

**Sustainability Appraisal of the Cumbria Minerals and Waste Development Framework**

**A Stage 1 Report to  
Cumbria County Council**

**by Land Use Consultants**

**November 2006**





**Cumbria Minerals and Waste  
Development Framework**

**Sustainability Appraisal  
Stage One Report: Issues and  
Options**

**Prepared for  
Cumbria County Council  
by  
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**November 2006**

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# I. INTRODUCTION

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## BACKGROUND TO THE DEVELOPMENT FRAMEWORK

- I.1. Local Development Frameworks were introduced under the Planning and Compulsory Purchase Act 2004 and refer to the suite of local development documents that set out the spatial planning policies for a local planning authority area. Cumbria County Council is now working to prepare the Cumbria Minerals and Waste Development Framework (MWDF), which will comprise the Core Strategy, Site Specific Allocations, Generic Development Control Policies and a Proposals Map. This Framework will replace the current Minerals and Waste Local Plan (1996-2006) and guide minerals and waste development in Cumbria over the period up to 2018.
- I.2. The main stages in the preparation of the MWDF are as follows:
- (i) Issues and Options
  - (ii) Preferred Options
  - (iii) Submission of Draft Plan
  - (iv) Examination in Public
  - (v) Inspectors Report
  - (vi) Adoption
- I.3. The Issues and Options Discussion Paper was published for consultation in June 2006. The timescale for the subsequent stages is currently under review.

## SUSTAINABILITY APPRAISAL

- I.4. The MWDF is subject to a full sustainability appraisal (SA) under the Planning and Compulsory Purchase Act 2004 and national planning policy (Planning Policy Statement 12: Local Development Frameworks). Preparation of the MWDF must also be in accordance with the requirements of the European Strategic Environmental Assessment (SEA) Directive (Directive 2001/42/EC). Government guidance on the Sustainability Appraisal of Regional Spatial Strategies and Local Development Documents (November 2005) recommends that SEA be integrated into SA to promote sustainable development through the combined consideration of potential social, economic and environmental effects.
- I.5. Whilst there is no single blueprint, a sound SA should reflect the following:
- The process should be *iterative* and *timely* so that the results of the appraisal can be fed back into policy formulation.
  - It should be *evidence based*, reflecting relevant baseline information, appropriate to the level of appraisal.

- SA should be *inclusive*, securing stakeholder involvement and balancing differing perspectives. *Transparency* is also important.
- The SA should be *independent*, whilst recognising the need for partnership working with those involved in policy formulation.
- Finally, SA should be *useful*. Whilst this may appear to be obvious, it can be difficult to employ SA findings to directly influence future action, and deliverability should be a consideration at each stage in the process.

## **APPRAISAL OF THE CUMBRIA MWDF**

- I.6. Following preliminary work undertaken by Cumbria County Council, including preparation of the SA Scoping Report by the Council's Sustainability Team, Land Use Consultants (LUC) were appointed by the County Council in August 2006 to complete the SA of the Cumbria MWDF. As a consequence of this combined approach, it is hoped that the appraisal will benefit from both the local knowledge of Cumbria County Council personnel and LUC's experience of undertaking appraisals of a similar nature elsewhere in the UK.
- I.7. The work can be broken down into three phases of appraisal:
- (i) Issues and Options
  - (ii) Preferred Options
  - (iii) The Submission Draft Plan

However, given the iterative nature of the plan preparation and SA processes, LUC's involvement up to submission of the draft Plan is expected to be more continuous in nature.

- I.8. Key issues for the SA of the Cumbria MWDF to consider include the following:
- The need to focus on 'deliverability' to ensure that the Framework makes an appropriate and effective contribution, through positive land use provision, to ensuring the necessary shift in waste management practices.
  - In considering the key strategic choices in progressing the draft Framework, to identify clearly any tensions between options/policies/proposals that score most strongly against 'global' appraisal criteria in relation to resource use, energy and climate change and those that may score most strongly against more 'local' appraisal criteria such as those protecting landscapes/townscapes and local amenity. Any potential policy alterations which could minimise this, or improve the 'sustainability' performance of the Framework more widely, should be highlighted.
  - The importance of highlighting the 'positive impacts' associated with having a robust framework for future minerals and waste planning in place. This includes the economic and social benefits associated with the implementation of more sustainable waste management practices, including employment opportunities

and the scope for the development of new industrial and technological growth sectors. Importantly, the ‘sustainability’ consequences for Cumbria of failing to deliver adequate treatment capacity for increasing waste arisings need to be drawn out.

- I.9. This Stage One Report summarises the findings of the appraisal of the first stage, i.e. of Issues and Options relating to future minerals and waste planning in Cumbria. This has been completed in line with government guidance that states that an appraisal of strategic options should be undertaken *in broad terms* with a more detailed appraisal of the effects of the Preferred Options undertaken when these have been selected (Stage Two).

### **Report Structure**

- I.10. Following this introduction, chapter two outlines the stages of the appraisal methodology and the appraisal assumptions made. Chapter three provides an overview of the appraisal findings and chapter four outlines the key conclusions, for consideration in selecting the Preferred Option(s) for the MWDF. Chapter four also sets out the next steps for the study.
- I.11. A number of supporting appendices are also provided. These are identified in the contents page and cross-referred to in the text.



## 2. APPRAISAL METHODOLOGY

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### INTRODUCTION

2.1. The key stages in the appraisal process are outlined in the government's guidance on the Sustainability Appraisal of Regional Spatial Strategies and Local Development Documents. With regard to the appraisal of Issues and Options, this involves the following stages:

- identifying other relevant policies, plans, programmes and sustainability objectives;
- establishing the baseline;
- identifying sustainability issues and problems;
- developing the appraisal framework;
- scoping;
- developing options;
- assessing effects;
- reporting.

Each of these stages is discussed in turn below.

2.2. In addition to generic sources of guidance in relation to SA, there is also sectoral guidance, and an increasing body of good practice, specifically in relation to SA and minerals and waste planning. A list of sources consulted during this Stage One appraisal is included as **Appendix I**.

### IDENTIFYING OTHER RELEVANT POLICIES, PLANS, PROGRAMMES AND SUSTAINABILITY OBJECTIVES

2.3. To enable potential synergies to be exploited and any inconsistencies and constraints to be addressed, account must be taken of relationships between the MWDF and other relevant policies, plans, programme and sustainability objectives. To comply with the SEA Directive, this includes environmental protection objectives at international, European or national levels. Other relevant documents include the UK Sustainability Strategy, national planning policy statements (PPSs) and plans and strategies at regional and local levels.

2.4. Chapter seven of the SA Scoping Report and accompanying appendices outline the relevant documents considered by the County Council's Sustainability Team. A review of these by LUC concluded that overall, the list was both up-to-date and relevant to an SA of a MWDF. However, the documents outlined below have been added to the list and reviewed prior to commencing the appraisal:

- PPG20 Coastal Planning;
- PPG25 Development and Flood Risk (to be superseded by PPS25 in November 2006);
- The Cumbria Biodiversity Action Plan (2001);
- *Talking Rubbish: The Cumbria Joint Municipal Waste Management Strategy* (2003).

## **ESTABLISHING THE BASELINE**

- 2.5. Baseline information provides the basis for predicting and monitoring potential effects. It is a task that has to be approached ‘carefully’ to ensure that information is collected at a level of detail appropriate to the scale of the plan, which will allow *potentially significant* effects to be identified. From a review of recent practice, it appears that there can sometimes be an overemphasis on data collation, which is unfortunately exacerbated by the relative ease with which this information can now be obtained. The key challenge is to develop an SA baseline which can be clearly linked to the assessment objectives and associated criteria, as opposed to conducting a merely descriptive exercise.
- 2.6. The collection of baseline information for the Cumbria MWDF is an ongoing process. Following a review of the information already held by the County Council and by the SA consultation bodies, chapter eight of the SA Scoping Report provides a preliminary overview of the environmental, social and economic baseline conditions for Cumbria. This has been drawn upon, and supplemented, by LUC for the purposes of assessing the MWDF Issues and Options, with a focus on the characteristics that relate to the issues to be addressed by the Plan (see **Appendix 2**). The evidence base will be developed and utilised further as the stages of plan preparation and appraisal progress, and policy options become more specific and locationally based.

## **IDENTIFYING SUSTAINABILITY ISSUES AND PROBLEMS**

- 2.7. In 2002, the County Council’s Sustainability Team identified a Profile of Key Issues and Pressures affecting Cumbria. Following the introduction of the SEA Regulations in 2004 and draft government guidance on SA, a sustainability group was established in Cumbria, with membership drawn from the four statutory consultation bodies, the six district councils, the Lake District National Park Authority and Cumbria County Council. The existing set of key issues and pressures has been re-examined by the group and further widened to include a section on resources so that the profile is relevant to the Cumbria MWDF (see Appendix 5 of the SA Scoping Report).

## **DEVELOPING THE APPRAISAL FRAMEWORK**

- 2.8. The SA Framework consists of a series of sustainability objectives against which sustainability effects can be described, analysed and compared. Following the work undertaken by the Council’s Sustainability Team and the Cumbria Sustainability Group to identify key issues and problems for Cumbria, an appraisal framework was

developed and tested. This framework is being used as the basis for sustainability appraisals across Cumbria.

