Minerals and Waste Joint Plan

Sustainability Appraisal

Non-Technical Summary Report

to accompany the Minerals and Waste Joint Plan

October 2016

North Yorkshire County Council, City of York Council and the North York Moors National Park

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To accompany the Publication Draft Plan

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Contents

1. Introduction

North Yorkshire County Council, City of York Council and the North York Moors National Park National Park Authority are planning authorities that have a responsibility to take decisions on planning applications relating to minerals and waste development within their boundaries. To assist with these decisions, and provide transparency in the approach to be taken, it is important that they have an appropriate range of policies in place.

The three planning authorities have come together to produce a Minerals and Waste Joint Local Plan (referred to throughout this report as 'the Joint Plan'). It includes policies about where minerals and waste development should take place and how it should be carried out. It also identifies a number of specific locations for future development, called site allocations and in a small number of instances Preferred Areas and Areas of Search have been identified.

The Joint Plan includes policies that deal with a number of different types of development. For example, the geology of the Plan area means that several different types of mineral can be extracted, from aggregate minerals like sand and gravel, to different types of building stone and energy minerals such as coal bed methane and shale gas. There are also important waste management needs that are planned for in the Joint Plan, including facilities for recycling or disposal of waste. These types of development can have a wide range of positive and negative effects on the environment and people. The challenge for the Joint Plan is to deliver development that is sustainable.

Sustainable development is development that meets the needs of the present generation without compromising the ability of future generation to meet their own needs[1]. 'Sustainability' is the way in which sustainable development is delivered, and can involve everything from positive actions to recycle more in order to use less resources, to looking after the countryside to ensure that future generations still have the space to grow food.

The UK Government has stated that sustainable development has economic, social and environmental dimensions. In order to help ensure that plans such as the Joint Plan set out policies that deliver sustainable development, the National Planning Policy Framework requires that *"A sustainability appraisal which meets the requirements of the European Directive on strategic environmental assessment [SEA Directive] should be an integral part of the plan preparation process, and should consider all the likely significant effects on the environment, economic and social factors"*[2]. This Non-Technical Summary report sets out the findings of the sustainability appraisal on the Joint Plan in a non-technical way. It accompanies a series of more technical reports, including a full

[1] This definition paraphrases the definition first proposed by the World Commission on Environment and Development in a 1987 report called 'Our Common Future' chaired by former Norwegian Prime Minister Gro Harlem Brundtland: "sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development, 1987. Our Common Future [URL: http://www.un-documents.net/our-common-future.pdf]

[2] Department of Communities and Local Government, 2012. National Planning Policy Framework [URL: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/6077/2116950.pdf]

‘sustainability appraisal’ report that documents the detailed effects of the Joint Plan in line with the SEA Directive.

2. The Minerals and Waste Joint Plan

The Minerals and Waste Joint Plan will cover the period 2016 to 31 December 2030. The geographical scope of the Joint Plan is the three minerals and waste planning authority areas of North Yorkshire, the City of York and the North York Moors National Park as shown in Figure 1 below.

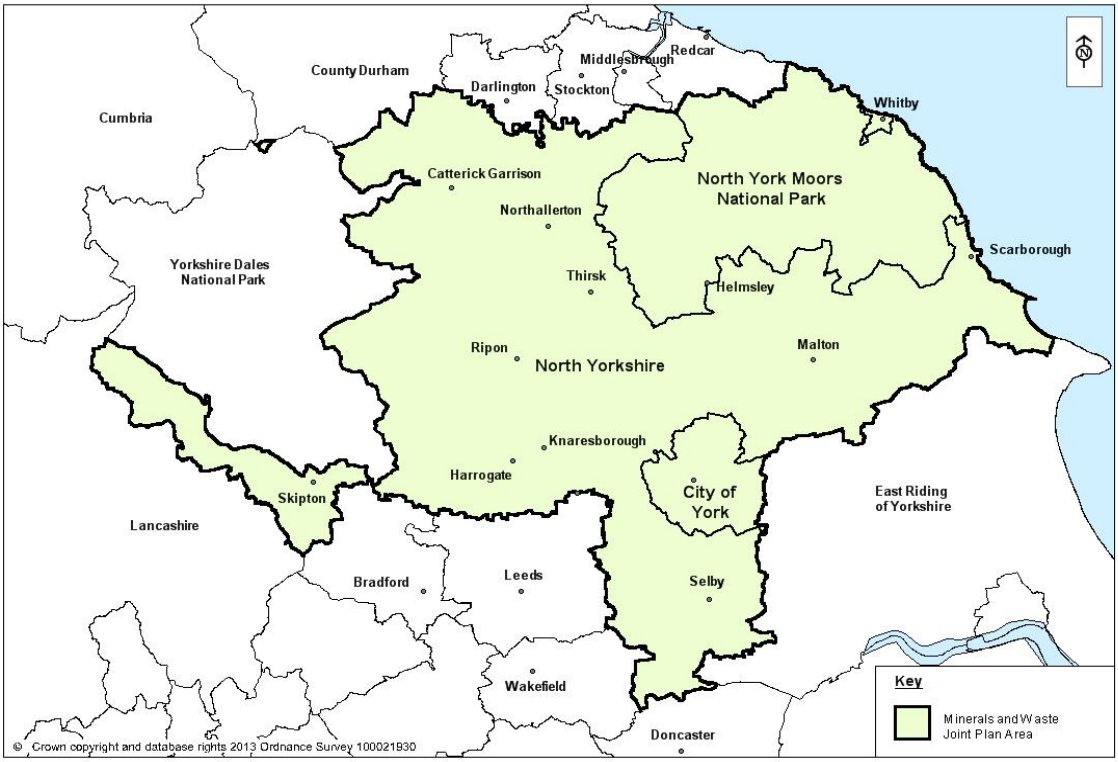

Figure 1: The Joint Plan area.

Unitary authorities, National Park Authorities and County Councils are minerals and waste planning authorities. This means that North Yorkshire County Council, the North York Moors National Park and the City of York all have a responsibility to prepare Development Plans setting out policies for development and use of land in their area[3] relating to minerals and waste. Planning authorities can prepare plans which relate just to their own area or they can work jointly with other planning authorities to prepare plans. In the case of the Joint Plan, North Yorkshire County Council, The North York Moors National Park Authority and City of York Council have coordinated to produce a Joint Plan.

According to the Joint Plan *"The role of the Development Plan is to guide future development of the area. It forms the starting point for decision making on planning applications. Proposed development that accords with an up-to-date plan should be approved and proposed development that conflicts should be refused, unless other material considerations indicate otherwise".*

[3] The North York Moors National Park and the City of York also have responsibilities for other types of development, including housing and employment and also prepare Local Plans that relate to this other development.

The Joint Plan includes a description of the background context to the Joint Plan as well as a description of key issues and challenges to address throughout the Joint Plan. It then goes on to consider the vision and objectives of the Joint Plan, and sets out policies for minerals; 'provision of waste management capacity and infrastructure', 'minerals and waste transport and other infrastructure', 'minerals and waste safeguarding' and 'development management'. In addition, it allocates a number of sites for both minerals and waste development and sets out a number of areas of search for minerals.

4 priorities also underpin the vision and objectives of the Joint Plan:

- Delivering sustainable waste management
- Achieving the efficient use of minerals resources
- Optimising the spatial distribution of minerals and waste development
- Protecting and enhancing the environment, supporting communities and businesses and mitigating and adapting to climate change.

The objectives of the Joint Plan are as follows:

Objective 1 - Encouraging the management of waste further up the hierarchy

Objective 2 - Making adequate provision for the waste management capacity needed to manage waste arising within the sub-region and safeguarding important waste management infrastructure

Objective 3 - Safeguarding important minerals resources and minerals infrastructure for the future

Objective 4 - Prioritising the long-term conservation of minerals through facilitating provision of sustainable alternatives to primary minerals extraction, including increasing the re-use and recycling of minerals and the use of secondary aggregates

Objective 5 - Planning for the steady and adequate supply of the minerals needed to contribute to local and wider economic growth, built development, quality of life, local distinctiveness and energy requirements, within the principles of sustainable development

Objective 6 - Identifying suitable locations for the extraction and recycling of minerals, the production of secondary aggregate, key minerals supply and transport infrastructure and the management of waste

Objective 7 - Seeking a good match between locations for waste management infrastructure and the places where waste arises, and between locations for mineral working and minerals supply infrastructure and the places where minerals and mineral products are used, in order to minimise the overall need for transport

Objective 8 - Promoting the use of alternatives to road transport and ensuring that new development is served by suitable transport networks

Objective 9 - Protecting and where appropriate enhancing the natural and historic environment, landscapes and tranquil areas of the Joint Plan area

Objective 10 - Protecting local communities, businesses and visitors from the impacts of minerals and waste development, including transport

Objective 11 - Encouraging the sustainable design and operation of minerals and waste development activity, including using opportunities arising from minerals and waste development and reclamation activity to mitigate and adapt to climate change

Objective 12 - Delivering benefits for biodiversity, geo-diversity, recreation and public access and other green infrastructure through reclamation of minerals workings.

3. Sustainability Appraisal

Sustainability appraisal is required under English law for Local Plans. It assesses how sustainable a Local Plan is and what can be done to make it more sustainable. A sustainability appraisal considers:

- The current state of the environment, the economy and social issues and how these are expected to evolve over time;
- Key environmental, economic and social problems;
- Any relevant environmental laws, regulations and other objectives that are relevant to the plan;
- The likely significant effects on a range of sustainability issues, such as air, water and human health, that are predicted to occur as a result of adopting the plan;
- The measures that can be put in place to try and prevent these significant effects;
- Alternatives to the plan;
- How sustainability effects will be monitored if the plan is adopted.

This sustainability appraisal also meets the requirements of a European Directive called the Strategic Environmental Assessment Directive which requires that certain plans are considered for their environmental effects. For more information about the SEA Directive, see the Sustainability Appraisal Report.

The sustainability appraisal has been an on-going process that has been carried out across several stages. This report represents the culmination of those earlier phases of work. Consultations have been carried out at each of the earlier stages, which include a 'scoping' or information gathering stage, an issues and options stage and a preferred options stage. For further information on the earlier stages of the sustainability appraisal process see the main Sustainability Appraisal Report (volume 1).

