in production and is expected to be completed by February 2008. The WYGT is in partnership with the NEYGT and the latter has been very helpful in obtaining funding and providing guidance on LGAP production.</p> <p>An audit was undertaken about 10 years ago and a re-audit of many of these sites is being undertaken as part of LGAP production.</p>

**Table B** Current status of company Geodiversity Action Plans

Company	Summary
Tarmac Ltd	<p>In about 2003/04 Eddie Bailey prepared a draft company GAP for Tarmac UK. In 2005 the Memorandum of Understanding between the Quarry Products Association, the Silica and Moulding Sands Association and English Nature encouraged the production of company biodiversity and geodiversity action plans within five years. Over the intervening period, Tarmac has given priority to the production of BAPs and, as a consequence, the draft GAP has not progressed to any significant degree. Over this period Tarmac was also closely involved in the production of the document 'Geodiversity Action Plans for Companies - A Good Practice Guide' prepared by Capita Symonds. The draft GAP was in close alignment with this Guidance, although the production of the Guidance did result in some minor changes being made.</p> <p>Formal approval and adoption of Tarmac's GAP is currently on hold pending the sale of the company and the decision of any new owner as to how this should be taken forward. This delay in the approval of the company GAP has also meant that Tarmac has not prepared any site-based GAPs. Once the company GAP is approved, it is expected that GAPs will be produced for all of Tarmac's c. 120 quarries, with the focus on 'Tier 1' sites (out of Tiers 1 - 3) where there will be the greatest value/benefit to both local communities and to the company.</p> <p>The absence of a company GAP or site GAPs has not been an impediment to things happening on the ground. Tarmac has undertaken a lot of work on geoconservation at many of its sites, including the development of access tracks and geological trails, installation of interpretation panels and viewing platforms, production of leaflets, retention/clearing of exposures for educational and interpretive use, and installation of rock baskets with different types of rocks from across the UK for schools visits.</p> <p>The company GAP is seen as providing a useful mechanism for explaining the company's approach to geoconservation and, as part of the company's natural diversity policy, it will provide a mechanism for reporting on its geodiversity work in the 'Report to Society' that is produced each year. The individual site GAPs will provide a structure approach to site development work and a mechanism for engaging with local communities.</p>
Lafarge Aggregates	<p>Lafarge is proposing to develop a national company GAP in the near future and a group of five geologists have been tasked to develop the framework for such a document by February 2008.</p> <p>Some work has been undertaken on developing individual sites but no details on this have been provided.</p>

Table continued...

Company	Summary
Aggregate Industries	<p>Aggregate Industries have been very proactive in seeking to develop the public use of quarry sites, especially in relation to their educational use. In all, the company has about 70 - 80 quarry sites, across the UK, some of which are active and others are disused.</p> <p>There is no corporate LGAP but the company has produced an internal working paper setting out its proposals in relation to the development of audits and action plans for individual sites. It is proposed that, over the next 2 - 3 years, the company will undertake audits of all sites that are considered to have potential for public/educational use in terms of the nature/level of their geological interest and their proximity to communities that might make use of them. The company has close links with Leicester University who are undertaking much of the audit work (on a consultancy basis and using students) and one of their graduates will be employed full time by the company from mid- 2008 to coordinate this work. The company has also worked with the voluntary sector (such as the Shropshire Geological Society on Wenlock Edge) on some site development work.</p> <p>To date audits have been completed on nine sites. Each audit involves an assessment of their geological and geomorphological features that may be of interest for educational purposes. Each audit generates a site action plan which is agreed with the local site manager. The site manager then has responsibility for implementation of the action plan, with the quarry meeting the cost of any such works. Work has already been undertaken on some sites, for example through improving access provision, developing geological trails, installing viewing galleries with interpretation panels, providing fossil collecting sites, installing boulder parks so that people can see different types of rocks etc.</p> <p>It is proposed that on completion of the site audits a glossy brochure will be produced to describe the sites where there are features of geological interest and which offer access/educational/interpretive facilities. This will encourage public use of the sites but it is recognised that it will also be of value to the company in terms of its own PR</p>
Smith and Sons (Bletchington) Ltd	Little work done on company GAPs to date but have hopes of making progress in the near future.

Table continued...

Company	Summary
Hanson Aggregates	<p>Hanson Aggregates produced and published in c. 2004/05 the document “UK Biodiversity and Geodiversity Action Plans’. The overall aim of this policy document is to describe the company’s approach to biodiversity and geodiversity issues in relation to its own activities, with a view to maximising benefits for the environment. Ten key objectives are identified: improve data and information flows; undertake an audit of geo and biodiversity; consider biodiversity and geodiversity in new proposals; education/research; review progress; improve employee awareness; management of SSSIs; contribute to UK BAP targets on reedbed and fen; and partnership links.</p> <p>Individual action plans are seen as an integral part of resource planning, site development and restoration. More specifically the GAPs will ‘deliver geological conservation and opportunities for learning by the protection, enhancement and creation of resources, and the provision of information.</p> <p>Under this policy, the company has implemented a rolling program of producing individual site GAPs since 2006. There are currently about 30 site GAPs for the whole country. To date the focus has been on producing site GAPs for sites with the most interesting geology or a history of receiving visitors. Each site GAP is accompanied by a set of Appendices which includes geological information, maps, photographs etc. The action plan at the back of each site GAP shows how it aims to achieve the 10 targets laid out in the company policy. The points are actioned mainly by the quarry manager or the site geologist. The documents are retained in the site document file, which contains copies of the sites legal documents for example planning permissions, consent details, various licences, etc. It is audited as part of the company’s Environmental Management process.</p>

**Table C** Use of English Nature guidance Local Geodiversity Action Plans - sharing good practice

Area	EN Guidance Used?	Notes
Abberley and Malvern Hills Geopark -May Hill	No	Had not seen EN Guidance document at time of LGAP production but it is considered to be a good basic guide which highlights need for objectives and common format. Will probably be useful for people starting out on LGAP process.
Abberley and Malvern Hills Geopark -Teme Valley	-	Not known. Staff member (Kate Harris) who produced LGAP has since left the Herefordshire and Worcestershire Earth Heritage Trust.
Abberley and Malvern Hills Geopark - South Shropshire	-	Not known. Staff member (Denise Instone) who produced LGAP is no longer a member of the Shropshire Geological Society.
Black Country	Yes	Referred to Guidance in early stages and also discussed LGAP with EN staff. Guidance not followed religiously, but it helped to focus minds on key points and was seen as a good starting point.
Cheshire region	No	Involved in production of Guidance and LGAP pre-dated its publication. Guidance very important at time but probably less relevant now as more LGAPs have been published and people can learn from good practice elsewhere in the country.
Cornwall and Isles of Scilly	Yes	Useful as a guide to help structure the LGAP and provides authoritative framework for LGAP. Would benefit from guidance on prioritising action plans.
Derbyshire and Peak District	N/A	Just starting to think about LGAP production.
Devon	No	The consultant commissioned to undertake preparation of the revised LGAP was asked to consider the EN guidance. However, it was not followed in that it was decided to continue with a fully integrated BAP and GAP for Devon.
Doncaster	Yes	Read it and thought it quite useful but did not follow it religiously. Main thing that was found useful was guidance to follow similar format to BAPs - and did that.
Dorset	Yes	Author of LGAP was involved in an EN training event from which the Guidance was developed and early draft of the Guidance was referred to in the preparation of the LGAP. In practice, the LGAP largely followed the Cheshire model.
Durham	No	The 'Audit' and 'Action Points Consultation Document' were prepared prior to the publications of the EN Guidance.
Gloucestershire - Cotswolds	Yes	Did not make great deal of use of it - had already established format of LGAP. Good basic guide providing common format/themes. Highlights need for clear objectives and joint working. Important to note that different approaches may be required in different areas.