- 2.9. Chapter 11 of the Scoping Report outlined the proposed appraisal framework for the SA, which included some tailoring to increase its suitability for the task of appraising the MWDF. As the sustainability objectives have been agreed through a robust and systematic process following extensive consultation, LUC has not sought to alter these. However, in discussion with the Council's Sustainability Team, LUC has tailored the appraisal criteria further on the basis of previous work in the North West of England that underlined the value of this task as stakeholders often had difficulty in reaching consensus during the appraisal process as a result of the generic objectives which had been applied.
- 2.10. The sustainability objectives and related appraisal criteria used in the SA of the MWDF Issues and Options are included as **Appendix 3**. It is important to note that for this first phase of the work, i.e. the comparative appraisal of options, the objectives have been divided into key, primary and secondary objectives, with an appraisal undertaken only against the former two categories. Given the strategic nature of the options, it was felt that appraisal against the secondary objectives would not be relevant, or would not identify potentially significant effects or differences between the options under consideration. The full list of objectives is however outlined in Appendix 6 of the Scoping Report.

## **SCOPING**

- 2.11. To meet the requirements of the SEA Directive, a local planning authority must seek the views of the statutory environmental consultation bodies (Natural England (formerly the Countryside Agency and English Nature), English Heritage and the Environment Agency) on the scope and level of detail of the environmental information to be included in the SA report. Government guidance also recommends that other bodies are consulted as the planning authority considers appropriate, with a balance between social, environmental and economic issues.
- 2.12. Cumbria County Council issued a draft Scoping Report to a range of relevant parties for comment in December 2005. Comments received are recorded in the final version of the Scoping Report (July 2006) in addition to the response of the County Council's Sustainability Team including actions taken (Appendix 7). To ensure full compliance with the SEA Directive, the final Scoping Report was resubmitted to the statutory environmental consultation bodies in August 2006. Comments from both rounds of consultation are being taken into account in progressing the stages of the appraisal.

## **DEVELOPING OPTIONS**

- 2.13. The SA Regulations and guidance require that 'reasonable alternatives' for each plan are appraised as an integral part of the process, taking account of the objectives and geographical scope of the plan. Options need to be sufficiently distinct to highlight the different sustainability implications of each so that meaningful comparisons can be made. Stakeholder involvement in the development of these alternative options is recommended.

- 2.14. The MWDF Issues and Options Consultation Paper sets out the key challenges for waste and minerals planning policy in Cumbria. Following a review of these in discussion with Cumbria County Council, a series of options have been defined for exploration through the SA process. Whilst this includes a number of issues identified in the Issues and Options Consultation Paper, some have been excluded at this stage as it was felt that these would have little influence on the overall tone and scope of the plan.
- 2.15. At the outset, a number of scenarios were developed comprising issues that are, or can be, mutually interdependent, and can therefore benefit from being assessed collectively. This 'scenario' approach is being viewed increasingly as good practice in the preliminary SA of Issues and Options. It allows for several issues to be assessed in combination, for example, options for the level of waste to be managed and the number of sites required and the approach to energy from waste have been considered together, as each issue can have an impact on decisions made in relation to the others. This is more effective for the purposes of SA, as it allows the influence of one policy on the others to be explicitly assessed and therefore better understood. SA can produce misleading results if every policy within a plan or programme is considered in isolation, as all policies cannot realistically always address all aspects of sustainability, and policies are designed to be applied in combination with others.
- 2.16. However, following a stakeholder meeting held on 26 September 2006 (see **Appendix 4** for list of attendance) it was concluded that some of the plan's key issues require further exploration individually, by considering relatively discrete options. The final approach therefore comprises a combination of combined scenarios and discrete options. Section 3.1 summarises the options that were tested in relation to each of the key issues.

## **ASSESSING EFFECTS**

- 2.17. Each option has been assessed with reference to the baseline situation prior to a comparative review of relative performance. Assessments have been based on professional judgement and expressed qualitatively from ++ (very positive) to - - (very negative). A clear explanation of the reasoning has been provided and a consistency check undertaken.
- 2.18. Measures to avoid, minimise or mitigate potential adverse impacts and to secure identified benefits have been highlighted. For example, these include considerations for progressing draft plan policies/identifying potential sites and requirements for co-ordination with other relevant parties.

## **Appraisal Assumptions**

- 2.19. A number of assumptions have been made in undertaking the appraisal. Assumptions specific to the individual scenarios/options appraised are identified clearly at the outset of the corresponding discussion of potential effects. However, there are also a number of more generic assumptions in relation to the proper functioning of the land use planning and regulatory regimes. For example, whilst there is considerable public concern regarding the environmental and health impacts of waste management

facilities, this, in large part, reflects historic practices for dealing with waste. In the past for example, inert waste has been dumped in unregulated tips, hazardous and other non-inert solid waste inappropriately handled and managed, quarries insensitively backfilled and organic waste spread on farmland, leading to nutrient enrichment and subsequent impacts on water quality. However, stronger regulation, stricter enforcement and improved technologies have all helped to reduce these risks. For example, it is now a requirement to line and cap landfill sites to collect and use methane, to remove a very high proportion of most pollutants from the stack emissions of incinerators, to enclose many sites where waste other than green waste is composted and to install biofilters to intercept bio-aerosols, ammonia and odours. Importantly, research sponsored by Defra into the management of household and similar wastes concludes that “...on the evidence from studies so far, the treatment of municipal solid waste has at most a minor effect on health in this country particularly when compared with other health risks associated with ordinary day to day living. The evidence on environmental effects is limited, but such as there is does not appear to suggest adverse environmental effects of waste management, other than those we know about already and are already addressing, such as methane emissions from landfill”<sup>1</sup>.

- 2.20. Whilst this SA seeks to ensure that the nature and magnitude of potentially significant environmental effects associated both with waste management and mineral extraction are identified and addressed fully, the assessment does reflect technological advances and current planning and regulatory regimes.

## **REPORTING**

- 2.21. The SA Report is a key output of the appraisal process. The report will form a public consultation document accompanying the draft MWDF and will need to demonstrate clearly that the SEA Directive’s requirements have been met. As key components from this Stage One Report will be taken forward into the SA Report, the end purpose of this document, including the intended audience, is an important consideration from the outset.

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<sup>1</sup> Department for Environment, Food and Rural Affairs (2004) *Review of Environmental and Health Effects of Waste Management: Municipal Solid Waste and Similar Wastes*.



### 3. ASSESSMENT OF ISSUES AND OPTIONS

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#### INTRODUCTION

- 3.1. As outlined in chapter 2 above, the Issues and Options have been taken forward for appraisal as a combination of combined scenarios and discrete options, as follows:
- **Waste Issue 1:** Combined option addressing overall approach to waste management, including level to be managed, approach to energy from waste, number of sites required and recycling / composting targets;
  - **Waste Issue 2:** Strategic approach to the location of waste management facilities;
  - **Waste Issue 3:** Targets for proportion of households within 5 miles of Household Waste Recycling Centres;
  - **Waste Issue 4:** Thresholds for provision of landfill capacity;
  - **Minerals Issue 1:** Level of production of aggregates;
  - **Minerals Issue 2:** Landbanks of reserves of aggregates with planning permission;
  - **Minerals Issue 3:** Strategic location of sand and gravel quarries;
  - **Minerals Issue 4:** Ghyll Scaur Quarry;
  - **Minerals Issue 5:** Local building stones;
  - **Minerals Issue 6:** Brick making mudstones;
  - **Minerals Issue 7:** Zinc extraction in the North Pennines AONB.
- 3.2. For ease of reference, the findings from the appraisal are summarised at the end of each discussion with the full appraisal provided in **Appendix 5**.

#### KEY WASTE ISSUES AND OPTIONS

##### **Waste Issue 1: Overall approach to waste management, energy from waste, number of sites required and recycling / composting targets**

##### *Issues*

- 3.3. The first set of key issues for the plan relate to **the overall level of waste to be managed** within the area. Previous policies have sought to provide sufficient facilities to manage waste generated within Cumbria. The Cumbria Joint Municipal Waste Management Strategy states that the seven local authorities in Cumbria have agreed to aim to reach waste management targets in Cumbria by recycling and composting as much as possible, and that support for energy from waste technology should only be provided if it becomes clear that **recycling and composting** alone

will not meet targets. This also influences how waste can be managed, and the implications this might have for how and where it is treated.

- 3.4. However, in light of the potential to support the **energy from waste** sector, it may be possible to justify importing some waste into the area, as a means of generating economies of scale and ensuring that sufficient 'raw material' can be used to support the sector. At the other end of the scale, some export of waste could be justified, if it was considered impracticable to provide sufficient and appropriate sites within Cumbria (as advised in PPS10), and/or to support regionally significant facilities, including energy from waste facilities, in a neighbouring area.
- 3.5. At present, wider policies provide varying messages on this issue. The draft Regional Spatial Strategy suggests that energy from waste facilities should be required on a sub regional basis, with local planning authorities collaborating to identify cross boundary proposals. The Regional Waste Strategy (para 3.31) supports the development of thermal treatment facilities as part of an integrated approach to dealing with waste. It is likely that this will include a mix of technologies. The Municipal Waste Strategy for Cumbria appears to be less supportive, viewing energy from waste as 'a last resort.' These varying approaches mean that a range of options can reasonably be defined and usefully explored within the SA.
- 3.6. The decisions made about the level of waste managed within the area, and the way in which it is managed, will also have a direct bearing on the **number of sites required**. The number of sites potentially required, as stated in the Issues and Options Discussion Document, has been quantified on the basis of RSS estimates in combination with a number of additional assumptions:
  - That it is assumed that existing Materials Recovery Facilities are at full capacity and that 2-3 additional facilities will be required within the plan period.
  - That more composting capacity is needed than is estimated in the RSS. Based on the regional figures of 55,000 tonnes per year this is considered to be within current capacity, although the Issues and Options Discussion Paper also suggests that 'for flexibility in the choice of technologies and to give potential for treating some commercial and industrial waste' 2 further facilities may be needed.
  - That 50% of treatment / recycling capacity needed for the commercial and industrial waste stream will be accommodated on the site where it arises. This would be equivalent to four treatment modules of 50000 tonnes per year, leaving a requirement for up to 11 treatment facilities.
  - That separate provision does not need to be made for the thermal treatment of 15,000 tonnes of commercial and waste.
- 3.7. It is important to recognise within the SA that these assumptions could be inaccurate, particularly as the requirements are being reviewed currently in light of more recent information. It is therefore important to provide sufficient consideration of alternatives to reflect the policy extremes which could potentially arise if this was to be the case. As a result, options to be explored should explicitly consider the

implications of over or under providing sites for waste management, as a means of usefully informing related policy decisions.