4. The State of the Environment, the Economy and Social issues

The following issues were reviewed when undertaking the sustainability appraisal:

- Biodiversity, Fauna and Flora;

- Landscapes;

- Water and Soil;

- Air;

- Cultural Heritage and Historic Environment;

- Additional environmental issues;

- Economy, employment, education and deprivation;

- Population and human health;

- Recreation and leisure;

- Communities

- Material assets and resources;

- Transport

After reviewing the current situation and future trends in the sustainability appraisal report, in relation to the above topic areas the following key issues have been identified:

Biodiversity, Flora and Fauna

- There are a large number of nationally designated wildlife sites and significant areas of internationally designated wildlife sites.
- Outside of these areas there are large numbers and a wide distribution of locally important Sites of Importance for Nature Conservation and UK BAP priority habitats.
- Much of the farmland is covered by some form of agri-environment scheme.
- Despite this many habitats in this area are fragmented and isolated.
- Outside of the National Park, woodland is generally found in small fragments.
- Invasive species are an increasing threat to native wildlife.
- Key ecosystem services include regulating water flow, food provision and cultural services such as the provision of a sense of history.

Landscapes

- Variations in geology, soils, topography and historical factors have helped create a range of distinctive and valued landscapes.
- A large proportion of the Plan area is protected for its landscape value by the North York Moors National Park, Areas of Outstanding Natural Beauty (AONBs) and Heritage Coasts.
- Although not specifically a landscape designation, Green belts limit development in some parts in the southern part of the Plan area.

- Whilst the county of North Yorkshire as a whole is largely tranquil, outside of the National Parks and AONBs levels of tranquillity often fall due to busy transport corridors or when near to settlements. Some areas, such as the North York Moors National Park have particularly dark skies.

Water and Soil

- Long stretches of river catchments can be found within the Plan area, all of which ultimately drain to the Humber Estuary, with the exception of the Esk and Tees.
- Significant floodplains form around large parts of these rivers, becoming more significant as they travel east.
- River Basin Management Plans set demanding targets for water quality across many water bodies however there are still significant numbers of water bodies at poor or bad status.
- Important groundwater resources are protected by Groundwater Source Protection Zones.
- Flooding is already a problem in lower lying areas and climate change is likely to increase the risk of surface water and river flooding.
- Much of the Plan area is made up of high quality farmland, though there are significant areas of poorer soils particularly in uplands.
- Parts of the Plan area are subject to issues such as soil erosion and compaction.
- Areas of high soil carbon exist in the North York Moors.

Air

- Air quality is mainly an issue for a few very local urban areas; however some important upland habitats are being affected by deposition of air pollutants.

Climatic Factors

- Harrogate has the highest total emissions of CO_2, followed by York and Selby, though across the Plan area total emissions are falling.
- Per capita emissions are falling, but remain highest in the more rural parts of the Plan area.
- Climate change is likely to have a range impacts on the Plan area including increased flooding, damage to infrastructure and effects on food production.

Cultural Heritage and Historic Environment

- The Plan area is rich in historic assets and archaeology.
- There are a large number of Listed Buildings, which as well as needing to be protected also require an on-going supply of minerals, such as building stone for their upkeep and repair.
- The Joint Plan will need to consider the settings of these assets as well as the protection of the assets themselves.
- Whilst most designated assets in the area are not ‘at risk’ more than a third of the designated historic assets identified as being ‘at risk’ in the region are in the Plan area.

Additional Environmental Issues

- The Plan area has a wealth of geological interest.
- Coastal erosion is affecting much of the coastline, in some places significantly.
- Minerals development offers significant opportunities to create new environments such as habitats or recreational land.

Economy, Employment, Education and Deprivation

- Since the end of the economic downturn unemployment has fallen across the county.
- Throughout Yorkshire as a whole, more than 1 in 10 people feel that they are underemployed.
- The minerals sector is a significant employer directly supporting approximately 2,000 jobs.
- Business appears to be 'holding up' following the down turn with only modest falls in active enterprises across the Plan area (and growth in the number of active enterprises in City of York) although this data is limited to data up to 2011.
- Wage levels in the Plan area are lower than England as a whole.
- Fuel prices are falling nationally, which could have positive impacts on businesses and rural communities in such a large economic area.
- Outdoor recreation brings income to many rural areas, though less money is spent outdoors by North Yorkshire people than the rates for England as a whole.
- Heritage assets are popular tourist destinations.
- The Plan area has generally better than average educational attainment levels.
- The Plan area is generally one of the least deprived areas in the country, although Scarborough and some parts of City of York rank significantly higher on the indices of deprivation than the rest of the Plan area.

Population and Human Health

- There are many sparsely populated parishes and most settlements are relatively small. The City of York however, is a significant city with a population of over 206,900 in the heart of the Plan area;
- All districts within the Plan area have population estimates of over 50,000. The largest settlements outside of the City of York are Harrogate and Scarborough, each with population estimate of 157,000 and 107,900 respectively. Most people live outside of rural settlements.
- Population of the Plan area as a whole is increasing and is expected to continue to rise, but at a lower rate than the region as a whole.
- North Yorkshire as a whole has a higher proportion of older people than the regional and nationally averages. A younger population profile can be found in the City of York however. In the future older people will form a larger proportion of the population.
- Most districts and the City of York receive a net inflow of new residents, though there is a net outflow in Craven; Harrogate and Richmondshire receive the most new residents.

- Life expectancy is increasing in all Districts in North Yorkshire, but there are significant geographical variations in both male and female life expectancy within the County; recent figures (2012-2014) show that Scarborough is the only district with lower male and female life expectancy than England as a whole.

Recreation and Leisure

- The Plan area provides many opportunities for recreation and leisure including the North York Moors National Park and an extensive network of rights of way.
- The natural environment and heritage assets are key attractions.

Communities

- Access to services is generally poor in the rural parts of the Plan area whilst the urban areas have a wide range of services and facilities.
- The most remote parts of the Plan area have little or poor access to broadband and mobile phone coverage.
- Crime and the perception of crime are not widespread issues.

Material Assets and Resources

- The Plan area has economically important areas of minerals, including aggregates such as crushed rock, sand and gravel and silica sand; energy minerals such as deep mined coal; and non-aggregate building stone.
- Most deposits of waste in North Yorkshire are taken to landfill sites, while the waste deposits managed via recycling and treatment are below regional and national rates.
- The percentage of household waste recycled, reused and composted has risen in recent years, with North Yorkshire as a whole recycling more than the national average; though there is still a large volume of waste that is not recycled.
- There is significant variation between district levels of recycling: within the Plan area the highest household rates of re-use / recycling composting are in Ryedale, the lowest rates are in Richmondshire.
- Energy consumption is generally higher than average.

Transport

- The most significant transport corridors run north to south and include the A1(M), A19 and East Coast mainline.
- There are no airports in the area. Three airports lie within close range of the County, and there are major seaports nearby on the Tees and Humber

5. The Sustainability Appraisal Objectives

The key issues identified in section 4 were considered together with the objectives of a number of regulations, plans and strategies (which are recorded in the scoping report). This helped to define a number of sustainability appraisal objectives, the purpose of which is to compare to alternatives in the Joint Plan to show how far the plan would help to meet the objective.

The sustainability appraisal objectives are as follows:

1. Protect and enhance biodiversity and geodiversity and improve habitat connectivity
2. Enhance or maintain water quality and improve efficiency of water use
3. Reduce transport miles and associated emissions from transport and encourage the use of sustainable modes of transportation
4. Protect and improve air quality
5. Use soil and land efficiently and safeguard or enhance their quality
6. Reduce the causes of climate change
7. Respond and adapt to the effects of climate change
8. Minimise the use of resources and encourage their re-use and safeguarding
9. Minimise waste generation and prioritise management of waste as high up the waste hierarchy as practicable
10. Conserve or enhance the historic environment and its setting, cultural heritage and character
11. Protect and enhance the quality and character of landscapes and townscapes
12. Achieve sustainable economic growth and create and support jobs
13. Maintain and enhance the viability and vitality of local communities
14. Provide opportunities to enable recreation, leisure and learning
15. Protect and improve the wellbeing, health and safety of local communities
16. Minimise flood risk and reduce the impact of flooding
17. Address the needs of a changing population in a sustainable and inclusive manner

6. Review of Alternatives

To review alternatives we first considered the objectives of the Joint Plan (see section 2 above). We considered this against a scenario where no plan would be adopted. The findings in relation to each alternative are summarised below:

Alternative 1: Implement the objectives of the Plan

Taken as a whole, the Joint Plan's objectives compare well to the Sustainability Appraisal Objectives. The Joint Plan objectives which seek to protect the environment and address climate change score particularly positively in relation to the SA objectives. Only one minor negative is identified. This is in relation to Plan objective 12 which notes that restoration of sites might drive a demand for inert landfill to restore ground levels. Other Plan objectives are broadly positive or neutral, though negative or mixed positive / negative effects are identified in relation to objectives 5 and 6 in particular, and more mixed effects recorded in relation to objectives 2 and 4. This is because objectives 2, 5 and 6 deal with providing adequate capacity to deal with waste, supply minerals and identify locations for this development, all of which would promote development on the ground, which could lead to a range of environmental and social effects.

Objective 4 supports sustainable alternatives to primary minerals and the use of secondary aggregates, which generally scores very positively for SA objectives such as minimising resources and moving waste up the waste hierarchy, but also notes some locally mixed positive and minor negative effects in relation to air, water and community vitality as industrial processes will be involved in meeting this objective, which could generate dust or traffic; though the objective would also reduce extraction of primary minerals which would otherwise have generated similar environmental impacts.

In contrast to earlier assessment on the Joint Plan objectives, it has been possible to remove much of the uncertainty from this assessment as site allocations and policies that accord with these objectives have now been more fully developed. Some uncertainty still remains in relation to Plan Objective 2 about making provision for waste management capacity and how it performs in relation to the soil / land SA objective and the historic environment SA objective as this type of development may sometimes take place on previously developed land, which is of uncertain value in relation to these SA objectives.

It should be noted that all objectives will operate in combination with each other and that a positive score has been recorded at least once in relation to each sustainability objective, meaning that the Joint Plan will positively contribute in some way towards each SA objective.