Table continued...

Area	EN Guidance Used?	Notes
Gloucestershire - West (Forest of Dean)	Yes	But only to a limited degree. Experience gained from producing other LGAPs and from looking at what other people have done is very useful.
Gloucestershire - Severn Vale	N/A	Proposed LGAP.
Greater Manchester	Yes	Only produced a very rough draft so far but used Guidance as framework for this draft. Useful in providing background and context.
Halton Borough	No	Not seen this document. Borough lies within the area covered by the Cheshire region LGAP and Halton Borough LGAP is effectively an annual work programme that is based on the objectives within the Cheshire region LGAP.
Herefordshire	Yes	Used the Guidance as a starting point in drafting consultation documents that formed the first stage of the LGAP production process. Found it useful.
Isle of Wight	No	Do not recall having a copy of this Guidance - although the LGAP does, in fact, broadly follows the Guidance.
Lake District National Park	N/A	Proposed LGAP.
Lancashire	No	Production of the LGAP had started by the time that the EN Guidance was published. LGAP was based, in part, on the Cheshire model - a model which, in turn, had a significant influence on the EN Guidance.
Leicestershire and Rutland	No	Guidance had not been published at the time that the LGAP was being prepared.
London	N/A	N/A Proposed LGAP.
Malvern Hills AONB - Castlemorton	Yes	Used primarily to provide framework for the LGAP rather than in relation to detailed aspects. It would have been useful if it had included guidance on how LGAPs should be integrated with other plans and strategies and how best to influence local planning.
Norfolk	Yes	Trying to follow this EN Guidance in the development of the Norfolk LGAP. It provides clear and concise guidance. A checklist of the type of organisation that might be involved in an LAP and potential sources of funding might be useful.
North Pennines AONB	No	Guidance had not been published at the time of LGAP production.
Northumberland National Park	Yes	Looked at guidance but did not use it very much. Made greater reference to other LGAPs that had already been published - such as Black Country, Cheshire and North Pennines.
North Wessex Downs AONB	No	Felt that understood LGAP process sufficiently well that did not need EN Guidance.

Table continued...

Area	EN Guidance Used?	Notes
Oxfordshire - County	No	Guidance had not been published at the time that the LGAP was being prepared.
Oxfordshire - Lower and Middle Jurassic	No	Felt that understood LGAP process sufficiently well that did not need EN Guidance.
Sheffield	Yes	LGAP still at very early discussion as stage so little use made as yet.
Shropshire	Yes	Provides a useful summary. The guide prepared by Burek and Potter of April 2002 was also used - this provided more detailed guidance on the context for geological conservation in England and for the LGAP process.
Staffordshire	No	Aware of its existence but has not been referred to since EN Guidance had not been published at the time of LGAP preparation.
Suffolk	Yes	Used EN Guidance to provide framework and in identifying objectives. Also used Cheshire LGAP as model.
Tees Valley	No	LGAP produced before the Guidance had been published. However Guidance looks good and useful for people embarking on LGAP process.
Teignbridge	-	Not known. LGAP was prepared by consultant and it is not known whether they referred to this guidance.
Torbay	No	'The Nature of Torbay - A Local Biodiversity and Geodiversity Action Plan' follows the Devon approach of integrating biodiversity and geodiversity. Therefore, the Nature of Devon (Devon BAP) was used as a template instead of preparing a freestanding LGAP.
Greater Warwickshire	No	Most of background information and guidance came from looking at other LGAPs and talking to people who had done them or been involved with them.
Worcestershire	Yes	Provided useful background. Some organisations starting out on the LGAP process might find it useful to be provided with information about how to initiate an LGAP and where get financial support for the LGAP production.
Yorkshire Dales and Craven Lowlands	Yes	Found Guidance quite useful but made greater reference to the report of workshop in December 2003 which gave case study examples of LGAPs that had already been produced. 2004 guidance is a little brief - found larger document more useful.
Yorkshire - East (Redcar, Cleveland and North York Moors NP)	No	Find information on LGAPs that other organisations have produced to be more useful.
Yorkshire - West	No	Not aware of existence of such Guidance. Have studied LGAPs produced by other organisations and have found these very useful and informative.

**Table D** List of downloadable LGAPs (all web addresses Accessed 10 December 2008)

Area	Web Address for LGAP
Abberley and Malvern Hills Geopark - May Hill	Not available as web version.
Abberley and Malvern Hills Geopark- Teme Valley	Not available as web version.
Abberley and Malvern Hills Geopark- South Shropshire	Not available as web version.
Black Country	URL: <a href="http://www.laws.sandwell.gov.uk/ccm/content/urbanform/planninganddevelopment/ldf/supplementary-planning-documents/black-country-geodiversity-action-plan.en">www.laws.sandwell.gov.uk/ccm/content/urbanform/planninganddevelopment/ldf/supplementary-planning-documents/black-country-geodiversity-action-plan.en</a>
Cheshire region	URL: <a href="http://www.sustainablecheshire.org.uk/documents/lgap.pdf">www.sustainablecheshire.org.uk/documents/lgap.pdf</a>
Cornwall and Isles of Scilly	URL: <a href="http://www.cornwallwildlifetrust.org.uk/geology/Geodiversity_action_plan_Cornwall.htm">www.cornwallwildlifetrust.org.uk/geology/Geodiversity_action_plan_Cornwall.htm</a>
Derbyshire and Peak District	N/A. Proposed LGAP.
Devon	URL: <a href="http://www.devon.gov.uk/index/environment/natural_environment/biodiversity/devon_biodiversity_action_plan/bap-georeview.htm">www.devon.gov.uk/index/environment/natural_environment/biodiversity/devon_biodiversity_action_plan/bap-georeview.htm</a>
Doncaster	Draft version at: URL: <a href="http://www.doncaster.gov.uk/Living_in_Doncaster/Neighbourhoods/Planning/environmental_planning/Geodiversity/Geodiversity.asp">www.doncaster.gov.uk/Living_in_Doncaster/Neighbourhoods/Planning/environmental_planning/Geodiversity/Geodiversity.asp</a>
Dorset	URL: <a href="http://www.jurassiccoast.com/downloads/lgap/dorset_lgap1_1.pdf">www.jurassiccoast.com/downloads/lgap/dorset_lgap1_1.pdf</a>
Durham	Audit at: URL: <a href="http://www.sustainableaggregates.com/docs/theme3/miro_samp_1_003d.pdf">www.sustainableaggregates.com/docs/theme3/miro_samp_1_003d.pdf</a> 'Action Points Consultation Document' not available as web version.
Gloucestershire - Cotswolds	Not available as web version.
Gloucestershire - West (Forest of Dean)	LGAP currently only in 'outline' form. Not available as web version.
Gloucestershire - Severn Vale	N/A. Proposed LGAP.