- 3.8. At a broader level, it is also important to take into account government and regional targets that have been set for the area, with which the plan should comply unless clear justification can be provided. The Regional Waste Strategy 2004 aims to recycle and / or compost 25% of household waste by 2005, 35% by 2010, 45% by 2015, and 55% by 2020, although the County Council has reservations about achieving these ambitious targets that reflect those set by the Cabinet Office Strategy Unit in 2002. The Review of England's Waste Strategy 2000 (Defra, February 2006) proposed national targets for recycling and composting of household waste of 40% by 2010 and 50% by 2020.

### **Options**

- 3.9. On the basis of the issues set out above, three 'composite' options/scenarios, drawing together these key issues, were identified for assessment within the SA process:
- **Waste Option IA (Provide for more than Cumbria's wastes):** The waste management sector is actively developed, with Cumbria becoming a model for sustainable waste management as a means of generating business and employment. Broadening the assumptions and conclusions set out in paragraph 12.8 of the Scoping Report (in line with paragraph 12.9), it was considered realistic and appropriate to consider a growth scenario in terms of sustainable development, as opposed to testing an 'unreasonable' assumption that growth of waste management would necessarily be focused on unsustainable practices. Some waste is imported to support energy from waste proposals, which may also benefit local energy intensive industries. A balance is struck between prioritising recycling and composting, as there is a strong market for recyclates, and also supporting economic development through the energy from waste sector / Combined Heat and Power schemes. Considerably more sites are required for waste management facilities. Facilities to accommodate composting capacity exceed those identified by the RSS. Four further Materials Recovery Facilities are provided based on the assumption that current sites are at capacity. Manage low level radioactive waste generated within Cumbria and accept some imported low level radioactive waste for management within local facilities.
  - **Waste Option IB (Provide only for Cumbria's wastes - net self-sufficiency):** Cumbria provides sufficient facilities to treat its own waste. General support is given to energy from waste proposals, but priority is given to recycling and composting as a means of fulfilling targets. Provision of policy support for on site recycling and treatment of commercial and industrial waste reduces the number of additional sites required. RSS predictions for composting capacity are accepted and met. One or two further Materials Recovery Facilities are provided, based on the assumption that a proportion of waste can be dealt with in existing operations. Only manage low level radioactive waste generated within Cumbria

- **Waste Option 1C (Provide for less than Cumbria's wastes):** Cumbria exports a proportion of its waste to regional facilities located near the 'centres of gravity' of regional waste arisings in the Greater Manchester and Merseyside conurbations. The government and RSS targets for recycling and composting are met, in line with statutory requirements. No further Materials Recovery Facilities are provided, with existing facilities together with on site recycling providing sufficient capacity. Export a proportion of the low level radioactive waste generated within the County.

### **Assessment assumptions**

- 3.10. It is assumed that additional sites could accommodate all the types of waste management facility identified in Box 1 of the Issues and Options Paper with the exception of landfill, which has different siting requirements.

### **Assessment findings**

- 3.11. Option WIA is based on a model of actively promoting sustainable waste management as a means of generating employment and income within Cumbria. Option WIA would perform well in relation to sustainability objectives that aim to minimise waste, reflect the waste hierarchy, and make provision for recycling. Strong positive impacts are predicted in relation to supporting energy from waste, with the option thereby contributing to wider aspirations to reduce greenhouse gas emissions. Similarly, the option would perform particularly well in relation to retaining existing jobs and creating new employment opportunities, and would strongly support other economic sustainability objectives including the need to stimulate investment, diversification and business innovation, thereby overcoming issues raised in paragraphs 12.3 and 12.4 of the Scoping Report. As it would exceed recycling and re-use targets, it is also assumed that there would be a corresponding improvement in public access to facilities under Option WIA, and that this option would generally support the development of clean / carbon efficient technologies.
- 3.12. Contrary to some perceptions, appropriately designed and run waste management facilities should have no adverse effect on human health. Indeed, research has not yet demonstrated that any such health impacts should be expected from this type of development. However, even with appropriate regulation and site selection, such a proactive approach to waste management could have potential negative impacts on the health and well being of communities, even if these impacts are only perceived. In this respect it is important to note that:
- (i) Option WIA implies that additional facilities, including energy from waste, would be provided, and that these would at least be perceived by some as having negative impacts on local communities;
  - (ii) there would be impacts associated with the transport of waste that can be difficult to avoid or mitigate.

Similarly, potentially negative impacts on biodiversity and landscape have been predicted, although to some extent these issues could be resolved in appropriate

decision-making, design and mitigation and at the site-specific level, important considerations in drafting plan policies.

- 3.13. Option WIB aims to achieve net self sufficiency for waste management in Cumbria, whilst generally supporting energy from waste proposals and providing sufficient sites to meet local need. Overall, the option would result in generally minor positive impacts, supporting the waste hierarchy and energy from waste, albeit, not in a proactive way. Similarly, minor positive impacts are also expected in relation to job creation, economic development, clean technology development and energy from waste generation.
- 3.14. However, the proposal to identify a minimal number of sites for new facilities could result in higher transport costs and lower economies of scale, thereby reducing scope to maximise the economic viability and throughput of operations within the area. It could also reduce the accessibility of facilities to some extent, whilst also resulting in minor (largely perception based) impacts on health and well being. There may also be neutral or negative effects on environmental objectives (biodiversity, landscape etc.) as the option will require some further sites to be identified and waste to be transported. However, as with Option WIA above, site level management and appropriate site selection, a consideration for the plan, should reduce these as far as possible.
- 3.15. Option WIC is based on exporting some waste, not actively supporting energy from waste schemes, and identifying no further sites for waste management. This would lead to a number of minor negative impacts, including providing access to services. The objectives relating to air quality and green house gas emissions, and health and well being could also be adversely impacted upon as a result of the increase in road traffic that would be likely to occur as a result of waste export. Most other impacts would be neutral, with some minor positive impacts including in relation to the recycling and re-use of waste as targets would still be met. Importantly, there would also be both positive and negative impacts on the areas receiving waste although this is not considered in detail within this SA, given its focus on Cumbria. Such cross boundary impacts should, however, be reflected in any SA work relating to waste policies at a regional scale and / or in adjacent local authority areas.
- 3.16. Recommendation / progression to Preferred Option: Option WIA would provide some major benefits, but has the potential to generate some minor negative effects at the site level. However, given that many of these effects could be addressed through appropriate planning decisions, site management and mitigation, and that possible impacts on community well being could be reduced by effective participation, consultation and raising awareness with regard to modern day waste management facilities, it would appear that this is potentially the most sustainable, positive option. It would show how a preferred option could be used to resolve some of the concerns that were raised in the Scoping Report (paragraphs 12.4 and 12.5). Option WIB also performs well, but some benefits provided by WIA would be significantly lower, and there would be similar potential issues arising at the site selection and development level.
- 3.17. Option WIC could be discounted on the grounds of sustainability at this point in the assessment, given its limited benefits, potential negative effects on health and well

being arising due to increased traffic generation and some aspects of the environment (e.g. air quality). However, it is important to bear in mind that the SA is not the only driver of the policy, and that other factors may lead to this option nevertheless being taken forward in full or in part.

## **Waste Issue 2: Strategic approach to the location of waste facilities**

### ***Issues***

- 3.18. The second key issue to be explored further relates to decisions on whether a centralised or decentralised network of waste management facilities might be most appropriate in Cumbria. Whilst this could be linked in with Option 1, there is merit in considering this decision separately. The issue comprises two relatively simple options: to focus on taking forward the proximity principle at a local level and providing a higher number of smaller waste management facilities throughout Cumbria, or to adopt a centralised model, with fewer, larger facilities. The Issues and Options Discussion Paper suggests that the latter could be achieved by providing one or two Green Resource Parks, backed up by intermediate bulking stations or local transfer points.
- 3.19. This is a particularly useful issue for an SA of a plan with a spatial dimension to provide further guidance on, particularly as many of the potential environmental and community impacts under consideration are associated with the transportation of waste. It is, however, important to consider this in strategic terms, without attempting to provide a site-specific analysis of impacts, if useful conclusions are to be drawn in relation to the overall approach for the plan. The implications of the policy for providing equitable access to services and facilities should be explored, particularly in relation to wider policy commitments such as rural proofing and providing access to employment in order to promote social inclusion.