Alternative 2: No plan is adopted

Under this alternative most SA objectives report a greater level of uncertainty than alternative 1 over sustainability effects. This is because, without a plan in place planning decisions would primarily be made using the National Planning Policy Framework (NPPF) and the National Planning Policy for Waste (NPPW), which are statements of national Government policy. Both of these policy documents place a large emphasis on different elements of sustainable development policy being delivered through Local Plans. Without a Local Plan in place, it is highly uncertain that sustainability would be fully factored in to planning decisions.

There are still a wide number of positive effects, though these are often at a lower level than alternative 1. This is because, even without a Local Plan, the NPPF and NPPW still require that decisions on planning applications take into account a range of sustainability criteria. Quite often though, locally important issues (such as those outlined in section 4 of this report) may not be sufficiently factored in to such decisions.

Several negative effects are noted, which are often of moderate or greater significance. In particular, the lack of a strategic (over-arching) approach under this alternative may lead to issues such as clustering of sites in some parts of the Plan area, where impacts to a range of SA objectives could work in combination. In addition, if it is assumed that other areas outside of the Plan area have plans in place, while the Plan area does not cover this scenario, the good transport links and proximity to market of several parts of the Plan area, coupled with the lack additional policies to adhere to, could attract more waste development, and possibly some additional minerals sites, and thus a greater demand for land to be developed (with associated environmental effects). Whether this is any better or worse than elsewhere outside the Plan area cannot be predicted. However, for the Plan area we have tentatively predicted negative effects of minor to moderate significance in relation to these 'absence of plan' type effects.

There is also a high degree of uncertainty as to the effects on sustainable economic growth and the requirements of a changing population. This is because a lesser degree of policy protection might suggest that growth could be at a higher rate. This growth is, however, unlikely to be as sustainable as growth under alternative 1 as ultimately perceptions of the Plan area might be damaged, making it a less attractive location for investment. In addition, without the allocations provided by a plan, there is less certainty that land can, at least in principle, be developed. Having a plan can provide for investment and therefore help promote sustainable economic growth.

In conclusion it was recommended that **Alternative 1 is pursued and Alternative 2 is discounted**.

A number of other high level alternatives were considered and considered against alternative options. These included the following policy themes:

- Broad geographical approach to supply of aggregates

- Overall distribution of sand and gravel provision

- Key spatial principles for oil and gas

- Overall approach to the waste hierarchy

- Strategic role of the Plan area in the management of waste

- Overall locational principles for provision of new waste capacity

The full findings of the review of these alternatives is shown in section 5.3 of the full Sustainability Appraisal Report, and the chosen policies are shown amongst the summary of sustainability appraisal findings in section 7 below.

The SA also considered alternative policy options for each of the individual policies presented in the Joint Plan. A full summary of the results of these assessments is provided in volume 1 of the sustainability appraisal report. We have, however, summarised the findings of all the policies in the Joint Plan. In addition, we have summarised the findings of the assessment of allocated sites, preferred areas and areas of search in the Joint Plan in a separate appendix.

7. Sustainability Appraisal Findings and Recommendations for Improvement (mitigation)

Using the Sustainability Appraisal objectives shown earlier in this report in section 6 each policy in the Joint Plan was compared to the sustainability appraisal objectives. A score was awarded based on how beneficial or negative a policy might be compared to the current relevant sustainability conditions in the short term (0 to 5 years from plan adoption, recorded in the tables below using the symbol 'S'), medium term (6 to 15 years from plan adoption, recorded in the tables below using the symbol 'M') and in the long term (16 to 30 years from plan adoption, recorded in the tables below using the symbol 'L').

The positive and negative scores were defined in the following way:

Score	Significance
++	The option is predicted to have higher positive effects on the baseline and the achievement of the SA objective.
m+	The option is predicted to have moderate positive effects on the baseline and the achievement of the SA objective.
+	The option is predicted to have minor / low level positive effects on the baseline and the achievement of the SA objective.
0	The option will have no (or an insignificant) effect on the baseline and the achievement of the SA objective.
-	The option is predicted to have minor / low level negative effects on the baseline and the achievement of the SA objective.
m-	The option is predicted to have moderate level negative effects on the baseline and the achievement of the SA objective.
--	The option is predicted to have higher negative effects and the achievement of the SA objective.
?	The impact of the objective on the baseline / SA objective is uncertain.

The full policy assessments are in appendix 2 of the Sustainability Appraisal Report. However, they have been summarised in this report below. For each policy the scoring is followed by a brief description of the predicted sustainability effects of adopting the policy, and recommendations may also be made if the policy could be improved.

Readers should note that for reasons of brevity (as the Joint Plan policies run to several hundred pages) policies assessed are not referred to in full, and for that reason, assessments should be read alongside corresponding policies in the Joint Plan.

Policy M01: Broad Geographical Approach to Supply of Aggregates

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	+	-	+	+	-	+	0	0	0	+	+	+	+	+	?	0	+
	-			-						-	-			-			
M	+	-	+	+	-	+	0	0	0	+	+	+	+	+	?	0	+
	-			-						-	-			-			
L	+	-	+	+	-	+	0	0	0	+	+	+	+	m+	?	0	+
	-			-						-	-						

Summary of Sustainability Appraisal Findings

This policy exhibits a range of different effects. In the main the sustainability objectives recorded minor positive effects for the protected landscapes in the Plan area. Some minor negative effects associated with crushed rock extraction were noted as the policy could shift location away from protected areas and into the remaining Plan area. There were positive benefits noted on tourism which benefit the economy and community vitality objectives. For the recreation objective, effects were mixed but became more positive in the longer term as quarry restorations are either enhanced, or possibly directed closer to more populated areas in the wider Plan area.

Recommendations

No recommendations are made.

Policy M02: Provision of sand and gravel

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	+	-	+	+	-	+	0	0	0	+	+	+	+	+	?	0	+
	-			-						-	-			-			

M	+ -	-	+	+ -	-	+	0	0	0	+ -	+ -	+	+	+ -	?	0	+
L	+ -	-	+	+ -	-	+	0	0	0	+ -	+ -	+	+	m+	?	0	+

Summary of Sustainability Appraisal Findings

This Policy's effects are, in effect, the cumulative (in combination) effects of the Joint Plan as it relates to sand and gravel extraction, so many effects are either cumulatively negative, or cumulatively mixed negative and positive. Some objectives also benefit from the cumulative effect of sand and gravel restoration schemes in the longer term (e.g. flooding, recreation and health SA objectives). Some objectives report highly negative effects, as quarrying for sand and gravel will inevitably involve the significance utilisation of materials and have a large carbon footprint (a carbon footprint is how much carbon dioxide is used up to make something, in this case saleable sand and gravel – carbon dioxide is a gas which contributes to global warming).

Recommendations

To some extent this Policy is mitigated by Policy M11 which encourages alternatives to land won primary aggregate, though it is acknowledged that many secondary and recycled aggregates are not direct substitutes for sand and gravel. Further consideration of the potential contribution made by recycled and secondary aggregate is recommended when this policy is considered at the mid-term review of the Joint Plan, depending on the availability of reliable data.

Policy M03: Overall distribution of sand and gravel provision

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	m-	m-	m-	-	m-	m-	+ -	0	0	m-	m-	++	+ -	-	+ -	+	+
M	m- +	m-	m-	-	m-	m-	+ -	0	0	m-	m-	++	+ -	-	+ -	+	+
L	m- m+	m-	m-	-	m-	m-	++	0	0	m-	m-	++	+ -	m+	+ -	++	+

Summary of Sustainability Appraisal Findings

This Policy's effects are, in effect, the cumulative effects of the Joint Plan as it relates to the distribution of sand and gravel extraction, so many effects are either cumulatively negative,

or cumulatively mixed negative and positive. Some objectives also benefit from the cumulative effect of sand and gravel restoration schemes in the longer term (e.g. flooding, recreation, health). Some objectives report neutral effects, as effects are more linked to the amount of material removed from the ground rather than locational factors (e.g. the material resources and waste objectives).

Recommendations

No further mitigation is proposed. However, development of sites should include implementation of recommendations made through the site assessment process.

Policy M04: Landbanks for sand and gravel

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	0	0	0	0	0	0	0	--	--	0	0	++	0	0	0	0	0
M	0 -	0 -	0 -	0 -	0 -	-	0	--	--	0 -	0 -	++	+ -	0 -	0 -	0	+
L	-	-	-	-	m-	-	0	--	--	-	-	++	+ -	-	0	0	+

Summary of Sustainability Appraisal Findings

Impacts in relation to this Policy are largely neutral in the short term with minor negative impacts occurring in the medium to long term. This is because in the longer term separate northwards and southwards distribution area landbanks could mean that there is increased pressure to maintain the landbank in defined (and therefore finite) areas, which may put additional pressure to approve sites in areas where cumulative effects on are already starting to build. Higher negative impacts have been recorded in relation to minimising resource use and prioritising management of waste as high up the waste hierarchy as practicable as maintaining a landbank is likely to reduce the incentive to work towards these objectives. Positive impacts have been identified in relation to the economy and meeting the needs of a changing population as this Policy would ensure that adequate resources are available to support growth.

Recommendations

No further mitigation is proposed.

Policy M05: Provision of crushed rock

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	m-	m-	m-	-	m-	--	-	--	-	m-	m-	++	+ -	-	- +	0	+
M	m- +	m-	m-	-	m-	--	-	--	-	m-	m-	++	+ -	-	- +	0	+
L	m- + ?	m-	m-	-	-	--	- +	--	-	m- ?	m- ?	++	+ -	- m+	- +	0	+

Summary of Sustainability Appraisal Findings

This Policy's effects are, in effect the cumulative effects of the Joint Plan as it relates to crushed rock extraction, so many effects are either cumulatively negative, or cumulatively mixed negative and positive. Some objectives also benefit from the cumulative effect of site restoration schemes in the longer term (e.g. flooding, recreation, health). Some objectives report highly negative effects, as quarrying for crushed rock will inevitably involve the significance utilisation of material resources and have a large carbon footprint. Uncertainty is also noted later in the plan period and there may be increased pressure from additional sites, particularly in the Magnesian limestone area, which would affect the biodiversity, landscape and historic environment objectives.