Table continued...

Area	Web Address for LGAP
Greater Manchester	N/A. LGAP in development.
Halton Borough	Not available on the internet. LGAP is simply a brief action plan (updated annually) that uses the objectives listed in the Cheshire region LGAP as a framework for detailing targets and actions for the year ahead and reviewing progress to date.
Herefordshire	'Consultation Document' at: URL: <a href="http://www.earthheritagetrust.org/blog/ProjectsPartnerships/CurrentProjects/archives/2007/11/12/3349002.html">www.earthheritagetrust.org/blog/ProjectsPartnerships/CurrentProjects/archives/2007/11/12/3349002.html</a>
Isle of Wight	URL: <a href="http://www.dinosaurisle.com/lgap.aspx">www.dinosaurisle.com/lgap.aspx</a>
Lake District National Park	N/A. Proposed LGAP.
Lancashire	URL: <a href="http://www.lancashirerigs.org.uk/images/Final_draft_action_plan.pdf">www.lancashirerigs.org.uk/images/Final_draft_action_plan.pdf</a>
Leicestershire and Rutland	URL: <a href="http://www.sustainableaggregates.com/docs/theme3/miro_samp_1_003l.pdf">www.sustainableaggregates.com/docs/theme3/miro_samp_1_003l.pdf</a>
London	N/A. Proposed LGAP.
Malvern Hills AONB (Castlemorton)	Not available as web version
Norfolk	N/A. LGAP in development.
North Pennines AONB	URL: <a href="http://www.northpennines.org.uk/index.cfm?Articleid=5137">www.northpennines.org.uk/index.cfm?Articleid=5137</a>
Northumberland National Park	URL: <a href="http://www.northumberlandnationalpark.org.uk/geodiversityactionplan.pdf">www.northumberlandnationalpark.org.uk/geodiversityactionplan.pdf</a>
North Wessex Downs AONB	LGAP currently only in draft form. Not available as web version.
Oxfordshire (County)	Not available as web version.
Oxfordshire (Lower and Middle Jurassic)	URL: <a href="http://www.oxfordshiregt.org/L_MJurLGAP.pdf">www.oxfordshiregt.org/L_MJurLGAP.pdf</a>
Sheffield	N/A. LGAP in development.
Shropshire	URL: <a href="http://www.shropshiregeology.org.uk/RIGS/sgap_publicity_leaflet.pdf">www.shropshiregeology.org.uk/RIGS/sgap_publicity_leaflet.pdf</a>
Staffordshire	URL: <a href="http://sgap.staffs-ecology.org.uk/">http://sgap.staffs-ecology.org.uk/</a>
Suffolk	Draft version at: URL: <a href="http://www.geosuffolk.co.uk/geodiversityactionplan.html">www.geosuffolk.co.uk/geodiversityactionplan.html</a>
Tees Valley	URL: <a href="http://www.teeswildlife.org/gap.htm">www.teeswildlife.org/gap.htm</a> Database at: URL: <a href="http://www.teeswildlife.org/GAP%20Database/CLICK%20HERE%20TO%20START.htm">www.teeswildlife.org/GAP%20Database/CLICK%20HERE%20TO%20START.htm</a>

Table continued...

Area	Web Address for LGAP
Teignbridge	URL: <a href="http://www.teignbridge.gov.uk/media/pdf/s/c/Part_2_T11_Pits_Quarries_Cuttings_Action_Plan.pdf">www.teignbridge.gov.uk/media/pdf/s/c/Part 2 T11 Pits Quarries Cuttings Action Plan.pdf</a>
Torbay	URL: <a href="http://www.countryside-trust.org.uk/lbap.htm">www.countryside-trust.org.uk/lbap.htm</a>
Greater Warwickshire	N/A. LGAP in development.
Worcestershire	'Consultation Document' at: URL: <a href="http://www.earthheritagetrust.org/blog/ProjectsPartnerships/CurrentProjects/_archives/2007/1/12/3349002.html">www.earthheritagetrust.org/blog/ProjectsPartnerships/CurrentProjects/_archives/2007/1/12/3349002.html</a>
Yorkshire Dales and Craven Lowlands	URL: <a href="http://www.nygp.org.uk/documents.php">www.nygp.org.uk/documents.php</a>
Yorkshire (East - Redcar, Cleveland and North York Moors National Park)	N/A. LGAP in development.
Yorkshire (West)	N/A. LGAP in development.

**Table E** LGAP key objectives and priorities (information gathered from published LGAP)

LGAP	Geological conservation and enhancement	Improved site management - through action or advice	Joint working & involvement	Influencing policy etc.	Awareness, appreciation & understanding	Geotourism	Information, education & life-long learning	Audit (for example sites, skills, resources), research & data storage	Financial and/or structural sustainability to ensure delivery	Monitoring and review	Geopark and/or WHS priorities
A&MH Geopark - May Hill	✓	✓			✓		✓	✓			
A&MH Geopark - Teme	✓	✓					✓	✓			
A&MH Geopark - S. Shropshire	No copy available										
Black Country	✓	✓		✓	✓		✓	✓	✓		
Cheshire			✓	✓	✓		✓	✓	✓	✓	
Cornwall & Isles of Scilly				✓	✓	✓		✓	✓		
Derbyshire & Peak District	N/A. Proposed LGAP										
Devon		✓		✓	✓			✓			
Doncaster								✓			
Dorset	✓			✓	✓			✓			✓
Durham	✓		✓	✓	✓	✓		✓		✓	
Gloucestershire/ Cotswolds	✓	✓		✓	✓	✓		✓	✓	✓	✓

Table continued...

LGAP	Geological conservation and enhancement	Improved site management - through action or advice	Joint working & involvement	Influencing policy etc.	Awareness, appreciation & understanding	Geotourism	Information, education & life-long learning	Audit (for example sites, skills, resources), research & data storage	Financial and/or structural sustainability to ensure delivery	Monitoring and review	Geopark and/or WHS priorities
Gloucestershire/ West - Forest of Dean	✓	✓		✓	✓	✓		✓	✓	✓	
Gloucestershire/ Severn Vale	N/A. Proposed LGAP.										
Greater Manchester	N/A. LGAP in development										
Halton Borough			✓	✓	✓		✓	✓	✓	✓	
Herefordshire	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Isle of Wight	✓			✓		✓	✓	✓			✓
Lake District NP	N/A. Proposed LGAP										
Lancashire			✓	✓	✓			✓		✓	
Leicestershire & Rutland	✓	✓	✓		✓	✓	✓	✓			
London	N/A. Proposed LGAP										
Malvern Hills AONB								✓			
Norfolk	N/A. LGAP in development										
North Pennines AONB	✓	✓	✓	✓	✓	✓	✓	✓			✓

Table continued...