### ***Options***

- 3.20. The following two options have been identified for the SA to consider:
  - **Waste Option 2A:** centralised provision of two large scale waste facilities, located adjacent to rail network access points or major roads.
  - **Waste Option 2B:** a decentralised network of waste facilities, provided close to waste sources (e.g. urban areas, centres of industrial and commercial activity).

### ***Assessment assumptions***

- 3.21. As with Option W1, it was not felt necessary or appropriate to specify the type of facility as the potential impacts associated with the different technologies have much in common. It is also assumed that sites for two large scale facilities could be identified within Cumbria.

### ***Assessment findings***

- 3.22. Option W2A was predicted to result in generally positive effects overall. The centralised option was expected to positively reflect the waste hierarchy. The

impacts of the option on public health and well being were expected to be mixed, with less facilities resulting in more focused concern, but the greater likelihood that energy from waste operations would conversely result in higher levels of concern. It was predicted that bringing many waste streams together at two larger sites, such as green resource parks, would present more opportunities for stimulating investment and diversification of the waste sector. Similarly, it was expected that the option would provide positive support for innovation in emerging waste management technologies.

- 3.23. Option W2B was also found to be supportive generally of waste management objectives, particularly those relating to the waste hierarchy. A decentralised approach was found to be particularly supportive of sustainability objectives that aim to improve access to local services, if some public accessibility to smaller facilities is assumed. However, potentially higher risks were associated with this option, particularly in terms of potential impacts on biodiversity and landscape, largely due to its emphasis on providing more, evenly distributed sites throughout Cumbria. Similarly, potentially negative effects were predicted to be more likely in relation to agricultural land and soil. The option would also do less to support the energy from waste sector given the benefits associated with achieving economies of scale, with consequent implications for wider aspirations to support renewable energy and reduce greenhouse gas emissions. However, this may be tempered by the recent emergence of technologies which may allow for smaller facilities to efficiently produce energy from waste.
- 3.24. Recommendation / progression to Preferred Option: Generally, Option W2A would perform well in terms of supporting employment and innovation within the sector, developing opportunities for energy from waste, and also minimising potential overall environmental impacts. Option W2B was shown to have more potentially negative effects in environmental terms with a greater number of sites required.

As many of the impacts of waste management are associated with the transport of waste, should potential sites be identified, further modelling using well-established software would assist in further clarifying the relative impacts of these two locational options. Given the relative importance of reducing waste miles as a policy driver, it is suggested that this is progressed alongside the preparation of the draft MWDF.

### **Waste Issue 3: Targets for proportion of households within 5 miles of Household Waste Recycling Centres**

#### ***Issues***

- 3.25. The third issue presented here is also raised and discussed within the Issues and Options Discussion Paper. At present, a target of 90% of households in Cumbria being within 5 miles of a Household Waste Recycling Centre is in place. This target was established some time ago, and the County currently falls short of it, providing facilities within 5 miles of 69% of the population. A review of whether the 90% target should be maintained is therefore being undertaken.

- 3.26. The Discussion Paper notes that the 90% target is currently being reconsidered as part of the Municipal Waste Management Strategy review, in light of the increasing provision of kerbside separation of recyclables.
- 3.27. Notwithstanding the outcome of this review, it is useful for the SA to test the effect that maintaining the current 90% target might have, and to compare this with a potential option of accepting a reduced target of 69%. The latter could avoid some local level impacts, but may have repercussions for existing sites, generating more traffic within these areas and acting as a disincentive to recycling, thereby influencing ability to meet targets set out under Issue 1. The former may reduce journey lengths, and therefore potential impacts of facilities, but could have repercussions in terms of general amenity in areas with new sites, and small scale but potentially locally significant operational and traffic issues.

### **Options**

- 3.28. As a result, three further options have been identified for the SA to consider:
- **Waste Option 3A:** accept a reduced target of 69% of households having access to a Household Waste Recycling Centre within 5 miles. This is based on an assumption that an increase in kerbside recycling facilities would overtake previous targets. This option implies that no further Household Waste Recycling facilities would be required.
  - **Waste Option 3B:** continue to pursue the stated target of 90% of households being within 5 miles of a Household Waste Recycling Centre. This implies the provision of new sites at Carlisle, Milnthorpe, Cockermouth, Brampton and Alston, replacement sites at a further five locations, and two additional enlarged sites. Kerbside recycling remains at current levels.
  - **Waste Option 3C:** accept a lower standard of provision than exists now. This is theoretically an option that could be achieved, for example through the closure of some existing facilities on the basis of operational difficulties. In reality, however, it is unlikely to be progressed for political and practical reasons and therefore on the grounds of 'reasonable-ness' it has not been fully tested through the SA process but has been referred to below in the interests of drawing comparative conclusions.

### **Assessment assumptions**

- 3.29. These options have not been assessed on a locationally specific basis at this preliminary stage.

### **Assessment findings**

- 3.30. Both options 3A and 3B perform well against increasing public access to recycling services. Option 3A performed well in relation to the key objective relating to the waste management hierarchy. It also performed most strongly in relation to health and wellbeing and environmental effects where potential (albeit largely perceived)

impacts are linked to the overall level of site provision and to more likely impacts arising from associated transport movements.

- 3.31. Option W3B also performed well against several of the sustainability criteria, probably reflecting the positive intentions underlying the concept of setting the increased target. Some potentially more negative effects on health and wellbeing were expected (although many of these relate to perceived health issues), given the corresponding requirements for site provision, including against the objective of providing access to services by sustainable transport modes, based on an assumption that they will be accessed primarily by car. Scope for minimising such effects was also identified, including co-locating HWRCs at, or near to, other public facilities, to reduce the overall number of trips generated.
- 3.32. Option W3B also raised concerns about potential impacts that meeting the 90% target might have on biodiversity and landscape. It is important to note however that these impacts are based on a simple assumption that more facilities increases the risk to Cumbria's environmental baseline. For the purposes of the options appraisal, the assessment shows that in comparative terms, Option W3B has potentially more mixed environmental impacts, and perhaps even negative implications than Option W3A. However, these are not generally expected to be significant, and with appropriate development plan policies, site selection criteria, and development control measures, many of these issues should be addressed at the site selection, design, and implementation stages.
- 3.33. In relation to employment and economic development, no significant differences are anticipated. There will be employment requirements associated with both greater kerbside collection and the operation of an increased number of HWRCs, and both will result in recyclates for further reprocessing.
- 3.34. Recommendation / progression to Preferred Option: On the basis of the above, a preliminary appraisal has revealed little significant difference in the overall sustainability performance of these two options. Two further considerations could assist the selection of a Preferred Option:
  - (i) As many of the impacts of waste management are associated with the transport of waste, further transport modelling for these two options would assist in further clarifying the relative impacts (see previous recommendations under paragraph 3.24).
  - (ii) The policy could be considered in relation to the relative weighting attached to key drivers, including those outside the land use planning system, particularly the feasibility of further increasing the provision of kerbside recycling facilities.

## **Waste Issue 4: Landfill Thresholds**

### ***Issues***

- 3.35. As noted in the Issues and Options Discussion Paper, the increased requirements to treat waste higher up the waste hierarchy and disincentives to landfill disposal should significantly reduce the amount of landfill capacity needed, albeit that some capacity will always be required to deal with residual waste.

- 3.36. At present, development plan policy states that proposals for landfill sites will only be permitted where there is less than 7 years of permitted capacity of non-inert waste and less than 4 years of capacity for inert waste. It was felt that the SA could usefully explore the impacts that reducing these thresholds might have, in order to establish how far the plan can or should go towards helping to fulfil the wider aim of minimising landfill, whilst also ensuring that sufficient facilities are provided to meet the needs of Cumbria.
- 3.37. An alternative to the current thresholds might therefore be to explore the effect of reducing the capacity threshold at which point new consents might be granted. In reality this may be difficult to sustain, as it implies a risk that the export of waste may be required where time lags in the planning system lead to significantly reduced capacity on a temporary basis. Related policy implications in relation to quarry restoration through landfill also need to be considered. In addition, this option would be partly dependent on the extent to which waste is successfully 'moved' up the waste hierarchy, including the influence this option itself could have on stimulating and providing facilities for recycling and composting.
- 3.38. It was also suggested that it would be useful to explore how planning provision for the RSS's ten-year estimate of need (2006-2016) might impact on the area, albeit that to some extent, this is a 'phasing' issue which may not influence the overall volumes of waste that are landfilled.
- 3.39. Whilst this issue could be linked in with Option 1, there is merit in considering these policy options separately.

### **Options**

- 3.40. The following three options have therefore been identified for the SA to consider:
- **Waste Option 4A:** retain existing landfill capacity thresholds where new consents may be granted (<7 and <4 years for non-inert waste and inert waste respectively).
  - **Waste Option 4B:** support reduction of landfill and movement of waste up the hierarchy, providing further disincentives for landfill operations by reducing thresholds to <4 years for non-inert waste and <3 years for inert wastes.
  - **Waste Option 4C:** provide for the RSS's 10 year estimate of need (2006-2016) which would effectively result in an increase in landfill capacity from the present provision for 5.5 million cubic metres to 7 million cubic metres. The assumption is that this would result in new consents being granted when the supply of land falls below a higher (10 year) threshold.