Recommendations

The policy is already well mitigated by development management policies and to some extent this policy is partly mitigated by Policy M11 which encourages alternatives to land won primary aggregate, though it is acknowledged that many secondary and recycled aggregates are not direct substitutes for crushed rock. Further consideration of the potential contribution made by recycled and secondary aggregate is recommended when this Policy is considered at the mid-term review, depending on the availability of reliable data.

Policy M06: Landbanks for crushed rock

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	0	0	0	0	0	0	0	--	--	0	0	0	0	0	0	0	0
M	0	0	0	0	0	0	0	--	--	0	0	0	0	0	0	0	0
L	-	--	-	-	--	m-	0	--	--	--	-	++	-	-	-	0	++
	++			+						?	--		++	++	+		
											++						

Summary of Sustainability Appraisal Findings

This Policy could have longer term negative effects on the environment, including biodiversity / geodiversity, air and water quality, landscape, resource use, minimising waste and the historic environment, and communities of the Plan area should these landbanks result in the need to release more land for extraction than is currently permitted. The Policy would however, enable a level of minerals supply to meet demand for development and therefore would result in major positive impacts in relation to the economy and meeting the needs of a changing population. By requiring new reserves of crushed rock to be sourced from outside the National Park and AONBs, this Policy would result in some positive effects for these designated areas particularly relating to landscape, recreation and tourism, cultural heritage and amenity. Some negative impacts may occur in these designated landscapes as there would be a decrease in local job opportunities.

Recommendations

No mitigation is proposed.

Policy M07: Meeting concreting sand and gravel requirements

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S M L	Extraction of sand and gravel from the sites and Areas of Search specified in this policy may result in a range of impacts in relation to the Sustainability Appraisal objectives. Each site has been individually assessed as part of the site assessment methodology and the results are presented in the Site Sustainability Appraisal Appendix (Appendix 3 of main sustainability appraisal report)																

Summary of Sustainability Appraisal Findings

A wide range of impacts will result from extraction of sand and gravel at the sites and Areas specified in this Policy. These are outlined in the Site Sustainability Appraisal and Areas Assessment Appendices to the main SA report. As many of the site allocations lie in close proximity to other existing or allocated sites, cumulative impacts will be of particular importance

Recommendations

Appropriate mitigation should be incorporated at each allocation site in line with recommendations in the Site / Area Sustainability Appraisal findings for each site and with other policies in the Joint Plan. Cumulative impacts should be given particular regard through the planning application process.

Policy M08: Meeting building sand requirements

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S M L	Extraction of sand from the sites specified in this policy may result in a range of impacts in relation to the Sustainability Appraisal objectives. Each site has been individually assessed as part of the site assessment methodology and the results are presented in the Site Sustainability Appraisal Appendix (Appendix 3 of main sustainability appraisal report).																

Summary of Sustainability Appraisal Findings

A wide range of impacts will result from extraction of sand at the sites specified in this Policy. These are outlined in the Site Sustainability Appraisal Appendix to the full SA report. As many of the site allocations lie in close proximity to other existing or allocated sites, cumulative impacts will be of particular importance.

Recommendations

Appropriate mitigation should be incorporated at each allocation site in line with recommendations in the Site Sustainability Appraisal findings for each site and with other policies in the Joint Plan. Cumulative impacts should be given particular regard through the planning application process.

Policy M09: Meeting crushed rock requirements

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S M L	Extraction of crushed rock from the sites specified in this policy may result in a range of impacts in relation to the Sustainability Appraisal objectives. Each site has been individually assessed as part of the site assessment methodology and the results are presented in the Site Sustainability Appraisal Appendix (Appendix 3 of main sustainability appraisal report).																

Summary of Sustainability Appraisal Findings

A wide range of impacts will result from extraction of crushed rock at the sites specified in this Policy. These are outlined in the Site Sustainability Appraisal Appendix to the main SA report. As many of the site allocations lie in close proximity to other existing or allocated sites, cumulative impacts will be of particular importance.

Recommendations

Appropriate mitigation should be incorporated at each allocation site in line with recommendations in the Site Sustainability Appraisal findings for each site and with other policies in the Joint Plan. Cumulative impacts should be given particular regard through the planning application process.

Policy M10: Unallocated extensions to existing quarries

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	+	+	+	+	+	-	0	-	0	+	m+	++	+	+	-	0	+
		0	-	-	-	?				-	-		-	-			
M	+	+	+	+	+	-	-	-	0	+	m+	++	+	+	-	-	+
	-	0	-	-	-	?	?			-	-		-	-			
L	+	+	+	+	+	-	-	-	0	+	m+	++	+	+	-	-	+
	-	0	-	-	-	?	?			-	-	?	-	-			
													?				

Summary of Sustainability Appraisal Findings

For most SA objectives this Policy results in mixed positive and negative effects. This is because the option allows unallocated extensions to sites, which would ordinarily result in a range of negative environmental and social effects (largely because it will either extend or increase issues that affected areas surrounding quarries during the lifetime of the quarry). However, the Policy does include a number of safeguards against this that should lessen effects and make sites more sustainable, not least the major development test and the reference to consistency with development control policies. The Policy would also offset the need for some new sites to be developed.

Some objectives vary from this pattern slightly. For instance, for the climate change objective the extended negative traffic impacts at sites are seen as outweighing the benefits of making use of existing infrastructure at site (though there is considerable uncertainty here), while the soils objective notes the loss of land / soils that is potentially allowed by this Policy. Similarly, although this option might reduce the need for new sites elsewhere to some degree, there will be jobs and revenue / viability benefits from allowing site extensions, as well as benefits to tourism that will result from the protections afforded to protected landscapes in the Policy. This leads to strongly positive effects on the economy objective. Other objectives where positives outweigh the negative, or are positive in their own right are the landscape and changing population needs objectives.

Recommendations

This Policy is largely already mitigated for by the Development Management Policies. No further mitigation is proposed.

Policy M11: Supply of alternatives to land-won primary aggregates

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	+	+	+	-	++	++	0	++	++	-	+	0	0	0	0	?	+
		-								+	?		-		-		
										?							
M	++	+	+	-	++	++	0	++	++	-	+	0	0	0	0	?	+
		-								+	?		-		-		
										?							
L	++	+	+	-	++	++	0	++	++	-	+	0	0	0	0	?	+
	?	-	?		?	?		?	?	+	?		-		-		?
										?			?		?		

Summary of Sustainability Appraisal Findings

For most of the SA objectives positive effects arise because supporting the use of secondary and recycled aggregates would offset the need to extract primary aggregates (and the negative effects associated with this). Some SA objectives report neutral effects as impacts associated with primary extraction are simply shifted to new locations. However, the health and wellbeing and community vitality objectives note some additional negative effects associated with the dusty nature of some secondary aggregates, while the water objective recognises the potential for water pollution from the storage and processing of some secondary aggregates (which would be dealt with via the environmental permitting regime). There are also uncertainties associated with the supply of secondary aggregates such as colliery spoil (particularly if sources of colliery spoil cease).

Recommendations

This Policy is largely mitigated by other policies in the plan (particularly D02 Local Amenity and Cumulative Impacts) as well as the environmental permitting / pollution control regime. However, monitoring of the supply of secondary and recycled aggregates is recommended due to uncertainties over supply.

Policy M12: Continuity of supply of silica sand

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	- ?	0 -	0 -	0	-	-- ?	- +	-	?	- ?	- ?	++	+	- ?	-	0	0
M	- ?	0 -	0 -	0	-	-- ?	- +	-	?	- ?	- ?	++	+	- ?	-	0	0
L	- ?	0 -	0 -	0	-	-- ?	- +	-	?	- ?	- ?	++	+	- ?	-	0	0

Summary of Sustainability Appraisal Findings

Supporting these two sites and the deepening of or extension of them could lead to a range of negative effects. These are outlined in the site sustainability appendix in detail. Major positive effects are also identified for the economy objective, as silica sand is a nationally significant mineral resource.

While the development management policies should help moderate many of the effects noted, particular issues that would need satisfactory resolution include the Blubberhouses site's potential impact on peat soils as well as views from the Area of Outstanding Natural Beauty and any issues that might be identified through appropriate assessment of the effects of the Blubberhouses site on the blanket bog habitats and species associated with the North Pennine Moors SAC/SPA.

Recommendations

No specific recommendations are made.

Policy M13: Continuity of Supply of Clay

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	0 +	0 -	-	0 -	- ?	-	0 -	-	0	- ?	-	++	++	-	0 - +	0	++
M	0 +	0 -	-	0 -	- ?	-	0 -	-	0	- ?	-	++	++	-	0 - +	0	++
L	+	0 -	-	0 -	- ?	-	+ ?	-	0	- ?	-	++	++	+ ?	0 - +	+ ?	++

Summary of Sustainability Appraisal Findings

A wide range of impacts will result from extraction of clay at the sites specified in this Policy. These are outlined in the Site Sustainability Appraisal Appendix. As many of the site allocations lie in close proximity to other existing or allocated sites, cumulative impacts will be of particular importance.

In terms of unallocated sites, a range of minor positive and negative effects are recorded for most SA objectives as such sites will need to comply with development management policies, which will either control effects or may leave some minor residual effects when they are applied to clay development (such as residual effects on soils / land, water and landscape) or may result in minor positive effects (e.g. through mitigation providing a net gain and a high level of protection – as is the case for biodiversity, or through gains made through restoration). Strong positive effects are observed in relation the economy, community vitality and population change as ultimately clay extraction supports the brick industry and the wider construction industry and the jobs associated with those industries.

Recommendations

Appropriate mitigation should be incorporated at each allocation site in line with recommendations in the Site Sustainability Appraisal findings. Cumulative impacts should be given particular regard through the planning application process.

Planning applications, particularly those which require an EIA (which must consider alternatives), should consider the suitability of possible alternative locations to see if soils could be better conserved at those alternative locations.

Policy M14: Incidental working of clay in association with other minerals

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	0	0	- ?	0	+	0	0	++	++	0	0	+	0	0	0	0	+
M	0	0	- ?	0	+	0	0	++	++	0	0	+	0	0	0	0	+
L	0	0	-	0	+	0	0	++	++	0	0	+	0	0	0	0	+

Summary of Sustainability Appraisal Findings

The impacts associated with this policy are predominantly neutral. The policy would support incidental clay extraction where overall sustainability and environmental / amenity impacts would not be significantly increased. However, there is some uncertainty as to the consideration of 'significance' in relation to these impacts. However, this is largely resolved by considering this Policy alongside the development management policies in the Joint Plan.