LGAP	Geological conservation and enhancement	Improved site management - through action or advice	Joint working & involvement	Influencing policy etc.	Awareness, appreciation & understanding	Geotourism	Information, education & life-long learning	Audit (for example sites, skills, resources), research & data storage	Financial and/or structural sustainability to ensure delivery	Monitoring and review	Geopark and/or WHS priorities
Northumberland NP	✓	✓	✓	✓	✓	✓	✓	✓			
North Wessex Downs	✓	✓	✓		✓	✓	✓	✓			
Oxfordshire County	✓	✓	✓		✓		✓	✓			
Oxfordshire (Jurassic)	✓		✓	✓	✓		✓	✓	✓	✓	
Sheffield	N/A. LGAP in development										
Shropshire	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Staffordshire	✓	✓	✓		✓		✓	✓		✓	
Suffolk	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Tees Valley		✓			✓		✓	✓			
Teignbridge	✓				✓			✓			
Torbay	✓		✓		✓		✓			✓	✓
Warwickshire	✓	✓		✓	✓		✓	✓			
Worcestershire	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
York Dales & Craven Lowlands	✓	✓	✓		✓	✓	✓	✓		✓	✓

Table continued...

LGAP	<p>Geological conservation and enhancement</p> <p>Improved site management - through action or advice</p> <p>Joint working &amp; involvement</p> <p>Influencing policy etc.</p> <p>Awareness, appreciation &amp; understanding</p> <p>Geotourism</p> <p>Information, education &amp; life-long learning</p> <p>Audit (for example sites, research &amp; data storage)</p> <p>Financial and/or structural sustainability to ensure delivery</p> <p>Monitoring and review</p> <p>Geopark and/or WHS priorities</p>
Yorkshire North East	N/A. LGAP in development
Yorkshire West	N/A. LGAP in development

**Table F** LGAP key objectives and priorities (information based on responses to question 2b of questionnaires)

Area	Objective <sup>1</sup>				Notes
	Audit	Communication & Education	Influencing Planning	Conservation & Management	
Abberley & Malvern Hills Geopark - May Hill		✓			Focus on education and interpretation reflected priorities of the Geopark. Increasing interest now in conservation & management with acquisition of one site by Gloucestershire GT.
Abberley & Malvern Hills Geopark - Teme Valley					Not known because staff member who produced the LGAP has since left the organisation (Herefordshire and Worcestershire Earth Heritage Trust).
Abberley & Malvern Hills Geopark - South Shropshire					Not known because staff member who produced the LGAP has since left the organisation (Shropshire Geological Society).
Black Country			✓		Would like to have gave them all equal weight but influencing local authorities was most important and is seen as critical to making progress with other objectives.
Cheshire region		✓	✓		
Cornwall and Isles of Scilly	✓	✓			Priorities are now shifting and 'conservation and management' and 'greater resources' are becoming of increasing importance.
Derbyshire and Peak District					N/A. LGAP only in very early stages of development.
Devon	✓	✓			Increasing emphasis on communication and education in recent years.

Table continued...

Area	Objective <sup>1</sup>					Notes
	Audit	Communication & Education	Influencing Planning	Conservation & Management	Greater Resources	
Doncaster	✓	✓	✓	✓	✓	All important - can't distinguish between them in terms of importance.
Dorset						No answer to question because staff member who produced the LGAP has since left the organisation.
Durham						'Action Points Consultation Document' not being taken forward by Durham County Council and no-one within DCC has knowledge of document and is able to comment.
Gloucestershire - Cotswolds	✓	✓	✓	✓		An audit is an essential precursor to LGAP preparation, although in many cases a review of RIGS records will provide sufficient information for this purpose. Once LGAP has been launched, priorities can address other issues such as conservation and management and influencing planning - with communication tagged on to these.
Gloucestershire - West (Forest of Dean)	✓	✓	✓	✓		
Gloucestershire - Severn Vale						N/A Proposed LGAP.
Greater Manchester	✓					Important to undertake audit as first stage of LGAP production.
Halton Borough	✓	✓		✓	✓	Approximately equal weight being given to each of these four objectives.
Herefordshire	✓	✓	✓	✓	✓	All important - no distinction between them.
Isle of Wight		✓		✓		

Table continued...

Area	Objective <sup>1</sup>					Notes
	Audit	Communication & Education	Influencing Planning	Conservation & Management	Greater Resources	
Lake District National Park						N/A. Proposed LGAP.
Lancashire		✓				Recognise that this priority reflects the pragmatic approach of the Lancashire LGAP - priorities are dependent on the resources (both financial and manpower) available.
Leicestershire and Rutland	✓	✓	✓	✓	✓	Recognise that priorities may change as and when greater resources become available.
London						N/A Proposed LGAP.
Malvern Hills AONB - Castlemorton		✓		✓		With time, communication and education is becoming more important and conservation and management is becoming less important.
Norfolk						LGAP is still in early stages of production and have yet to decide on priorities.
North Pennines AONB	✓	✓			✓	In practice, the focus has been primarily on education, interpretation and tourism - this reflects the priorities attached to funding streams.
Northumberland National Park	✓	✓	✓			Expect that conservation and management will become more important with time as other issues are addressed.
North Wessex Downs AONB		✓				

Table continued...

Area	Objective <sup>1</sup>					Notes
	Audit	Communication & Education	Influencing Planning	Conservation & Management	Greater Resources	
Oxfordshire - County						No information available.
Oxfordshire - Lower and Middle Jurassic	✓	✓				
Sheffield	✓				✓	LGAP still at very early discussion stage but greatest priority is expected to be given to these aspects.
Shropshire				✓	✓	At strategic level, all objectives equally important but recognise that action cannot take place without funds and that impetus for actions comes from cons'n and man't.
Staffordshire		✓			✓	
Suffolk	✓	✓	✓	✓	✓	All objectives have been given equal weight at this stage. May refine this as final version of LGAP is developed.
Tees Valley	✓	✓				Site management likely to increase in importance with time.
Teignbridge			✓			Audit, communication and education and conservation and management also very important but greatest priority to influencing planning.
Torbay	✓	✓	✓	✓		Response to questionnaire reiterated key objectives within the LGAP. All objectives were given equal standing within the Plan.
Greater Warwickshire		✓	✓	✓	✓	Audit seen as being of a lower priority because adequate information on geological sites and resources was available from existing records.

Table continued...