### **Assessment assumptions**

- 3.41. It is assumed that further sites, or the expansion of existing sites, are most likely with Option 4C. These have not been assessed on a locationally specific basis at this preliminary stage. It is also assumed that Option 4B could lead to there being insufficient landfill capacity within Cumbria on a temporary basis. Based on the

current location of landfill facilities, it is assumed that additional provision under any of the options is likely to be focused in the south of the County.

### **Assessment findings**

- 3.42. The assessment of Option W4A showed that accepting current landfill thresholds could have minor negative impacts on waste management sustainability objectives that seek to move waste up the waste hierarchy. The option was found to also have potential negative impacts on the sense of well being of people, based on an assumption that it would require the allocation of further landfill sites or at least extensions to existing sites, and that there can be public concern about the health and amenity impacts associated with landfilling waste, albeit that associated health impacts are not supported by research findings.
- 3.43. Option W4A was also expected to have negative landscape effects, although the assessment noted that these could be reduced or mitigated at the project design and implementation stage. The SA also raised concerns about the potential effects that maintaining current landfill targets may have on countryside remoteness and tranquillity, particularly taking the transport of waste into consideration, and it was expected that this option would contribute little to the objective of reusing brownfield sites or economic development/employment generation in the waste management sector.
- 3.44. On the assumption that Option W4B would be less likely to lead to further landfill sites, or the expansion of existing sites, and would stimulate recycling and composting, this option would have strong positive effects on the key objective for waste management in Cumbria. It would also support aspirations for renewable energy by indirectly providing more raw materials for use in energy for waste plants, although this would depend also on the overall availability of appropriate facilities, as discussed under Waste Option I above. It is, however, also important to note that it is possible to capture energy from landfill gases and to supply this to the national grid. Option W4B also performs more strongly in relation to economic development/employment generation in the waste management sector.
- 3.45. It is assumed that Option W4C would result in an increase in landfill capacity, and therefore potentially increased negative impacts on objectives relating to waste recycling facilities, and perceived health and wellbeing. Otherwise, most impacts would be broadly similar to those predicted for Option W4A.
- 3.46. All options were expected to have mixed (-/+) potential impacts on biodiversity, given that both green and brownfield sites can have designated and non-designated biodiversity value. Actual impacts will depend on site selection, mitigation and other more detailed considerations, which should be borne in mind as the draft plan is progressed. Similarly, mixed impacts were predicted for all options in relation to safeguarding good quality agricultural land and avoiding soil degradation and pollution.
- 3.47. Recommendation / progression to Preferred Option: With the assumptions made, Option W4B has emerged as being the most sustainable option, with relative benefits particularly in relation to waste management, economic and social objectives.

- 3.48. However, it is also important to note that many negative issues of concern in relation to Options W4A and W4C could be addressed at the site level, assisted by effective public communication/participation and through good working practices.
- 3.49. Option 4B performs most strongly because it is assumed that this will lead to less waste being landfilled in Cumbria. However, the key question in considering the Preferred Option in this case, is whether a reduced threshold would actually lead to a reduction in new/extended landfill sites and / or whether other policy initiatives might be better placed to achieve this, including wider regulatory and fiscal measures. Should a reduced threshold still be seen as a means of reducing landfill, further consideration would need to be given to the practicalities of this, including the possibility that planning and other consents would be unable to ensure that required capacity matched demand within the reduced time period proposed.
- 3.50. Overall, however, it is likely that the Preferred Option will need to reflect regionally and nationally set targets for landfill in the area, as a legitimate means of waste management, albeit as a 'last resort' (Option W4C). Whilst this could generate more negative impacts in relation to some sustainability objectives, these should be weighed up against the potentially more severe repercussions for sustainability that falling short of providing sufficient landfill capacity within Cumbria would generate.

## **KEY MINERALS ISSUES AND OPTIONS**

### **Minerals Issue 1: RAWP apportionment, recycling / secondary materials targets and sites required**

#### ***Issues***

- 3.51. The first minerals issue and its associated options covers a number of points raised in the Issues and Options Discussion Paper, as it is considered that there is merit in considering these in combination as part of one scenario rather than assessing them in isolation. These are key issues, and should therefore form the basis of the core strategy.
- 3.52. Firstly, there is a need to consider the **appropriateness and delivery of the RAWP sub regional apportionment**. This is based on projections of national and regional need (from 2003). Traditionally in Cumbria, local needs for minerals have been met and there has been a small amount of material exported from the area southwards. Actual production levels to date have been lower than the apportionment figure for crushed rock, and have exceeded the apportionment for sand and gravel. Mineral Planning Guidance Note (MPG) 6: Guidelines for aggregates provision in England (April 1994) states that the apportionment figure should not be regarded as inflexible and that the preparation of development plans provides an important opportunity to test the practicality and environmental acceptability at the local level of the Guidelines figure (para. 58). It is therefore both valid and useful to consider the potential sustainability impacts that accepting lower or higher production levels than those indicated by the RAWP might have on Cumbria. It was agreed that this analysis should focus on the contribution of sand and gravel to meeting these targets, as the Issues and Options Discussion Paper suggests that no further crushed rock sites will be required during the plan period.

- 3.53. The target set for aggregates extraction has direct implications for the **number of sites** that would be required within Cumbria. At present, although there are adequate minerals reserves with planning permission to fulfil requirements to supply sand and gravel, these permissions will all expire before 2015, suggesting that an acceptance of the RAWP apportionment will require the identification of new sites for extraction. The size of landbanks (as discussed under Minerals Issue 2) also has a bearing on this issue. For example, given the size of the landbank for crushed rock within the area, it is perhaps reasonable to assume that no further sites would be required to meet the RAWP apportionment figure. However, increased production 'targets' are perhaps more likely to imply the need for further consents for aggregates at least, particularly as the extraction of some reserves within the landbank may not be commercially viable or would be associated with environmental concerns that have gained greater policy emphasis since consent was first granted.
- 3.54. The proportion of **materials provided by recycling or from secondary sources** requires to be taken into account as part of this equation. Government guidance states that a quarter of the supply of aggregates should be met from recycled or secondary sources. If this was exceeded, it might be possible to argue for a reduction in the RAWP primary extraction figures for Cumbria, particularly taking account of the environmental acceptability considerations outlined in MPG6. However, at the same time, there may be a case for Cumbria arguing that this is too high a proportion, particularly as whilst there are a number of potential sources of secondary aggregates in Cumbria, including mineral wastes and industrial by-products, the scope for aggregate recycling is likely to be lower than in other parts of the North West region where rates and scales of construction and demolition are significantly higher.

### **Options**

- 3.55. As a result, the following combined options have been identified as a means of exploring these issues in combination:
- **Minerals Option 1A:** Exceed RAWP sub apportionment figures, by providing for the continued production of 900,000 tonnes of sand and gravel per annum. To reflect this sustainable economic development driven scenario, also exceed target for aggregates from recycled / secondary sources (33%) with both collective and on site aggregate recycling facilities. Aggregates not required within Cumbria exported and, subject to associated transport costs, sources of recycling/secondary aggregates imported into Cumbria for reprocessing.
  - **Minerals Option 1B:** Provide for the RSS's apportionment of 700,000 tonnes of sand and gravel per annum. Increase production levels for recycled / secondary aggregates to meet national target and RAWP targets. Emphasis on providing on-site facilities for recycling and processing where possible, with more limited extensions to existing sites for primary extraction.
  - **Minerals Option 1C:** Provide for less than 700,000 tonnes of sand and gravel per annum. This reduction in the regional apportionment figure could be argued for on the grounds of practicality and environmental acceptability as allowed by MPG6 and aim to argue for a reduced target for recycled / secondary aggregates

in Cumbria on the same grounds, particularly practicality, given relatively low levels of construction and demolition. Provide the minimum number of sites required. This is a relatively theoretical option, which has been included to allow for comparative analysis of the issues.

### **Assessment assumptions**

- 3.56. With Option MIA, it is assumed that the required number of additional mineral extraction and waste processing sites can be identified within Cumbria.

### **Assessment findings**

- 3.57. Option MIA would be beneficial in terms of providing a steady flow of minerals, and making best use of co-products. It would also provide considerable benefit in terms of providing additional employment, supporting businesses development and growth and stimulating innovation and entrepreneurship within the minerals sector. However, this option does not perform well against conserving mineral resources and, subject to siting decisions and mitigation measures, could also result in negative impacts on the environment (including biodiversity and landscape) and amenity and well being, as a result of the need for more extraction and aggregate reprocessing sites in the area and a corresponding increase in related traffic. As noted in Paragraph 12.6 of the Scoping Report, although restoration could provide environmental benefits, extraction would inevitably lead to some environmental damage prior to this and so the benefits should be considered in a balanced way. Option MIA would have both positive and negative effects on the objective that seeks to minimise primary extraction, as it would raise both primary and recycling/secondary aggregates production.
- 3.58. Option MIB would be relatively neutral, providing positive, but not as significant, benefits in relation to key sustainability objectives for minerals and waste. It may also be generally supportive of employment, although major economic growth/diversification would not be achieved. The SA found that overall, most of the impacts of this option would be neutral in relation to Cumbria's baseline environment.
- 3.59. Option MIC could provide some minor, site-specific, environmental benefits, largely due to its aim of reducing the number of sites in Cumbria where minerals extraction takes place (e.g. reduced noise etc.). Otherwise, the option would be largely neutral, and could have some negative impacts, particularly in terms of hindering business development and innovation within the sector. It could also have negative impacts by undermining the ability of Cumbria to meet local demand for minerals, lacking support for minerals recycling and secondary sources, and missing an opportunity to make sustainable use of minerals co-products.
- 3.60. Recommendation / progression to Preferred Option: As would be expected, Option MIA would provide some clear economic benefits, and would support the further development of the minerals and waste sector in Cumbria. However, even with careful site selection and mitigation/control, these benefits would need to be balanced with potentially higher environmental effects overall, particularly taking traffic movements into consideration. Option MIB would be relatively neutral, but

could be considered insufficient if development of this industry sector was considered to be a fundamental political aspiration in Cumbria.