Some positive impacts would result from this Policy as it would increase productivity from mineral extraction, minimising the generation of clay waste, providing a valuable building material and providing positive benefits for the economy.

Recommendations

While not a specific mitigation measure of this SA, an advisory recommendation would be to consider adding Policy D03 to the 'key links to other policies' box.

Policy M15: Continuity of supply of building stone

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	-	-	-	-	-	-	0	m-	m-	++	-	+	+	-	-	0	++
										-	++		-				
M	-	-	-	-	-	-	0	m-	m-	++	-	+	+	-	-	0	++
										-	++		-				
L	-	-	-	-	-	-	+	m-	m-	++	-	+	+	-	-	0	++
	+									-	++		-	+		+	

Summary of Sustainability Appraisal Findings

It is considered that this Policy would help provide an adequate supply and range of building stone to market and therefore positive impacts have been recorded in relation to the economy, community viability and vitality and meeting the needs of a changing population. The Policy would enable building stone to be extracted in close proximity to historic assets or from former quarries where required in order that the correct type of stone can be sourced, conserving the historic environment of an area and the character of its heritage assets. This would result in minor to strong positive impacts in relation to the historic environment and landscape objectives.

Although building stone extraction tends to be a relatively small scale operation, negative impacts have been identified in relation to a number of the environmental and social objectives as this Policy is likely to result in an increase in active building stone sites with associated biodiversity, water, air quality, recreation, landscape and amenity impacts. These effects are likely to be reduced to just low level effects, however, as mitigation is provided through the development management policies.

Recommendations

None

Policy M16: Key spatial principles for hydrocarbon development

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	0	0 -	- ?	0	-	+ - ?	+	--	0	0	? -	m+ ? -	+ ?	- ?	0 -	0	+ -
M	0	0 -	- ?	0	-	+ - ?	+	--	0	0	? -	m+ ? -	+ ?	- ?	0 -	0	+ -
L	0	0 -	- ?	0	-	+ - ?	+	--	0	0	? -	m+ ? -	+ ?	- ?	0 -	0	+ -

Summary of Sustainability Appraisal Findings

This Policy exhibits a range of mostly neutral or neutral to minor negative effects. This is because in the main it provides a high level of protection for environmental and social factors when considered in combination with other policies in the Plan. This enables objectives such as biodiversity, water, historic environment air and health to report either insignificant or insignificant to minor residual effects after mitigation required by the plan is taken into account.

Some effects are more significantly negative. For instance, because hydrocarbons are a non-renewable fossil fuel, this form of development can only be negative for the materials resources objective. In addition, traffic effects were minor negative as, while the Policy requires consideration of other policies such as M17 which requires transport assessment, there is some concern that rural areas may receive more traffic, albeit within the capacity of the road and within acceptable levels in terms of their impact, while uncertainty remains that traffic assessment would always be sufficiently broad in scope to accurately capture cumulative traffic impacts. Local rights of way may also be affected by views of development of industrial character even after mitigation is applied.

The Policy also has a number of mixed effects, for example on the economy and population objectives as it supports jobs and the provision of energy, though the locational restrictions in the Policy could limit the potential for this whilst at the same time helping to protect the existing rural or visitor economy. Mixed effects are reported for climate change as on the one hand shale gas may generate significant traffic movements, while on the other hand it may provide a domestic source of gas that could offer an alternative to liquid natural gas (LNG)

and coal, resulting in carbon savings, though this is uncertain as it also depends on higher level policy decisions made by energy providers and government.

Uncertainty occurs at a number of points in the assessment as the scale of development, along with any supporting development, is to an extent unknown.

Recommendations

While it is considered that the policy could do little else to effectively manage this type of development, the SA highlighted an uncertainty in relation to the quality of transport assessments. To ensure that high quality assessments are received the SA should include an indicator to monitor transport assessments and their consideration of cumulative issues.

Policy M17: Other spatial and locational criteria applying to hydrocarbon development

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	+	m+	m+ ?	m+	m+	+ ?	+	0 -	+	+	+	m+ -	m+	+	++	+	0
M	+	m+	m+ ?	m+	m+	+ ?	+	0 -	+	+	+	m+ -	m+	+	++	+	0
L	+	m+	m+ ?	m+	m+	+ ?	+	0 -	+	+	+	m+ -	m+	+	++	+	0

Summary of Sustainability Appraisal Findings

The policy mostly acts as a positive safeguard against the main impacts of hydrocarbon development, with some level of positive effect on most of the SA objectives, particularly the water, transport, air, community and health SA objectives. Some uncertainty is highlighted for the transport objective due to uncertainties over the quality of transport assessments, and there is also uncertainty pertaining to climate change as it is not known to what extent features such as pipelines would indirectly generate carbon through their lifecycle. There are also mixed positive and negative scores for the sustainable economy objective because, while policy protects local economies, for developers the policy may be seen as quite restrictive.

We have scored this assessment in terms of the effect it would have on the plan's approach to hydrocarbons rather than its effect on the baseline, which is covered by the assessment of M16 in combination with these policies.

Recommendations

See the recommendation for monitoring transport assessments made at Policy M16.

Policy M18: Other specific criteria applying to hydrocarbons development

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	0 +	+	+ - ?	0	0	+ - ?	0 +	0	++	0	0	- + ?	0 ?	0	+	0	0
M	0 +	+	+ - ?	0	0	+ - ?	0 +	0	++	0	0	- + ?	0 ?	0	+	0	0
L	+	m+	+ - ?	+	+	+ - ?	0 +	0	++	0	m+	- + ?	0 ?	+	+	0	0

Summary of Sustainability Appraisal Findings

Generally this Policy has positive effects on most of the objectives. This is because it generally encourages on site management of waste (such as reuse/recycling of returned water) ensuring a high standard of environmental protection in doing so (with positive effects for many of the environment objectives as well as the health objective). It also requires hydrocarbon sites to be returned to their original use or other agreed beneficial use (essentially a return to the baseline, though we have scored this assessment in terms of the effect it would have on the Plan's approach to hydrocarbons rather than its effect on the baseline, which is covered by the assessment of Policy M16 in combination with these policies). This is positive as it benefits objectives like the landscape and land objectives in the long term.

Slight negative effects are noted as off-site facilities for waste management are also within the scope of the Policy, providing they are consistent with Policy W10 (which prioritises siting facilities for NORM (Naturally Occurring Radioactive Material) at existing wastewater treatment works). This could generate some additional traffic (minor negative, but uncertain as to the volume of traffic) though Policy W11, which is also referred to in the Policy, prioritises waste management close to source. The sustainable economy objective records mixed effects as the Policy potentially places specific financial requirements on hydrocarbon developers due to the need, where justified by specific circumstances, for a financial guarantee to secure restoration. On the other hand recycling liquid / other wastes may ultimately save disposal costs.

Recommendations

Due to uncertainty over the volume of traffic generated by off-site disposal it is recommended that the SA monitors the significance of this through submitted planning applications.

Policy M19: Carbon and gas storage

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	-	0	+	0	-	++	0	0	0	?	?	+	+	?	0	0	0
	?		?	-	?	0				-	-	0	0	0	-	?	
	0		0	?	0	?				0	0	?	?		?		
						-											
M	-	0	+	0	-	++	0	0	0	?	?	++	+	?	0	0	0
	?		?	-	?	0				-	-	0	0	0	-	?	
	0		0	?	0	?				0	0	?	?		?		
						-											
L	-	0	+	0	-	++	0	0	0	?	?	++	+	?	0	0	0
	?		?	-	?	0				-	-	0	0	0	-	?	
	0		0	?	0	?				0	0	?	?		?		
						-											

Summary of Sustainability Appraisal Findings

This preferred Policy has strong positive effects for the economy (in terms of the energy security provided by gas storage and the business opportunities associated with CCS technology) as well as for climate change mitigation. Other effects tend to be location specific though could be negative due to factors such as the land footprint (i.e. the amount of land used) of buildings and pipelines and the risk that leaks could occur.

Recommendations

No further mitigation proposed.

Policy M20: Deep coal and disposal of colliery spoil

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	-	-	-	-	-	-	0	--	m-	0	-	+	+	+	-	0	+
	?	?	?	?	?	?	?	?	?	?	m-	?	-	-	?	?	?
											?		?	?			
M	-	-	-	-	-	m-	0	--	m-	0	-	+	+	+	-	0	+
	?	?	?	?	?	?	?	?	?	?	m-	?	-	-	?	?	?
											?		?	?			
L	-	m-	-	-	-	--	0	--	m-	0	-	+	+	m+	-	0	+
	?	?	?	?		?	?	?	?	-	m-	?	-	?	+	?	?
										?	?		?		?		

Summary of Sustainability Appraisal Findings

This Policy exhibits a mixture of mainly minor negative effects and uncertain effects. Most minor negative effects occur because, while the Policy combines with the development control policies in the Joint Plan, because of the nature of deep coal and colliery spoil development, residual effects may remain. This is the case for the flooding, biodiversity, health and wellbeing, landscape, historic environment, soils, traffic, air and water objectives. More significant minor effects occurred in relation to the resource use (as coal mining is the extraction of a non-renewable resource) and climate change (due to longer term greenhouse gas emissions from mines) objectives.

Positive contributions were also recorded, particularly in terms of the economy. However, all options recorded a high level of uncertainty as coal mining in the UK has an uncertain future.

Recommendations

Generally this Policy links well to development management policies which provide appropriate mitigation. However, there is an opportunity to link this Policy to the hydrocarbon Policy M16 to further promote extraction of coal mine methane.

Policy M21: Shallow coal

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	-	-	+	-	--	m-	0	--	0	-	-	m+	?	-	-	0	0
	?	?	?	?	?	?		?	?	?	--	?		?	?		
											?						
M	-	-	+	-	--	m-	0	--	-	-	-	m+	?	-	-	0	0
	?	?	?	?	?	?		?	?	?	--	?		?	?		
											?						
L	0	-	+	-	?	m-	0	--	--	-	-	m+	?	-	-	0	0
	+	?	?	?		?		?	?	?	--	?		?	?		
	?										?						