Area	Objective <sup>1</sup>				Notes
	Audit	Communication & Education	Influencing Planning	Conservation & Management	
Worcestershire	✓	✓	✓	✓	Of these, audit is the most important. Currently undertaking an audit in preparation for preparing an Action Plan in 2008 and then moving on to implementation.
Yorkshire Dales & Craven Lowlands	✓	✓	✓	✓	At this early stage in the life of the LGAP, audit is the most important aspect - need this information before being able to move forward on other priorities.
Yorkshire - East (Redcar, Cleveland & North York Moors NP)					✓
Yorkshire - West	✓	✓	✓		Communication is vital - whether with the planners, schools, the general public. Important to raise profile of geo-conservation.

<sup>1</sup> These objectives are defined in the English Nature Guidance as follows:

Geodiversity audit - can include an audit of the geodiversity resource at varying levels of detail, audit of available information and audit of available skills within the partner organisations and the local community

Communication and education - promoting an understanding and a wider awareness of geodiversity, encouraging participation in the action planning process and interpretation of the geological resource

Influencing planning - encouraging the strategic development of protection for the geodiversity resource through local government plans and planning guidance

Conservation and management - establishing clear goals for the management and conservation of geological sites, natural processes and the geodiversity of our landscape

Resources - establishing clear objectives for the resourcing (money and people) of the action planning process in order to sustain its future momentum

**Table G** Composition of LGAP Partnership (information based on published LGAP)

LGAP	Multi-organisation Partnership (for example SRPs, BP)	Statutory Agencies	Local Authorities	Parish Councils	BGS	National Parks & AONBs	RIGS, Geology Trusts & geological societies	Wildlife Trusts	Other Voluntary Groups	Land-owners (incl. NT)	Minerals Industry	Museums & Record Centres	Education & Academic Institutions	Other
A&MH Geopark - May Hill		✓					✓							✓ <sup>1</sup>
A&MH Geopark - Teme							✓							
A&MH Geopark - S. Shrop.	No copy of LGAP available													
Black Country	✓	✓	✓				✓	✓						
Cheshire		✓					✓		✓			✓	✓	
Cornwall & Isles of Scilly							✓	✓				✓		
Derbyshire & Peak District	N/A. Proposed LGAP													
Devon <sup>2</sup>	✓													
Doncaster			✓		✓									
Dorset		✓	✓		✓	✓	✓	✓	✓	✓		✓		
Durham			✓		✓						✓ <sup>3</sup>			
Gloucestershire/Cotswolds						✓	✓				✓ <sup>4</sup>			✓ <sup>5</sup>
Gloucestershire/West - Forest of Dean		✓	✓			✓	✓	✓			✓			✓ <sup>6</sup>
Gloucestershire/Severn Vale	N/A. Proposed LGAP													

Table continued...

LGAP	Multi-organisation Partnership (for example SRPs, BP)	Statutory Agencies	Local Authorities	Parish Councils	BGS	National Parks & AONBs	RIGS, Geology Trusts & geological societies	Wildlife Trusts	Other Voluntary Groups	Land-owners (incl. NT)	Minerals Industry	Museums & Record Centres	Education & Academic Institutions	Other
Greater Manchester	N/A. LGAP in development													
Halton Borough	No information included in LGAP <sup>7</sup>													
Herefordshire		✓	✓		✓		✓			✓				✓
Isle of Wight	✓	✓	✓			✓	✓		✓	✓		✓	✓	
Lake District NP	N/A. Proposed LGAP													
Lancashire							✓							
Leicestershire & Rutland					✓		✓	✓			✓	✓	✓	✓ <sup>8</sup>
London (proposed)		✓	✓		✓		✓				✓			
Malvern Hills AONB						✓	✓							
Norfolk	N/A. LGAP in development													
North Pennines AONB		✓			✓	✓								
Northumberland NP		✓			✓	✓		✓			✓			
North Wessex Downs						✓	✓							
Oxfordshire County							✓							
Oxfordshire (Jurassic)		✓					✓							✓ <sup>9</sup>

Table continued...

LGAP	Multi-organisation Partnership (for example SRPs, BP)	Statutory Agencies	Local Authorities	Parish Councils	BGS	National Parks & AONBs	RIGS, Geology Trusts & geological societies	Wildlife Trusts	Other Voluntary Groups	Land-owners (incl. NT)	Minerals Industry	Museums & Record Centres	Education & Academic Institutions	Other
Sheffield	N/A. LGAP in development													
Shropshire		✓	✓		✓	✓	✓	✓	✓ <sup>10</sup>	✓		✓	✓	✓ <sup>11</sup>
Staffordshire		✓	✓				✓	✓			✓		✓	
Suffolk	N/A. LGAP in development													
Tees Valley		✓					✓	✓						
Teignbridge <sup>12</sup>		✓ <sup>13</sup>	✓											
Torbay <sup>14</sup>		✓	✓						✓					✓
Warwickshire		✓			✓		✓					✓		
Worcestershire			✓		✓		✓			✓				✓
York Dales & Craven Lowlands		✓	✓		✓	✓					✓			
Yorkshire East	N/A. LGAP in development													
Yorkshire West	N/A. LGAP in development													

<sup>1</sup> European Geoparks

<sup>2</sup> Devon Biodiversity Partnership & South West Regional Biodiversity Partnership

<sup>3</sup> Mineral Industry Research Organisation (MIRO) provided funding from the ASLF via the Office of The Deputy Prime Minister

<sup>4</sup> Mineral Industry Research Organisation (MIRO) provided funding from the ASLF via the Office of The Deputy Prime Minister

<sup>5</sup> IHS Energy

<sup>6</sup> Local archaeological group

<sup>7</sup> Borough lies within Cheshire region. LGAP is very brief action plan using Cheshire objectives and applying these to the local area consultant

<sup>8</sup> National Forest Company and local geological consultant

<sup>8</sup> National Forest Company and local geological consultant

<sup>9</sup> GWP Consultants

<sup>10</sup> Shropshire Hills Discovery Centre, Shropshire Caving and Mining Club, Abberley and Malvern Hills Geopark

<sup>11</sup> Shropshire Mines Trust

<sup>12</sup> Relates to Teignbridge BAP rather than the GAP since the latter is embedded within the former

<sup>13</sup> Devon Biodiversity Partnership & South West Regional Biodiversity Partnership

<sup>14</sup> Relates to Torbay BAP & GAP since it is a combined document

**Table H** Composition of LGAP Partnership (information based on responses to questionnaire)

LGAP	Statutory Agencies	Local Authorities	National Parks & AONBs	Parish Councils	BGS	RIGS & Geological Societies/ Trusts	Wildlife Trusts	Other Voluntary Groups & Charities	National Trust	Other Land-owners	Minerals Industry	Museums & Record Centres	Educational & Academic Institutions	Other
A&MH Geopark - May Hill		3				1				3				2 <sup>1</sup>
A&MH Geopark - Teme						1								2 <sup>1</sup>
A&MH Geopark - S. Shrop.	No information available													
Black Country	2,3	2			2	1	2		3			1		2 <sup>2A</sup> ,3 <sup>2B</sup>
Cheshire	2,3	1			2	1		2	3		3	2	1,3	2 <sup>3</sup>
Cornwall and IoS	3	3				1	2		3			3	3	
Derbyshire & Peak District					3	1 <sup>4</sup>								
Devon <sup>5</sup>	2,3	1,2	2		3	3	2	3	3	3	3		3	
Doncaster	2	1			2			2 <sup>6A</sup>			2,3	3		3 <sup>6B</sup>
Dorset <sup>7</sup>	3	1	3			1	3							
Durham	No partnership is understood to exist - see Table A1													
Glos/Cotswolds	2		2			1	3				2	3	2	
Glos/West - Forest of Dean	2	2	2		2	1	2				2		3	

Table continued...