- 3.61. It is suggested that Option M1C can be excluded from further consideration relatively easily, as it would have a negative impact on key objectives relating to mineral extraction and waste management.

## **Minerals Issue / Option 2: Landbanks**

### ***Issues***

- 3.62. At present there are more than adequate landbanks for crushed rock and sand and gravel in Cumbria. Nationally, Mineral Policy Statement (MPS) 1 (November 2006) states that, ideally, landbanks should be maintained for at least 7 years for sand and gravel and at least 10 years for crushed rock. A landbank below these levels indicates that additional reserves will need to be permitted if acceptable planning applications are submitted.
- 3.63. The Issues and Options Discussion Paper suggests that the status quo is maintained with regard to both types of landbank. However, reflecting concerns that, at least theoretically, higher landbanks could lead to higher levels of production and generate significant impacts, including those of a cumulative nature, it was felt useful to compare this with an alternative policy that seeks to actively reduce landbanks for crushed rock to 10 years. It should be noted that in practice this would be difficult to achieve, possibly even requiring legal negotiation and potentially high compensation costs, depending on the timescale set to achieve the reduced target.
- 3.64. Whilst this issue could be linked in with Option 1, there is merit in considering this decision separately.

### ***Options***

- 3.65. The following two options have been identified in relation to this issue:
- **Minerals Option 2A:** maintain current landbank policies for crushed rock and sand and gravel in Cumbria - at least 15 and 7 years respectively. Do not seek to reduce over time.
  - **Minerals Option 2B:** actively seek to reduce current landbanks for crushed rock to 10 years, by exploring scope to revoke consents which could collectively have greatest environmental impacts.

### ***Assessment assumptions***

- 3.66. For the purposes of this appraisal, it is assumed that reducing the landbank for crushed rock could lead to a consequent reduction in the overall levels of hard rock extraction within Cumbria.

### ***Assessment findings***

- 3.67. Option M2A could have minor negative impacts on the objective that focuses on minimising primary extraction, and could run counter to the aim of making better use

of co-products from minerals working. It could also result in impacts on amenity and wellbeing as a result of its potential to generate concentrations of transport activities. Some aspects of the environment could be adversely affected by continuing extraction, including landscape character and countryside remoteness / tranquillity, particularly if consented reserves within landbanks were extracted concurrently or in close succession. Otherwise, the option would be largely neutral, including in economic terms, and would be positive in terms of maintaining a steady flow of minerals to meet demand within the area, and protecting resources from sterilisation.

- 3.68. Assuming a corresponding fall in extraction, Option M2B would perform relatively positively in terms of the key objective for sustainable mineral extraction, and, if it further encouraged aggregate recycling as a consequence, against the sustainable waste management objective. It would also have potentially positive effects on amenity and wellbeing, and would contribute positively to most environmental objectives, as it would reduce the risk of future environmental effects. However, Option M2B would not perform as well against economic objectives, including employment retention and generation.
- 3.69. Recommendation / progression to Preferred Option: Assuming a fall in extraction levels, Option M2B performs generally better in relation to sustainability objectives with the exception of economic considerations. However, in the absence of a site-specific review of consented landbank reserves, it is suggested that no significant adverse impacts have been flagged up with Option M2A that would justify Option M2B, given the difficulties and potential financial costs that could arise in its implementation. Although there may be individual sites within the current landbank that could not be exploited without significant environmental impacts, it is suggested that these are dealt with on a site-by-site basis.

### **Minerals Issue / Option 3: Strategic location of minerals sites**

#### ***Issues***

- 3.70. As the location of quarries is partly determined by geology, there is a need to give careful consideration to locational choices in relation to minerals extraction, as limited resource availability can lead to operations, and related impacts, being clustered in geologically appropriate areas.
- 3.71. The overall approach to guiding the location of quarrying in Cumbria could have implications both for communities where extraction is already taking place, and for those where there is currently no extraction. In the past, there have been particular concerns about transport related impacts associated with some quarries, and this appears to be particularly problematic in the Aldoth and Brampton areas. There may be opportunities to accept a reduction in extraction in Aldoth, as existing consents will largely expire by 2008, but Brampton will have continuing extraction until at least 2011, reducing scope to alleviate these issues entirely through the plan. In areas where there is currently no established extraction, or where levels are low, new extraction could result in transport related impacts, as well as affecting amenity and related considerations.

- 3.72. As discussed under Issue 1 and reflecting the current supply of crushed rock, the options explored in relation to this issue are based on an underlying assumption that new sites will only be provided for sand and gravel extraction, with no new consents for crushed rock being granted within the plan period.
- 3.73. There is a need for careful consideration of whether the plan should be seeking to 'disperse' potential impacts of sand and gravel quarrying further, particularly directing extraction away from areas where problems already exist. Conversely, there may be scope to reduce the number of communities where extraction generates impacts, by maintaining the existing distribution of quarries through extensions to existing consents and more limited numbers of new sites for primary extraction.

### **Options**

- 3.74. This stand-alone option would also be influenced by the Minerals Issue / Option 1 discussed above. However, as locational considerations are a key issue for a spatial land use plan to address, it is considered useful to review the potential sustainability impacts of the following discrete alternatives:
- **Minerals Option 3A:** active redistribution of quarrying away from problem areas, with, subject to the proper consideration of environmental effects, new sites identified in areas where extraction was previously non-existent or limited.
  - **Minerals Option 3B:** no redistribution of sites, allowing for extensions and new sites in areas where there are current concerns about transport and amenity impacts. Exploration of mitigation measures and the use of planning agreements with mineral operators to set in place further compensatory measures for communities.
- 3.75. It is assumed that there are adequate potential sites in areas where there is currently limited, or no, mineral extraction.

### **Assessment findings**

- 3.76. Both options score comparably in terms of managing mineral resources sustainably. When compared to the current baseline situation, Option M3A performs less strongly against the objective for landscape quality as it could permanently change landscape character in an area previously unaffected by mineral extraction, although conversely, it is possible that there is more scope for new sites, including associated transport routes, to conform better to current environmental and amenity standards for mineral extraction. With the exception of this, both options score comparably against many of the remaining criteria, as they relate largely to the actual distribution of both employment benefits and residual amenity and environmental impacts, after appropriate mitigation and control.
- 3.77. Recommendation / progression to Preferred Option: The consideration of whether environmental impacts should be concentrated or dispersed could be better informed by more detailed information on cumulative impacts, environmental capacity/thresholds and the ability of environmental resources to accommodate change. This would require alternative areas for extraction to be identified. There will be amenity related impacts associated with both locational options and whilst the

SA can identify both these and associated opportunities for minimisation and/or mitigation, it is not the role of the SA to determine whether these impacts should be 'redistributed'.

- 3.78. Should Option M3A be pursued, the potential impacts flagged up in the SA highlight the importance of reflecting the SA objectives in the site selection criteria.

## **Minerals Issue / Option 4: Ghyll Scaur Quarry**

### ***Issues***

- 3.79. Ghyll Scaur Quarry (near Millom) is a source of very high skid resistant roadstone. Planning permission for this quarry will expire within the plan period. The Issues and Options Discussion Paper notes that this type of material needs to be considered separately from other aggregates. Whilst there are other operational and planned quarries generating roadstone within the area, the Discussion Paper suggests that Ghyll Scaur could be acknowledged as a nationally significant resource. National level policy notes the relative scarcity of such materials and emphasises the need to protect such sites from sterilisation.
- 3.80. It was felt to be useful for the SA to consider the implications of focusing future extraction in this location, particularly in light of the alternative sources of roadstone arising elsewhere in Cumbria.

### ***Options***

- 3.81. The following options have therefore arisen from consideration of this issue:
- **Minerals Option 4A:** actively acknowledging Ghyll Scaur Quarry as a nationally significant resource, thereby implying a presumption in favour of further extraction at the site, subject to site level assessments.
  - **Minerals Option 4B:** no active acknowledgement of Ghyll Scaur Quarry as a nationally significant resource within the plan. This may lead to future consents being refused in the area.

### ***Assessment assumptions***

- 2.79. For the purposes of this assessment, it is assumed that Option 4B would be compliant with national policy in that it would not result in sterilisation of the resource as a result of in-built safeguarding policies in the plan. Other sites have not been assessed on a locationally specific basis at this preliminary stage.

### ***Assessment findings***

- 3.82. Both options could result in impacts on amenity and wellbeing, and aspects of the environment that could be adversely affected by continuing extraction (e.g. landscape character). However, the SA suggests that Option M4A would result in more (albeit minor) adverse impacts on biodiversity and landscape as it is based on the assumption that it would equate to a presumption in favour of extensions and future consents, in the national interest. These impacts, would however, be partly resolved by

appropriate mitigation at the site level, and would need to be balanced with the potential minor benefits for employment and economic development that are also predicted with this Option.