Summary of Sustainability Appraisal Findings

This Policy mainly reports negative effects against the SA objectives that result from the potential for shallow coal to create large working voids or generate impacts such as traffic, dust and water pollution. While development management policies elsewhere in the Joint Plan will help mitigate these impacts, the possibility that one or more large scale sites could result from the Policy may leave some minor residual impacts.

Minor to major / moderate negative effects being reported under the landscape objective and climate change, land and waste objectives.

Recommendations

This Policy is generally mitigated by other policies in the plan (particularly relation to the water environment, local amenity and cumulative impacts, transport, agricultural land and soils, reclamation and after use and historic environment). Further mitigation might be achieved through restoration which helps to offset greenhouse gases – for instance restoration of habitats that sequester carbon or restoration to renewable energy production in the supporting text to this policy this (by pointing out the link between this Policy and part one (iv) of Policy D10 on reclamation and afteruse).

Policy M22: Potash, polyhalite and salt supply

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	-	-	-	-	-	-	0	--	-	-	-	?	?	?	?	0	+
	?		?	?		m-	-			?	?	-	++	-	-	-	
						?	+					++	-	+			
M	-	-	-	-	-	-	0	--	-	-	-	?	?	?	?	0	+
	?		?	?		m-	-			?	?	-	++	-	-	-	
						?	+					++	-	+			
L	-	-	-	-	-	-	0	--	-	-	-	?	?	?	?	0	+
	?		?	?		m-	-			?	?	-	++	-	-	-	
						?	+					++	-	+			

Summary of Sustainability Appraisal Findings

Most SA objectives have negative effects resulting from application of the major development requirements, which significantly moderate effects, but may still allow some development in the National Parks and AONBs. Support for new development outside of designated landscapes (albeit subject to specific criteria and the development management policies) could lead to negative effects (with significant uncertainty) for most SA objectives. In addition, lateral extensions could lead to minor subsidence or could extend the time period in which Boulby and Dove Farm operate, with corresponding minor negative / uncertain sustainability effects. Effects, however, tend to be minor as they are mitigated by other policies in the Joint Plan.

The economic and community vitality SA objectives report a mixture of uncertain, strongly positive and minor negative effects. This is because significant jobs and other economic benefits could be provided, but tourism may suffer, depending on location. Positive effects are also noted for the changing population SA objective, as potash is an important resource for food production.

The climate change and resource use objectives show stronger negative effects, the former due to the factors such as possible transport of materials, loss of soils and habitat and the embodied carbon in infrastructure such as road connections, pipelines (if used) and buildings (with uncertainty noted about the configuration of future sites, and effects moderated to a degree by the sustainable design Policy D11), the latter objective recognising a large scale extraction of a non-renewable resource (albeit a resource which has limited potential for substitution).

Minor negative effects are reported for the water quality SA objective, as the potash resource outside of the National Park includes a concentration of Source Protection Zones.

Recommendations

This Policy is already significantly mitigated through links to other policies in the Joint Plan. Monitoring of the Joint Plan should determine the extent to which this Policy directs development to areas outside of the designated landscapes and what the effects of this might be.

Policy M23: Supply of gypsum

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	0	0	+	+	0	0	0	-	-	0	0	+	+	0	0	0	+
	?	?	?	?	?	+		+	+	?	?	++			?	-	++
						?										?	
M	0	0	+	+	0	0	0	-	-	0	0	+	+	0	0	0	+
	?	?	?	?	?	+		+	+	?	?	++			?	-	++
						?										?	
L	0	0	?	?	0	0	0	-	-	0	0	+	+	0	0	0	+
	?	?			?	+		+	+	?	?	++			?	-	++
						?										?	

Summary of Sustainability Appraisal Findings

The consideration of future gypsum and DSG (Desulphogypsum – a by-product produced by coal fired power stations) proposals against the development control policies should have broadly neutral / insignificant effects as future development will need to take account of a range of environment and amenity criteria. It will also potentially have a strong positive effect on the economic growth and changing population needs objectives as gypsum supply will be more secure going forward as both gypsum and DSG are supported. This could underpin future development due to gypsum's importance as a construction material, though it is acknowledged that there is currently little interest in gypsum development so effects could be lower.

Two objectives reported mixed positive and negative effects. The 'minimising resource use' objective identified that support for gypsum would consume a primary natural resource on the one hand, but support for DSG would do the opposite in that it would save / offset consumption of primary gypsum. A similar effect was observed for the 'minimising waste objective' in that the Policy might, though supporting gypsum, allow gypsum to be extracted

at the expense of utilising waste DSG as a resource. However, the Policy also supported DSG, so the market may play a role in optimising the balance between these two materials.

Recommendations

There was some uncertainty noted as to the volume of gypsum that will be extracted in the future and the supply of DSG. This should continue to be monitored.

Policy M24: Supply of vein minerals

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	-	-	-	-	-	-	-	-	-	-	-	m+		-	-		
M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	-	-	-	-	-	-	-	-	-	-	-	m+		-	-		
L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	-	-	-	-	-	-	-	-	-	-	-	m+		-	-		

Summary of Sustainability Appraisal Findings

This policy does not provide support for the extraction of vein minerals (crystallized minerals within rock) in the Plan area; however should development come forward and gain consent, a number of negative impacts could result particularly in relation to the environmental SA objectives. This is largely because vein minerals occur close to sensitive receptors (such as wildlife sites and designated landscapes) and extraction techniques can utilise a significant area of land and can be energy intensive. However, these are all mitigated down to low and possibly insignificant levels due to development management policies elsewhere in the Joint Plan, or the protections referred to in the Policy. There may be positive economic benefits associated with this policy should new vein minerals development come forward and gain consent.

Recommendations

No mitigation proposed.

Policy M25: Borrow pits

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	0	0	++	0	+	+	0	-	-	?	?	+	?	?	+	0	++
	-	-		-						-	-			-	-		
				+						0	0				0		
M	0	0	++	0	+	+	+	-	-	?	?	+	?	?	+	+	++
	-	-		-						-	-			-	-		
				+						0	0				0		
L	0	0	++	0	+	+	+	-	-	?	?	+	?	?	+	+	++
	-	-		-						-	-			-	-		
	+			+						0	0				0		

Summary of Sustainability Appraisal Findings

This Policy would have some positive impacts in terms of reducing transport miles, reducing climate change impacts and shortening supply chains resulting in positive economic effects and a positive contribution towards meeting the needs of a changing population. However, borrow pits could also have some low level negative effects, such as possible local effects on water quality, temporary generation of dust, loss of primary resources, and impacts on the historic environment, landscape or recreation. However, these effects are generally very short term and uncertain due to being dependent on location.

Recommendations

The existing development management criteria are considered sufficient to mitigate negative effects to acceptable levels.

Policy W01: Moving waste up the waste hierarchy

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	-	-	?	?	-	++	0	++	++	?	?	++	+	?	+	?	++
	m+	?		+	++					0	0		-	0	-	0	
															?		
M	-	-	?	?	-	++	0	++	++	?	?	++	+	?	+	?	++
	m+	?		+	++					0	0		-	0	-	0	
															?		
L	-	-	?	?	-	++	0	++	++	?	?	++	+	?	+	?	++
	m+	?		+	++					0	0		-	0	-	0	
															?		

Summary of Sustainability Appraisal Findings

This Policy would encourage sustainable resource management by prioritising the management of waste as higher up the waste hierarchy. This results in particularly positive effects in relation to resource consumption, soils, climate change, minimising waste generation and managing waste as high up the waste hierarchy as practicable, the economy and meeting the needs of a changing population. Uncertain effects or effects which have both positive and negative aspects have been recorded against several of the other environmental and social objectives as the scale of impacts would be determined by the nature and location of the particular waste management facility.

Some objectives, such as biodiversity, climate change and soils also show strong indirect global effects as the policy in effect reduces the carbon and land footprint of many of the products that we use that currently end up reaching the end of their life in landfill. One area where minor negative effects could occur on balance is in relation to water demand, as some recycling operations can be water intensive (though the assessment is quite uncertain in relation to this).

Recommendations

No mitigation is proposed as locational/development management issues will be dealt with under other policies in the Joint Plan.

Policy W02: Strategic role of the Plan area in the management of waste

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	-	-	+	-	-	+	0	-	0	-	m-	++	+	-	-	-	++
	+		-	+	m+	-			+				-				
M	-	-	+	-	-	+	0	-	0	-	m-	++	+	-	-	-	++
	+		-	+	m+	-			+				-				
L	-	-	+	-	-	+	0	-	0	-	m-	++	+	-	-	-	++
	+		-	+	m+	-			+				-				

Summary of Sustainability Appraisal Findings

This Policy would have a range of mainly minor and often mixed effects on the SA objectives. In particular, while there are outright positive effects on the economy and population needs objectives as a result of provision of jobs and ensuring that an effective waste management system operates, minor negative effects are observed across most of the other SA objectives as cumulatively allocated sites plus further planning permissions are likely to exhibit residual effects on objectives after they have been controlled by other policies in the plan (for instance land will be used up, traffic will be generated, buildings will be constructed and impacts such as dust and odour may occur at low levels). Some objectives also report indirect positive impacts such as biodiversity and soils, as a result of decreased carbon and land footprints. Some sites such as waste transfer sites exhibit significant positive effects on transport, so this also shows up in this assessment which notes both positive and negative effects for transport. In terms of providing capacity within the Plan area to deal with waste arising in the Yorkshire Dales National Park this would largely maintain the status quo in terms of how waste is managed from the National Park, and this would have mainly neutral effects on the Plan area and modest benefits for the Yorkshire Dales as it will allow the special qualities of the National Park to be maintained.

Recommendations

No further mitigation is proposed.

Policy W03: Meeting waste management capacity requirements - Local Authority Collected Waste

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	-	-	-	-	-	-	0 -	++	++	-	-	++	+ -	-	-	0 -	0
M	-	-	-	-	-	-	0 -	++	++	-	-	++	+ -	-	-	0 -	0
L	-	-	-	-	-	-	0 -	++	++	-	-	++	+ -	-	-	0 -	0

Summary of Sustainability Appraisal Findings

For this Policy Allerton Park (WJP08), Harewood Whin (WJP11) and Common Lane Burn (WJP16) have been assessed separately as part of the site assessment process as they each have quite different sustainability impacts.