LGAP	Statutory Agencies	Local Authorities	National Parks & AONBs	Parish Councils	BGS	RIGS & Geological Societies/ Trusts	Wildlife Trusts	Other Voluntary Groups & Charities	National Trust	Other Land-owners	Minerals Industry	Museums & Record Centres	Educational & Academic Institutions	Other
Glos/Severn Vale	N/A Proposed LGAP													
Greater Manchester <sup>8</sup>		1				1								
Halton Borough		1						2				2		
Herefordshire	3	2	3		2	1	3	2 <sup>9A</sup>	2	3	2		3	2 <sup>9B</sup>
Isle of Wight	2	2	3			3		3 <sup>10A</sup>	3	3		1,3	3	3 <sup>10B</sup>
Lake District NP	N/A Proposed LGAP													
Lancashire	2,3	2				1	2							3 <sup>11</sup>
Leicestershire & Rutland <sup>12A</sup>	3	3			1	2	2				2	2	2	3 <sup>12B</sup>
London-SG for prop'd LGAP	2	1,2			2	2					2			
Malvern Hills AONB			1	3		1								3 <sup>13</sup>
Norfolk	2	2			2	1	2					2		
North Pennines AONB	3	3	1		3			3		3	3	3	3	3 <sup>14</sup>
Northumberland NP <sup>15</sup>	2		1		1	3	3							
North Wessex Downs	3		2			1,2		3 <sup>16A</sup>				3		3 <sup>16B</sup>

Table continued...

LGAP	Statutory Agencies	Local Authorities	National Parks & AONBs	Parish Councils	BGS	RIGS & Geological Societies/ Trusts	Wildlife Trusts	Other Voluntary Groups & Charities	National Trust	Other Land-owners	Minerals Industry	Museums & Record Centres	Educational & Academic Institutions	Other
Oxfordshire County	No clear information available - see Table A1													
Oxfordshire (Jurassic)		3		3		1	3			3	3			
Sheffield <sup>17</sup>						2		1						
Shropshire	3	1	1		3	1	2	3	3	3	3	2	3	2 <sup>18</sup>
Staffordshire <sup>19</sup>					3	1								
Suffolk	2 <sup>20</sup>				2 <sup>20</sup>	1								
Tees Valley		3				2,3	1							3 <sup>21</sup>
Teignbridge <sup>22</sup>		1				2								
Torbay	2	2			3	2		1		3		3	3	1 <sup>23</sup>
Warwickshire		2			2	1						1		
Worcestershire	3	2	3		2	1			2		3	3	2	2 <sup>24</sup>
York Dales & Craven Lowlds	2	2,3	1,3		1	3					2,3		3	
Yorkshire North East <sup>26</sup>						1								
Yorkshire West		2				1						2		

<sup>1</sup> Abberley and Malvern Hills Geopark

<sup>2A</sup> Black Country Consortium comprising the four local authorities and Chamber of Commerce (= sub Regional Development Agency)

<sup>2B</sup> British Waterways

<sup>3</sup> Women's Institute

<sup>4</sup> Early days in production of the LGAP. Derbyshire RIGS is currently taking the lead but it is expected that a wide range of partners and stakeholders will, in due course, be invited to become involved. National Stone Centre is likely to play a key role

<sup>5</sup> The Devon GAP is integrated within the Devon BAP and the list of key stakeholders therefore comprises the members of the Devon Biodiversity Partnership which comprise 70+ organisations

<sup>6A</sup> Natural History Society

<sup>6B</sup> Yorkshire Water

<sup>7</sup> LGAP Partnership has largely stalled at present time

<sup>8</sup> Early days in LGAP production but lead being taken by Greater Manchester RIGS and G Greater Manchester Geological Unit (a planning unit funded by the Greater Manchester local authorities). A wider partnership has yet to be formed

<sup>9A</sup> Woolhope Naturals Field Club

<sup>9B</sup> Abberley and Malvern Hills Geopark; Malvern Hills Conservators & Duchy of Cornwall

<sup>10A</sup> IoW Natural History and Archaeological Society

<sup>10B</sup> IoW Biodiversity Partnership United Utilities

<sup>11</sup> Relates to Teignbridge BAP rather than the GAP since the latter is embedded within the former

<sup>12A</sup> LGAP issues are dealt with through the geological subcommittee of the Leicestershire and Rutland Wildlife Trust. This committee comprises all of the organisations listed

<sup>12B</sup> Local geological consultants, National Forest, a local 'A' level geology teacher & retired geologists

<sup>13</sup> Malvern Hills Conservators

<sup>14</sup> North Pennines AONB Geopark Advisory Groups

<sup>15</sup> Hoping to broaden out the Partnership now that the LGA has been produced

<sup>16A</sup> Local conservation groups

<sup>16B</sup> YHA

<sup>17</sup> Early days. No formal partnership as yet - just 'participants'. Sorby Natural History Society is currently leading process. Local RIGS group also involved

<sup>18</sup> Shropshire Caving and Mining Club

<sup>19</sup> Partnership dissolved because ceased to function and RIGS Group took over. RIGS Gp has strong input from local universities, museums and Wildlife Trust

<sup>20</sup> Proposed/hoped/expected that these organisations (that is, NE, EH & BGS) will become part of the core partnership

<sup>21</sup> Cleveland Industrial Archaeologists

<sup>22</sup> A formal partnership was not seen as appropriate given time and resources available to the local authority

<sup>23</sup> English Riviera Geopark Organisation

<sup>24</sup> Malvern Hills Conservators; Abberley and Malvern Hills Geopark & Worcestershire Biodiversity Partnership

<sup>25</sup> North Yorkshire Geology Trust has tried to form a partnership it has yet to get off the ground. Trust currently leading on LGAP

**Table I** Relative Progress in Implementing the five objectives in English Nature guidance Local Geodiversity Action Plans - sharing good practice (information based on responses to question 4d)

LGAP	Objective					Notes	
	Audit	Communication & Education	Influencing Planning	Conservation & Management	Greater Resources		Other
Abberley & Malvern Hills Geopark - May Hill		✓✓		✓✓			<p>Produced as a 'pilot/trial' LGAP by Gloucestershire Geology Trust for the Geopark.</p> <p>Progress has been made in implementing aspects relating to management and awareness.</p>
Abberley & Malvern Hills Geopark - Teme Valley							<p>Produced as a 'pilot/trial' LGAP by the Herefordshire and Worcestershire Earth Heritage Trust for the Geopark.</p> <p>Little progress has been made in implementing it.</p>
Abberley & Malvern Hills Geopark - South Shropshire							<p>Produced as a 'pilot/trial' LGAP by the Herefordshire and Worcestershire Earth Heritage Trust for the Geopark.</p> <p>Little progress has been made in implementing it.</p>

Table continued...