- 3.83. Recommendation / progression to Preferred Option: The preference in this case should be identified on the basis of the relative strength of key policy drivers. If Cumbria is seeking to maximise the contribution of the minerals sector to the economy, and if there are few concerns about the sensitivity of the site itself, Option M4A would be preferable. However, Option M4B performs better against environmental and amenity objectives, although it does not take account of consequent implications for extraction at other sites within, and beyond, Cumbria.

### **Minerals Issue / Option 5: Local building stone**

#### ***Issues***

- 3.84. The Discussion Paper sets out existing policies relating to the supply of local building stone in Cumbria, as provided by the Joint Structure Plan (2001-2016) and the existing Minerals and Waste Local Plan. These support small scale working of dimension or building stone and slate to meet local requirements.
- 3.85. However, the Paper suggests that a more positive approach could be provided by the plan. This would help to meet the needs of the local building industry and address concerns regarding the appropriate restoration of Cumbria's built heritage.

#### ***Options***

- 3.86. The following options have been identified in relation to this issue:
- **Minerals Option 5A:** Maintaining the status quo with respect to supplying local building stone and slate. Focus on small-scale operations and extensions where there are no other reasonable alternatives. This option implies that a degree of importation may be required to meet needs arising within Cumbria.
  - **Minerals Option 5B:** Positive promotion of extraction of a greater range of local building stones to secure supplies, as far as possible, to meet Cumbrian needs. This could result in the opening of new quarries and / or significant extensions to existing operations.

#### ***Assessment assumptions***

- 3.87. For the purposes of this assessment, it is assumed that there are additional stone resources available under Option M5B, although the impacts associated with their extraction have not been assessed on a locationally specific basis at this preliminary stage. Detailed geological information on the matter is not, however, currently available.

#### ***Assessment findings***

- 3.88. Option M5A would generate some positive impacts in terms of meeting a significant proportion of the requirements for minerals within Cumbria. However, it would

also provide fewer benefits than Option M5B, which would contribute to the maintenance and restoration of the built environment and would provide additional income, employment and investment in the minerals sector. Whilst Option M5A would score more strongly in relation to environmental and amenity criteria as extraction levels are lower, there may be relatively more transport related impacts as material may be imported.

- 3.89. However, Option M5B could also have negative impacts. There would be greater risks to environmental resources, including biodiversity and landscape quality as a result of the increased number of sites that would be required. However, this could be mitigated to a certain extent at the local level through appropriate site selection, planning and management, and ultimately restoration of the sites. The option would also run counter to the aim of reducing primary extraction albeit that the quarrying of building stone produces significant quantities of minerals waste that can be reused.
- 3.90. Recommendation / progression to Preferred Option: Again, the preference in this case should be identified on the basis of the relative strength of key policy drivers. However, should the selection of the option be environmentally led, it should be borne in mind that whilst Option M5B involves higher levels of extraction, it could provide potential significant benefits for the built environment within Cumbria, and reduce transport impacts associated with importation. Should Option M5B be progressed, it would be useful to explore whether this particular type of mineral resource coincides with areas with particular environmental sensitivities, thereby further increasing the potential environmental impacts associated with this policy.

## **Minerals Issue / Option 6: Brick making mudstone**

### ***Issues***

- 3.91. At present, High Greenscoe Quarry provides the raw materials for the Askam Brick and Tile Works. The works provides specialist bricks, using traditional techniques, and are therefore a unique product. Government policy emphasises the need to safeguard brickclay resources.
- 3.92. To secure the future of the brickworks, further reserves of brickclay will be needed. At High Greenscoe Quarry, currently proposed extensions could impact upon important areas of woodland. The plan should therefore consider the extent of potential resources, and the importance of this specific site in meeting needs for raw materials.

### ***Options***

- 3.93. Assuming that national policy aiming to deliver a continuing supply of brick making mudstone is adhered to, as opposed to allowing a potential decline in supplies, the following two options have been identified:
- **Minerals Option 6A:** allow extension of High Greenscoe Quarry, subject to appropriate provision of mitigation and compensation/enhancement measures by the minerals operator.

- **Minerals Option 6B:** active encouragement of new sources of brick making mudstone away from High Greenscoe Quarry, in recognition of the specific environmental constraints of the site.

2.91. It is assumed that encouraging new sources *and* allowing an extension of High Greenscoe Quarry is not a reasonable option for consideration and appraisal.

#### ***Assessment assumptions***

3.94. For the purposes of this assessment, it is assumed that there are additional sources available under Option M6B, although the impacts associated with their extraction have not been assessed on a locationally specific basis at this preliminary stage.

#### ***Assessment findings***

3.95. Both options would ensure a continued supply of mudstone, with associated economic and employment benefits. Option M6A would be generally neutral in relation to many sustainability objectives, i.e. no change to the current baseline, with the exception of environmental resources which could be affected by extended extraction, including the woodland which is important in terms of both biodiversity and landscape character.

3.96. Subject to the specific characteristics of the alternative locations, Option M6B has the potential to result in greater negative impacts, as it would shift mudstone extraction away from the existing site at High Greenscoe Quarry to other locations, and would therefore have the potential to generate wider impacts on amenity and the environment, with the exception of the identified woodland resource which would be better protected. The feasibility of this option is also uncertain, as there is no confirmed knowledge that this material is available in other locations.

3.97. Recommendation / Preferred Option: Subject to more detailed exploration of alternative sites, on the basis of the findings of the SA, it is anticipated that extension of High Greenscoe Quarry (Option M6A) may be the Preferred Option overall, provided that adequate mitigation/compensation can be identified for the potential woodland loss.

### **Minerals Issue / Option 7: Zinc extraction in the AONB**

#### ***Issues***

3.98. For centuries, the Nenthead area was a centre for the underground mining of vein deposits of zinc and lead. Whilst underground mining for these ceased around fifty years ago, there are extensive areas of dormant planning permissions for underground mining near Nenthead and in the immediately adjacent area of Northumberland. There are, however, no permissions for the very extensive surface developments that would be needed if mining was to recommence.

3.99. The Issues and Options Discussion Paper notes that although there may not to be interest in reviving this industry, it is important that the plan considers what response would be taken if it was. As a result, it suggests that exceptional circumstances and

public need could be defined, whereby the extraction of known reserves within the North Pennine Moors AONB might be permitted.

- 3.100. Whilst it is not felt that the SA should go as far as considering the various implications of different levels of ‘overriding need’, it was felt that it would be worthwhile considering the strategic implications of adopting such a policy.

### **Options**

- 3.101. The following two options have therefore been identified for consideration within the SA:

- **Minerals Option 7A:** clear identification of overriding circumstances where zinc extraction in the AONB might be permitted. This would lead to an assumption that only strictly necessary consents will be granted.
- **Minerals Option 7B:** no clear policy addressing this issue, based on an assumption that extraction is highly unlikely. Site specific consents would still be required, and as a result, applications would still be considered against the environmental policies in the plan and appropriate mitigation would be put in place should consents be granted. However, this option represents a broadly positive stance by omission, allowing for debate on a site-by-site basis.

### **Assessment findings**

- 3.102. On the assumption that Option M7A is more restrictive and zinc extraction less likely, this option performs most strongly against environmental and amenity criteria, with strong positive effects on landscape quality. However, it was also judged to be potentially negative in relation to employment and business development relating to the sector. Although restrictive, this option could still meet objectives in relation to the supply of minerals provided that exceptional circumstances in relation to need/benefits could be justified.
- 3.103. Unsurprisingly, Option M7B performed more strongly against economic criteria, albeit income from recreation and tourism in the AONB was not considered in the appraisal, and less well against environmental and amenity criteria. With respect to the former, in addition to potential impacts on the landscape quality of the AONB, the area also includes a site of European importance for bird populations, whilst potential water pollution would also be an important consideration, particularly given the high quality of many of Cumbria’s watercourses.
- 3.104. Recommendation / progression to Preferred Option: The SA suggests that given the potential negative impacts associated with zinc extraction in the AONB, it may be beneficial to provide a clear policy that sets out the overriding circumstances where extraction might be permitted. Whilst this may be unlikely to actually occur as a result of market demand, a safeguarding approach would provide greater certainty in relation to a number of sustainability objectives.

## ISSUES AND OPTIONS EXCLUDED FROM STAGE ONE

- 3.105. The Issues and Options Discussion Paper sets out several further issues that have the potential to generate additional options for assessment within the SA. However, at this preliminary stage, it was felt that the SA should focus on key issues and alternatives that are fundamental to the overall direction of the plan, and that more peripheral issues, and those where reasonable alternatives are difficult to identify, need not be evaluated separately at this stage.
- 3.106. It is important to note that the policy ultimately provided within the MWDF itself will be tested at later stages of the SA.
- 3.107. The table below sets out the residual issues, and the reasons for excluding them from the assessment of alternatives:

Issue	Reason for not assessing further through the SA options
Appropriateness of existing waste and minerals policy	Not explored as a specific option in its own right, although many of the options set out above incorporate existing policies, and are identified as such within the assessment for the purposes of clarity.
Treatment of high and intermediate level radioactive wastes	Currently the subject of a national level review. Exploration of alternatives in the absence of clear overall requirements is considered to be inappropriate.
Mineral Consultation Areas	Para 6.10 of the Issues and Options Discussion Paper states that these areas (designated following the Local Government and Planning Act 1980) require review. This is an important issue, but would not generate appropriate options for testing through the SA process. The issue should be considered further by CCC in the process of formulating the plan.
Marine dredged sand	The Discussion Paper notes that the share of this is declining. Although it could influence conclusions drawn on levels and sources of sand from primary / recycled / secondary aggregates, it is considered acceptable to view this as an issue that lies largely outside the jurisdiction of the land use planning system. Existing licenses are already in place, and the plan can only potentially influence this by adjusting the share or level of land won sand, thereby potentially influencing change in the market. Licenses to dredge marine aggregates are issued by the Crown Estate and are subject to a government review procedure whereby applications are considered on their merits. No options focusing on this issue alone have therefore been explored at this stage.