Supporting additional proposals for recycling, reprocessing and composting may also generate new facilities with potential environmental and community effects (though these effects will be reduced by Policies W10 and W11 as well as the development management policies). Similarly, supporting improvements to the Household Waste Recycling network may result in new development. Again, the effects of this development are considered to potentially involve minor effects on the environment and community objectives that will be reduced by development management policies. The effects on the environmental and community objectives are considered to range from insignificant to minor negative.

This Policy is likely to have strong benefits on the economy SA objective. It will generate jobs and promote low carbon resources from what previously would have been considered waste. It will also reduce the costs associated with alternative disposal in landfill. There are also strong benefits for the minimising resources and waste hierarchy SA objectives as this development is essential for reducing waste.

Recommendations

Mitigation has been proposed in relation to Allerton Park (WJP08), Harewood Whin (WJP11) and Common Lane Burn (WJP16) in the Site Assessment appendix of the Sustainability Appraisal.

Policy W04: Meeting waste management capacity requirements - Commercial and Industrial waste (including hazardous C&I waste)

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	+	0	+	+	+	m+	0	++	++	-	-	m+	-	0	-	0	+
	-		-	-		-							+		?		
			?	?	-	?											
M	+	0	+	+	+	m+	0	++	++	-	-	m+	-	0	-	0	+
	-		-	-	-	-							+		?		
			?	?		?											
L	+	0	+	+	+	m+	0	++	++	-	-	m+	-	0	-	0	+
	-		-	-	-	-							+		?		
			?	?		?											

Summary of Sustainability Appraisal Findings

This Policy has both positive and negative effects in relation to many of the objectives. This is because it supports the management of waste higher up the waste hierarchy and away from landfill, which has benefits in terms of reducing the land take and amenity impacts of simply landfilling waste, though the facilities for waste management higher up the waste hierarchy will themselves have a land footprint or amenity impacts (though this will largely be controlled by the development management policies and locational principles in the Joint Plan).

Some effects are outright positive, for instance strong positive effects were noted for the minimising resource use and minimising waste objectives. Other impacts were related to the transport of waste, for which there are benefits through reducing reliance on exporting waste for recycling and/or reprocessing (resulting in shorter journeys), while there are lesser negative effects associated with exporting hazardous waste. This results in mixed effects for the transport, air quality and climate change objectives.

Positive effects were noted for the economy objective (due to the greater local focus being more cost effective for industry and supporting local jobs) and the changing population objective (as there may be benefits such as increased energy security). Elsewhere in the assessment, uncertainty was noted as effects were seen as highly dependent on location.

A potential effect was noted in relation to community vitality and health and wellbeing. This is because hazardous waste will be managed outside of the Plan area, which will in effect mean that some small scale noise and traffic effects may be exported and also negative perceptions of any properties close to hazardous waste sites may endure. However, such disposal sites may be remote from community receptors so the effect is considered insignificant.

Recommendations

Most negative effects are moderated by the development management policies down to low levels.

Policy W05: Meeting waste management capacity requirements - Construction, Demolition and Excavation waste (including hazardous CD&E waste)

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	-	-	+	+	++	+	0	m+	m+	0	-	+	-	+	-	0	+
			?	-		-				+	+				?		
M	-	-	+	+	++	+	0	m+	m+	0	-	+	-	+	-	0	+
			?	-		-				+	+				?		
L	-	-	+	+	++	+	0	m+	m+	0	-	+	-	+	-	0	+
	+		?	-		-				+	+				?		

Summary of Sustainability Appraisal Findings

This Policy has a range of mixed effects. Many SA objectives report both minor positive and negative effects because while new facilities may be built to support the policy (having potentially negative effects on biodiversity and generating dust, noise, local traffic and carbon which affect a number of other objectives such as air and wellbeing), utilising CD&E waste to regenerate land or for quarry restoration will often restore degraded land, which, depending on the restoration proposed, could bring a range of sustainability benefits. The 'restoration' aspect of this Policy is the key reason why a strong positive effect is noted for the soils and land SA objective.

In a similar way some objectives noted both a neutral or minor negative effect and a positive effect, largely because policies elsewhere in the Joint Plan would reduce any negative effects, but the positive effects of quarry restoration would still occur. This occurs with the historic environment and landscape objectives.

Other strong positives are noted for the minimising resources and minimising waste SA objectives, which identified that more recycling of CD&E waste would reduce demand for new materials to be extracted and also reduce demand for disposal of materials. This can add value to what was once a waste, bringing economic benefits.

A potential negative effect was noted in relation to community vitality and health and wellbeing. This is because hazardous CD&E waste will be managed outside of the Plan area, which will in effect mean that some small scale noise and traffic effects may be exported and also negative perceptions of any properties close to hazardous waste sites may endure. However, such disposal sites are often remote from community receptors so the effect is considered low.

Recommendations

Effects are largely mitigated by other plan policies leaving only residual effects.

Policy W06: Managing agricultural waste

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	-	m+ -	+	0	++ ?	++	0 +	++	0 ?	0 ?	0 ?	+	0	0	0	0	0
M	-	m+ -	+	0	++ ?	++	0 +	++	0 ?	0 ?	0 ?	+	0	0	0	0	0
L	-	m+ -	+	0	++ ?	++	0 +	++	0 ?	0 ?	0 ?	+	0	0	0	0	0

Summary of Sustainability Appraisal Findings

For most objectives this Policy displays either positive effects or neutral effects. In particular the Policy performs very positively against the resource use and waste minimisation objectives, in part because it encourages lower resource use and moves waste up the waste hierarchy by supporting anaerobic digestion. It also performs well for the soils and land objective because of the benefits of utilising organic farm wastes in composts (which are routinely made on farms) or as biodigestate for improving the productivity of land. However, this same objective records some uncertainty that crops may be grown as a feedstock for an anaerobic digestion facility (a type of waste management system which allows some wastes to break down without oxygen), which if this were to happen could negatively impact on land as it my displace food crops.

A minor negative effect was noted in relation to biodiversity due to the possible combined effect of land take and leachate (leachate is the liquid residue that can wash away from decomposing wastes) from off and on-farm facilities as well as localised nutrient loading of soils (where soils become so fertile they suffer from problems, such as the growth of aggressive weeds) from on-farm facilities still being significant even after other policies mitigating policies are applied. Similarly the water objective noted the positive effects of using biodigestate (a type of fertiliser produced in anaerobic digestion facilities) and compost as fertilisers, but also the potentially minor negative effect of run off and leachate from sites, though this would be largely mitigated by development management policies in the Plan.

Recommendations

It may be advantageous to slightly alter the Policy to add wording akin to 'additional organic waste streams may be acceptable at agricultural anaerobic digestion facilities provided that they serve a local need and comply with the overall policy'. This would further enhance benefits, particularly to the land / soils objective.

Clear links in the 'key links to other relevant policies' box to Policy D09 on the water environment, would further lessen any effects on aquatic biodiversity and water bodies.

Policy W07: Managing low level (non-nuclear industry) radioactive waste

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	-	0	+	0	-	+	0	?	+	-	-	0	0	?	0	0	0
	?		-		?	-			0	?	?						
M	-	0	+	0	-	+	0	?	+	-	-	0	0	?	0	0	0
	?		-		?	-			0	?	?						
L	-	0	+	0	-	+	0	?	+	-	-	0	0	?	0	0	0
	?		-		?	-			0	?	?	+					

Summary of Sustainability Appraisal Findings

Mostly the effects of this Policy are small scale as the volume of LLR (low level radioactive waste) is expected to be low[4] and most significant impacts would be regulated through the environmental permitting regime. There could however be small impacts associated with land take, changes to character resulting from small built structures or low level changes in traffic levels as a result of this Policy. This leads to low level negative effects (with

[4] There is some uncertainty over the actual amount as some Naturally Occurring Radioactive Material is generated by shale gas extraction

considerable uncertainty) on the biodiversity, soil, climate change, historic environment, and landscape objectives with mixed positive and negative effects on the transport objective. There are low level positive effects on the waste management and economy (longer term only) objectives. Elsewhere effects are either uncertain or no effects are observed.

Recommendations

Effects are mitigated by other policies in the Joint Plan so no mitigation is proposed.

Policy W08: Managing waste water and sewage sludge

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	- / +	+	+	-	- / +	- / +	-	++	++	-	-	+	+	-	m+	-	++
M	- / +	+	+	-	- / +	- / +	-	++	++	-	-	+	+	-	m+	-	++
L	- / +	+	+	-	- / +	- / +	-	++	++	-	-	+	+	-	m+	-	++

Summary of Sustainability Appraisal Findings

Mostly the sustainability effects of this Policy are small scale and minor and may be positive or negative. For instance, minor negative effects are associated with the objectives for air, adaptation to climate change, historic environment, landscape and flooding in part because the facilities supported by the Policy have a physical land take, would be likely to be located close to water and through traffic, construction activities and bio-aerosols, would impact upon air. Some objectives (such as the biodiversity, land use, climate change and health and wellbeing objectives) displayed mixed positive and negative effects because while the processes that take place may intrinsically have negative effects associated with them, co-location with AD (anaerobic digestion) and the expanding of existing sites allows for new positive effects such as reduced additional land take or the offsetting (i.e. the cancelling out of impacts by making savings somewhere else) of energy use[5] to take place. For the health and wellbeing objective, waste water treatment is on the one hand seen as essential for health and wellbeing while on the other hand could have local amenity effects.

The Policy performs particularly strongly against the resource use and waste hierarchy objectives as co-locating AD facilities with waste water / sewage treatment facilities will help

[5] If existing sites are expanded it is assumed they might be more energy efficient as they may benefit from shared facilities and services.

turn waste materials into economically valuable resources. Sewage / water treatment also underpins the further development of settlements so performs well against the changing population needs objective.

Recommendations

Negative effects associated with this Policy have already largely been reduced by this Policy. However, sequential testing of waste water treatment plants for flooding will be required prior to allocation or planning approval. Flood plain compensatory storage may also be required.