LGAP	Objective					Key ✓✓✓ = good progress; ✓✓ = moderate progress; ✓ = a little progress; blank = no progress
	Audit	Communication & Education	Influencing Planning	Conservation & Management	Greater Resources	
Black Country		✓✓	✓✓✓	✓		<p>Planning is seen as important in terms of influencing LDFs and the RSS.</p> <p>Funding is less of a hindrance to implementation than people finding time.</p> <p>Would like to appoint F/T Project Officer so that could make greater progress.</p> <p>Less action on cons'n and man't because many sites are already wardened and managed as part of management of other interests (for example by local authorities)</p>
Cheshire region		✓✓✓				<p>Considered important that people understand geology if they are to be interested in conserving geological features - so have focussed on educating students, planners landowners, general public, policy makers, targeted groups. Will improve sustainability of the LGAP</p> <p>Funding is less of a hindrance to implementation than people finding time but many people enthusiastic about helping with delivery of LGAP actions.</p> <p>Monitoring is being undertaken but is haphazard rather than systematic.</p>

Table continued...

LGAP	Objective					Key ✓✓✓ = good progress; ✓✓ = moderate progress; ✓ = a little progress; blank = no progress
	Audit	Communication & Education	Influencing Planning	Conservation & Management	Greater Resources	
Cornwall and Isles of Scilly	✓✓✓	✓✓	✓✓	✓✓	✓	<p>Key problem is accessing adequate funding and this will be a priority for the future.</p> <p>Additional problem is the need to rely on a very small committed group of volunteers from the Cornwall RIGS group to implement the LGAP.</p> <p>Monitoring is only informal but this could be incorporated in an LGAP review.</p>
Derbyshire and Peak District						N/A. LGAP is only at development stage.
Devon	✓✓	✓✓✓	✓✓	✓	✓✓	<p>Leads on delivery are Devon CC and Devon RIGS group - often working in partnership with others (for example with industry players on interpretation and production of management plans and site clearance work)</p> <p>Encouraged by high level of public interest in interpretive material produced.</p> <p>Would like to make more progress on implementation - staff time is often greater problem than funding.</p> <p>No structured monitoring - but would like to develop system to do so.</p>
Doncaster						N/A. LGAP is only at development stage.

Table continued...

LGAP	Objective					Notes
	Audit	Communication & Education	Influencing Planning	Conservation & Management	Greater Resources	
Dorset		✓✓				<p>Implementation is limited due to lack of funding and interest/commitment by many organisations that could assist.</p> <p>Majority of LGAP delivery is by Dorset AONB and local RIGS Group. Latter has very limited capacity but has successfully delivered on interpretive projects.</p> <p>No success in influencing planning system.</p>
Durham						<p>LGAP included Audit and Action points Consultation Document. Audit published, but Action Plan has yet to be approved by Durham CC and is currently 'on hold'. There has therefore been no progress on delivery.</p>
Gloucestershire - Cotswolds	✓✓	✓✓				<p>Lead on delivery is Gloucestershire Geology Trust.</p> <p>Little activity due to lack of resources. Key future priority is the appointment of dedicated LGAP Officer to drive forward the actions, especially in relation to securing long term funding, generating local authority support and raising awareness.</p>
Gloucestershire - West (Forest of Dean)						N/A. LGAP is only at development stage.
Gloucestershire - Severn Vale						N/A. Proposed LGAP
Greater Manchester						N/A. LGAP is only at development stage.

Table continued...

LGAP	Objective					Key ✓✓✓ = good progress; ✓✓ = moderate progress; ✓ = a little progress; blank = no progress
	Audit	Communication & Education	Influencing Planning	Conservation & Management	Greater Resources	
Halton Borough	✓✓✓	✓✓		✓	✓✓	<p>Audit is being given highest priority, (with funding from the HLF) since this will provide the Council with better information about its geological assets and therefore enable it to be more proactive in relation to their conservation and promotion.</p> <p>Progress also being made in undertaking site management works (for example cleaning up exposures, improving access, and providing information and interpretation. Council takes the lead on implementation, in partnership with the local records centre</p>
Herefordshire	✓✓✓					Audit being undertaken as first priority and will be completed for 2008. Will then move into finalisation of LGAP and implementation of other priorities.
Isle of Wight	✓✓✓	✓✓				✓✓ 'Other' = pursuit of Geopark status. In parallel with the development LGAP, a two year study was undertaken to identify whether the IoW should apply for Geopark or WHS status. It was decided to pursue Geopark status - this was seen as a key mechanism for attracting funding which would allow implementation of many of the LGAP actions. Due to key staff leaving post and limited financial resources, this process is now on hold.
Lake District National Park						N/A. Proposed LGAP.

Table continued...

LGAP	Objective					Notes
	Audit	Communication & Education	Influencing Planning	Conservation & Management	Greater Resources	
Lancashire	✓✓	✓✓✓	✓✓			

**Key**  
✓✓✓ = good progress; ✓✓ = moderate progress; ✓ = a little progress; blank = no progress

Lancashire RIGS is leading on implementation and get other organisations involved as and when necessary. EN/NE has been especially helpful.

Audit work has focused on developing an understanding of physical landscapes and geodiversity sites in Lancashire with a view to producing a geodiversity map of Lancashire and updating and/or replacing existing geodiversity databases.

Significant progress made in getting local authorities to put geoconservation on equal footing with biodiversity conservation. Consultation working well.

Lack of funding is having a significant affect on what are able to do and professionalism with which are able to do it. Dependent on voluntary input with small and sporadic funding stream - mostly for specific projects.

No structured monitoring - will be addressed by 5 year review

Table continued...

LGAP	Objective					Notes
	Audit	Communication & Education	Influencing Planning	Conservation & Management	Greater Resources	
Leicestershire and Rutland	✓✓✓	✓✓✓		✓✓		<p>Priorities for future implementation focus on harmonising and improving recording systems for RIGS and other geological sites across two counties.</p> <p>Aim to work with local authorities, minerals industry and other partners on taking forward implementation especially in relation to education and geotourism. Also hope to progress designation of Charnwood Forest as Geopark or World Heritage Site and appointment of F/T geoconservation officer.</p> <p>Lack of funds is main impediment to progressing implementation.</p>
London						N/A. Proposed LGAP.
Malvern Hills AONB - Castlemorton				✓		<p>Limited progress made on a couple of sites.</p> <p>LGAP process not considered to be very useful or successful as a mechanism for delivering geoconservation objectives.</p>
Norfolk						<p>N/A. LGAP in development</p> <p>Priority likely to be given to influencing planning since this will be important in getting geoconservation embedded in the LDFs.</p> <p>Concerned that adequate funding may not be available for effective implementation.</p>

Table continued...