<b>Issue</b>	<b>Reason for not assessing further through the SA options</b>
High purity limestone requirements	The existing policy sets out the requirement to demonstrate national and regional need to justify the extraction of high purity limestone within Cumbria. No proposals to alter this are made. This is not therefore considered a key issue to be assessed at this stage in the SA, although more detailed consideration will be given to any resultant policy at the Preferred Option stage.
Gypsum and anhydrite	The Discussion Paper notes that no new consents for mining gypsum will be required until towards the end of the plan period, and that areas of search will need to be identified, and future reviews will need to consider whether additional extraction is required. Provisions for anhydrite are only necessary in terms of protecting entrances and workings from sterilisation by other forms of development. This is not therefore considered a key issue to be assessed at this stage in the SA, although more detailed consideration will be given to any resultant policy at the Preferred Option stage.
Oil and gas	Existing policies relating to these sectors are defined in the Discussion Paper. These generally note that permission could be granted where applications are in line with wider schemes for the appraisal and development of these resources. This is not therefore considered a key issue to be assessed at this stage in the SA, although more detailed consideration will be given to any resultant policy at the Preferred Option stage.
Peat	The Discussion Paper states that the existing policy (43) on peat could be retained. This states that consent will only be granted where there is a 'demonstrable national requirement', the site has already been significantly damaged by recent human activity and is of limited or no current nature conservation or archaeological value, and appropriate restoration is undertaken. This appears to be an appropriate approach, which is unlikely to generate further impacts. Alternatives are limited and expected to add little to the SA at this stage. More detailed consideration, including the wording of the policy in relation to environmental protection and enhancement is therefore proposed at later stages of the SA.

## 4. KEY CONCLUSIONS

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### INTRODUCTION

- 4.1. This section of the report brings together the key findings of the SA so far. It aims to provide advice on the selection of the Preferred Option for the Cumbria Minerals and Waste Development Framework, by highlighting potentially significant issues, and considering how an appropriate balance can be struck in policy development.

### POTENTIALLY SIGNIFICANT ISSUES ARISING FROM STAGE ONE

- 4.2. The review of options has highlighted a number of key issues. It is important to bear in mind that this is a strategic level assessment and this influences the extent to which definitive conclusions can be drawn on the actual impacts of the plan. However, the process of testing options has highlighted where potential plan policies could potentially have a significant impact, and provides guidance on the relative merits or otherwise of pursuing different options.

#### **Key Issue 1: Deriving benefits from development of the waste and minerals sectors in a sustainable way**

- 4.3. As noted in Chapter 1, the SA of Issues and Options has helped to identify positive policy impacts as well as means of seeking to avoid negative impacts. In terms of the overall policy relating to waste management, the appraisal showed that potential environmental or community impacts should be considered alongside possible economic benefits. If the local economy is viewed as a key political policy driver, it is important to recognise that Cumbria could derive employment, business development, training and investment from the active promotion of a vibrant waste management sector that ‘champions’ sustainable technology. The land use planning system can support this by actively pursuing the fulfilment of higher targets for waste management in the area, and by positively providing sufficient sites to accommodate development requirements. This would also contribute positively to wider goals relating to the waste hierarchy and energy from waste.
- 4.4. A key question for the MWDF, however, is how far these benefits can be used to justify environmental and social impacts at the site level, albeit that these can often be reduced to minor impacts. If there is sufficient concern about the capacity of the area to absorb the level of development and, importantly, the associated transport movements that would flow from such a positive approach, a more muted response may be required. Development control policies and processes will have a key role to play in mitigation and / or managing these impacts.
- 4.5. Strategic level decisions also need to be made to steer the overall approach to minerals extraction in the area. Option M1 discussed the fundamental, and interrelated, issues of RAWP apportionment, targets for recycled and secondary materials, and consequently the number of sites to be provided by the planning system. As with the overall thinking on waste management, the key question to be

addressed in selecting the Preferred Option is whether the economic benefits of undertaking a high level of extraction, and exporting materials, would be justifiable in relation to its higher environmental effects. If there are already concerns about the impacts of the mineral sector in Cumbria, a more neutral option that accepts targets but does not seek to actively develop the minerals sector may be appropriate.

## **Key Issue 2: Strategic locational choices**

- 4.6. As explained in Chapter 2, the SA has been undertaken on the basis of several explicit assumptions, including an acceptance that many potential effects would be managed and mitigated at the site level. Whilst waste management facilities and quarries can often be perceived as ‘bad neighbours’ by the general public, in practice many safeguards and working practices are in place to ensure that their impacts are minimised. As a result, the analysis of both waste and minerals issues has focused on reviewing potential impacts that are relatively difficult to mitigate, and these are largely transport related or linked with perceptions and awareness of the sector.
- 4.7. Further locational choices need to be made at a strategic level, in relation to both waste facilities and minerals extraction. Locational choices for minerals extraction are relatively constrained, although there are still some strategic siting decisions to be made in relation to future sand and gravel extraction. The key question for the next stage will therefore be whether concentration of extraction, largely where it is already taking place, would be preferable to a policy emphasis on a different pattern of extraction. In light of ongoing concerns about the impacts of the sector on some communities, further testing of relative cumulative impacts, thresholds and environmental capacity would help to provide a clearer set of conclusions at the next stage of process.
- 4.8. Some of the more specific minerals issues were difficult to draw conclusions on at a strategic level, including options relating to brick making mudstone at High Greenscoe Quarry. In the absence of major strategic impacts arising from the options, the SA concluded that further site-specific analysis, that also takes into account the relative merits of alternative sites, albeit these have yet to be identified, is recommended.
- 4.9. In terms of waste facilities, the SA concluded that a centralised approach to providing waste management facilities could benefit the development of the sector itself, but could also have mixed impacts by concentrating social and environmental impacts at the local level. The alternative, of a decentralised approach to provision of waste management facilities, would also have impacts that could potentially be distributed more widely throughout the area.
- 4.10. At the next stage, it will therefore be important to establish a clearer spatial view on whether appropriate sites for both minerals extraction and waste management can be identified in Cumbria to fulfil the preferred scenarios in a low impact way. It will also be useful to understand more fully the transport related repercussions of the proposed approaches. Further baseline information and analysis may assist with this, together with more detailed modelling of the respective options, specifically specialist transportation modelling in relation to waste facilities, as proposed in Section 3.

### **Key Issue 3: The influence of other policy drivers**

- 4.11. There was found to be relatively little difference in the potential impacts of some of the waste and minerals options. For example:
- the issue of targets for HWRCs is an important consideration that highlights the relationship between the MWDF and the area's Municipal Waste Strategy. However the SA concluded that both options would be generally positive.
  - although reducing landbanks might be beneficial in terms of sustainability, not reducing them would have insufficient impacts to justify the potential costs and legal issues that would arise under the first scenario.
  - supplies of local building stone could either be generally supported or strongly supported, with there being little significant difference in the impact of the options.
  - recognising or not recognising Ghyll Scaur Quarry as a national resource would result in relatively few positive or negative significant impacts in planning terms.
- 4.12. It is therefore suggested that in these cases further consideration is given to the relative weighting of key policy drivers, in order to help define the most appropriate way forward. Decisions on whether economic productivity outweighs minor environmental impacts could therefore be made in a transparent way, as part of the Preferred Option selection process.

### **Key Issue 4: Deliverability**

- 4.13. As suggested in Chapter 1, the deliverability of potential plan policies has been taken into account, to ensure the conclusions of the SA are as realistic as possible. For example, although the option to reduce landfill thresholds could provide benefits, the SA also noted that this option may in practice be difficult to deliver, as a result of the timescales associated with the land use planning system. If the option cannot ensure that sufficient landfill capacity is available within Cumbria, this would raise questions about the area's ability to meet its overall requirements for waste management capacity, and could ultimately result in a breach of more significant sustainability criteria in the longer term. As a result, primary conclusions have been balanced within the assessment and should be noted within the selection of the Preferred Option.

### **Key Issue 5: Options to be avoided in the interest of sustainability**

- 4.14. As well as providing an indication of the Preferred Options to develop further in Stage 2, the SA concluded that the following options could effectively be excluded from further analysis on the basis of their potentially adverse impact:
- (i) seeking to export substantial amounts of waste materials to other parts of the region, as this could have significant impacts on perceived and actual health and well-being (largely as a result of traffic borne impacts), and some aspects of the environment;

- (ii) arguing for a reduced aggregates apportionment figure on the grounds of practicality and environmental acceptability as this would mean that key sustainability objectives for minerals could not be met;
- (iii) setting a reduced target for recycled / secondary aggregates, as this would also undermine the contribution of the MWDF to primary objectives of sustainable waste management.

## **NEXT STEPS**

- 4.15. These findings will be used by Cumbria County Council in confirming the Preferred Option for the MWDF including site selection criteria (Stage Two). This will then be appraised in a manner that is consistent with Stage One of the SA, yet draws more comprehensively on the baseline information, and characterises potential impacts more fully to reflect the more focussed nature of the next stage of plan preparation.