LGAP	Objective					Other	Notes
	Audit	Communication & Education	Influencing Planning	Conservation & Management	Greater Resources		
North Pennines AONB	✓✓✓	✓✓✓	✓✓	✓	✓✓	✓✓✓	<p>'Other' = promotion of geotourism.</p> <p>Funding is not a problem - the main constraint is peoples' time.</p> <p>Progress is being monitored through the Geopark Advisory Group</p>
Northumberland National Park							<p>LGAP only recently launched and therefore no implementation to date.</p> <p>Priority for future is to get more people/organisations involved - especially local RIGS Group. Other priorities will be communication and education. Conservation and management will rise in importance as get more organised with local groups etc</p> <p>Some funding available but availability of peoples' time is likely to be a greater constraint on progress</p>

Table continued...

LGAP	Objective					Key ✓✓✓ = good progress; ✓✓ = moderate progress; ✓ = a little progress; blank = no progress
	Audit & Education	Communication & Education	Influencing Planning	Conservation & Management	Greater Resources	
North Wessex Downs AONB						<p>✓✓ Early days and no progress to date - due in large part to lack of funding.</p> <p>Priorities for implementation are likely to be audit and raising awareness with key delivery organisations being the Oxfordshire Geology Trust, Wiltshire Geology Group, Berkshire RIGS Group and AONB.</p> <p>In common with the Oxfordshire Jurassic LGAP (see below) a further problem may be that the LGAP was produced by one person and has little wider ownership - possibly resulting in a lack of enthusiasm for implementation. Some progress made in trying to develop wider LGAP partnership - see 'Other' category in table to left</p>
Oxfordshire - County						There appears to be some confusion about responsibility for the implementation of this LGAP - see Table A1. Although the LGAP was produced in 2002 it is not thought that it has been implemented, at least in recent years,
Oxfordshire - Lower and Middle Jurassic	✓✓	✓✓		✓		A lack of funding has been a major constraint on implementing the LGAP. It is understood that a further problem may have been that the LGAP was prepared by a single individual and has little wider ownership - and that there is therefore little enthusiasm for taking forward its recommendations.
Sheffield						N/A. Proposed LGAP.

Table continued...

LGAP	Objective					Notes	
	Audit	Communication & Education	Influencing Planning	Conservation & Management	Greater Resources		Other
Shropshire		✓✓					<p>LGAP only launched in September 2007 and therefore a little early to comment on implementation. However, funding has been obtained for 'geotrails' project and a series of six leaflets has been produced by the Shropshire Geological Society.</p> <p>Funding and peoples' time will be main constraints on delivery. Acquisition of funding is therefore high priority. Availability of funding streams may well determine priorities for implementation.</p> <p>Progress will be monitored through regular Steering Group meetings</p>
Staffordshire		✓✓	✓				<p>Implementation is largely in the hands of the local RIGS Group - and is therefore subject to the availability of time and funding - and their energy and motivation.</p> <p>Some progress in development of geo-trails.</p> <p>Have tried to get planners interested but with little success.</p>
Suffolk	✓✓✓	✓✓✓	✓	✓		✓✓	<p>'Other' = Development of LGAP Partnership</p> <p>Good progress made across several areas of work despite fact that LGAP has not been formally launched. High priority given to development of database of geological sites so that information is readily accessible to the public and other organisations.</p>

Table continued...

LGAP	Objective					Key ✓✓✓ = good progress; ✓✓ = moderate progress; ✓ = a little progress; blank = no progress
	Audit	Communication & Education	Influencing Planning	Conservation & Management	Greater Resources	
Tees Valley	✓✓✓	✓✓✓		✓		<p>✓✓✓ RIGS Gp is leading in implementation and have made good progress on interpretation with education packs, leaflets, guided walks and trails etc</p> <p>'Other' = Designation of all RIGS sites within the area. Excellent progress has been made with 30 out of 33 sites designated.</p> <p>Progress is not being monitored because this is not seen as a priority when there are so many other pressures on peoples' time - although realise that it is important.</p> <p>Site management likely to be give greater priority in future.</p>
Teignbridge	✓✓		✓✓			<p>Teignbridge DC is lead on implementation.</p> <p>Expecting to commission work on assessment of condition of RIGS sites with recommendations for management and interpretation.</p> <p>Reasonable progress made in influencing planners and engineers within the Council</p> <p>Constrained by limited funding and staff time.</p>

Table continued...

LGAP	Objective					Key ✓✓✓ = good progress; ✓✓ = moderate progress; ✓ = a little progress; blank = no progress	Notes
	Audit	Communication & Education	Influencing Planning	Conservation & Management	Greater Resources		
Torbay		✓✓				✓✓✓	<p>Since the LGAP was only published in February 2007, it was seen as a little early to have made much progress in implementation. 3 years has been given for the completion of high priority actions - most of which are ongoing. Some progress made in increasing awareness and the need for sensitivity towards geodiversity.</p> <p>'Other' relates to success in designation of Torbay as European Geopark in September 2007 and progress in strengthening of networks and partnerships.</p>
Greater Warwickshire		✓					<p>Work on LGAPs started in 2002 and a 'mini LGAP' was published in 2004. Full county LGAP has been developed over last couple of years but yet to be formally launched.</p> <p>No progress has been made on formal implementation although some work has been undertaken on interpretation with ASLF funding.</p> <p>Expect funding to be main constraint on implementation</p>
Worcestershire	✓✓✓						<p>Good progress on carrying out an audit and then will progress development of LGAP. Expect to produce Action Plan in 2008 and will then move on to delivery of other aspects of geo-conservation.</p> <p>One of aims is to take the actions within the three trial LGAPs for the Abberley and Malvern Hills Geopark (ie May Hill, Teme Valley and Castlemorton) and incorporate these in the Worcestershire LGAP</p>

Table continued...

LGAP	Objective					Key ✓✓✓ = good progress; ✓✓ = moderate progress; ✓ = a little progress; blank = no progress
	Audit	Communication & Education	Influencing Planning	Conservation & Management	Greater Resources	
Yorkshire Dales & Craven Lowlands	✓✓	✓✓				<p>Key priority at moment is to identify, survey and designate RIGS sites. Some funding is available for this work and progress is being made.</p> <p>Some progress made on communications side with production of information leaflet, website development, publication of LGAP and staging of launch day.</p> <p>Most of implementation will be undertaken by volunteers.</p>
Yorkshire - East (Redcar, Cleveland & North York Moors NP)						N/A. Still in development phase.
Yorkshire - West	✓✓✓	✓	✓	✓		<p>Focus is currently on completing the audit of sites - good progress is being made with this and it should be completed early in 2008. It is then proposed to write the LGAP, with a view to getting a first draft completed by February 2008.</p> <p>Small amount of work also already undertaken on site management and interpretation</p>





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