Policy W09: Managing power station ash and Incinerator Bottom Ash

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	-	0	0	0	+	+	0	++	++	-	0	+	-	-	0	0	+
	+	-	-	-	?					+	-		+	?	-	?	
	?	+	?	+						?	+		?		+		
		?		?							?				?		
M	-	0	0	0	+	+	0	++	++	-	0	+	-	-	0	0	+
	+	-	-	-	?					+	-		+	?	-	?	
	?	+	?	+						?	+		?		+		
		?		?							?				?		
L	-	0	0	0	+	++	0	++	++	-	0	+	-	-	0	0	+
	+	-	-	-	?					+	-		+	?	-	?	
	?	+	?	+						?	+		?		+		
		?		?							?				?		

Summary of Sustainability Appraisal Findings

There are some minor negative effects on biodiversity, water, local air quality and the historic environment, as well as less certain minor negative effects on landscape, community vitality (for which there are also some positive effects associated with employment) and health and wellbeing associated with this Policy, arising out of localised problems such as dust generation, possible runoff / leachate and traffic, all of which would be likely to be controlled by development management measures in the plan to acceptable levels. These may however be offset to a degree by positive environmental and social effects, particularly in relation to reduced land take, resulting from lower levels of primary minerals extraction (i.e. extraction of 'new' minerals from the ground) should support for use of power station ash result in less demand / need for this primary extraction.

The Policy does allow for management of power station ash at new facilities which could generate some further effects which are dependent on location (so uncertainty is noted in many places in the assessment) though effects would be low as they will be constrained by Policy W11 and development management measures.

There are some major positive effects associated with climate change, minimising the use of resources and minimising waste generation resulting from the potential for power station ash to reduce demand for primary aggregates, and minor positive effects associated with the economy and meeting the needs of the population.

Recommendations

It is considered that other development management policies in the Joint Plan, combined with environmental permitting would mitigate for the issues relating to dust, water pollution and air quality that have been identified in this assessment. No further mitigation is proposed.

Policy W10: Overall locational principles for provision of new waste capacity

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	m+	m+	+	+	++	m+	0	++	++	++	m+	++	+	m+	-	0	m+
	-	-			-					-	-			?	+		
M	m+	m+	+	+	++	m+	0	++	++	++	m+	++	+	m+	-	0	m+
	-	-			-					-	-			?	+		
L	m+	m+	+	+	++	m+	0	++	++	++	m+	++	+	m+	-	0	m+
	-	-			-					-	-			?	+		

Summary of Sustainability Appraisal Findings

This Policy has mostly positive effects when compared to the SA objectives. This is largely because it maximises and builds on the use of facilities that are already there (which is generally a good thing to do in sustainability terms), and also seeks to reduce the transport footprint of new facilities while linking the Policy strongly to the waste site identification principals and other policies in the Joint Plan.

Amongst the most notable sustainability effects were strong positive contributions to the 'reduce resource use' and 'minimise waste' objectives (as less building will be needed to deliver the Policy, and the Policy underpins a wider strategy in the Joint Plan to move waste up the waste hierarchy). In addition, the Policy has strong economic effects as it retains jobs

and potentially reduces business costs. The Policy would also protect the special qualities of protected landscapes as well as the tourist jobs that depend on them.

Mixed positive and negative effects were recorded for a number of objectives, such as biodiversity, water, soils, historic environment and landscape objectives. While the dominant effect is positive for these objectives, minor negative effects were noted due to possible displacement of some development to locations outside of protected landscapes. Similarly a mixed assessment is recorded for a changing population objective as, while there are strong positive effects in terms of delivering a working system of waste management, there is a minor concern that waste management in designated landscapes will become more difficult in the future.

Recommendations

None

Policy W11: Waste site identification principles

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	- 0 +	+	+ -	m+	++	++ -	+	m+	+	+	+	++	m+	+	m+	+	+
M	- 0 +	+	+ -	m+	++	++ -	+	m+	+	+	+	++	m+	+	m+	+	+
L	- 0 +	+	+ -	m+	++	++ -	+	m+	+	+	+	++	m+	+	m+	+	++

Summary of Sustainability Appraisal Findings

Effects in relation to this Policy are largely positive. The preference for locations close to where heat generated through Combined Heat and Power schemes can be utilised, would support climate change objectives as well as having a positive outcome for local communities and businesses. The principle of co-location could also have some positive impacts in terms of the economy, reducing transport miles, soils and land, and minimising resource use. Reference to national policy in relation to consideration of specific environmental and community issues, may lead to a number of positive impacts as the NPPF and National Planning Policy for Waste cover issues relating to most of the SA objectives.

Some minor or negative effects are recorded in relation to biodiversity (as habitats on previously developed land may be lost) and landscape (where less valued landscapes may endure negative effects), though development management measures would reduce these issues down to low or insignificant levels. In addition, while siting facilities for recycling CD&E waste close to the point of arising will reduce transport, there could be some negative transport effects arising from recycling at active minerals sites, though the Policy does mitigate for a proportion of the effect through its existing wording.

Recommendations

Better links to development management policies could be made in the 'key links to other relevant policies' box, particularly the landscape, biodiversity and historic environment policies.

Policy I01: Minerals and waste transport infrastructure

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	0	0	+	+	0	+	0	+	0	?	?	+	?	-	+	0	0
		?	?			?						-		+	-	?	
M	-	0	m+	++	0	m+	0	+	0	-	-	+	?	-	m+	0	0
	?	?	?		-	?		-		?	?	-		+	-	?	
L	-	0	m+	++	0	m+	0	+	0	-	-	+	?	-	m+	0	0
	?	?	?		-	?		-		?	?	-		+	-	?	

Summary of Sustainability Appraisal Findings

This Policy is likely to have some positive impacts through the retention of the existing rail, pipeline and water transportation infrastructure and support for the development of new infrastructure. These positive effects relate to reducing the need to transport minerals and waste by road with knock on benefits in relation to air quality, climate change, amenity and the economy. Impacts are uncertain in relation to a number of the environmental objectives such as biodiversity, water quality, landscape and cultural heritage as impacts will be dependent upon the location, type and scale of additional infrastructure as well as the frequency of its use. Small scale negative impacts may occur as a result of construction on new transport links such as loss of habitats, impacts upon the setting of historic assets or loss of archaeology and landscape impacts.

Recommendations

None noted.

Policy I02: Locations for ancillary minerals infrastructure

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	+	+ ?	+ ?	+	0 - +	0	0	0 +	0	+	+ -	++ -	+ -	+	+ -	0	0
M	+	+ ?	+ ?	+	0 - +	0	0	0 +	0	+	+ -	++ -	+ -	+	+ -	0	0
L	+	+ ?	+ ?	+	0 - +	0	0	0 +	0	+	+ -	++ -	+ -	+	+ -	0	0

Summary of Sustainability Appraisal Findings

In the main the protections in this Policy will avoid significant effects on the environmental objectives, though uncertainty is occasionally noted due to uncertainty over locations where minerals ancillary infrastructure would take place and how 'additional significant environmental effects' may be interpreted by different developers, particularly if the host site already has significant impacts.

Elsewhere, mixed effects are often reported. For instance, the economic objective notes how this Policy helps to add value to minerals products, but also the potentially restrictive nature of the Policy which may make some development more difficult to achieve could be negative. The community vitality and health and wellbeing objectives note that synergies (i.e. where different impacts work together) between different impacts, such as traffic, noise and visual impacts may together result in minor significant effects on perceptions of an area or on wellbeing.

Recommendations

Given that secondary aggregate (by-products of other mineral extraction or industrial processes) processing may have significant water impacts, Policy D09 should be referred to in the key links to other relevant policies and objectives. In addition, to address synergies between effects, Policy D02's reference to cumulative effects could be clarified in that Policy's supporting text so that it includes synergies between different types of effect.

Policy S01: Safeguarding mineral resources

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	+	+	0	+	+	0	0	++	0	++	+	++	0	+	++	0	++
	?	?	?	?	?	?	?			?	?	?	?	?	?	?	?
M	+	+	0	+	+	0	0	++	0	++	+	++	0	+	++	0	++
	?	?	?	?	?	?	?			?	?	?	?	?	?	?	?
L	+	+	0	+	+	0	0	++	0	++	+	++	0	+	++	0	++
	?	?	?	?	?	?	?			?	?	?	?	?	?	?	?

Summary of Sustainability Appraisal Findings

As safeguarding does not infer that minerals extraction will take place there are generally no predicted direct effects. Were development to take place it would need to accord with other policies in the Joint Plan.

This Policy is likely to result in minor to very positive impacts in relation to encouraging the safeguarding of resources, economic growth and meeting the needs of a changing population as future mineral resource sterilisation is avoided, thus conserving resources for future benefit. The safeguarding of buffer zones around mineral reserves may also have minor positive impacts in relation to minimising air quality and amenity impacts experienced by users of new proximal / nearby development.

Some uncertainty is noted in relation to the amount and location of any future development that may be displaced as a result of this Policy, and the consequences of this displacement, is not known. However, some objectives noted that there could be some positive benefits from not developing the area which is safeguarded.

Recommendations

None.

Policy S02: Developments proposed within Minerals Safeguarding Areas

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	+	+	0	+	+	0	+	++	0	+	+	-	-	+	+	0	-
	?	?		?	?					?	?			?	?		+
M	+	+	0	+	+	0	+	++	0	+	+	-	-	+	+	0	-
	?	?		?	?					?	?			?	?		+
L	+	+	0	+	+	0	+	++	0	+	+	-	-	+	+	0	-
	?	?		?	?					?	?	++		?	?		+

Summary of Sustainability Appraisal Findings

In terms of the environmental sustainability objectives there are minor benefits from this Policy, as arguably it would potentially reduce the amount of development in safeguarding areas, though to some extent some of this development would simply go somewhere else (with uncertain impacts). The assessment also identified strong benefits for the minimising resource use objective as safeguarding a broad range of minerals resources would help protect resources for possible future use. Similarly, an additional benefit was noted for climate adaptation as safeguarding potash and polyhalite will help save a key resource for manufacturing fertiliser, which ultimately will help tackle the issue of food security (which is a recognised climate change vulnerability).

There were however some minor negative effects noted in relation to the economy, community vitality and changing population objectives. This is because some economically valuable development may be deterred from taking place (though the Policy does contain a criteria which considers the need for the development and whether this outweighs the need to safeguard the mineral), while some housing projects may also be less viable (though there are exemptions which help moderate this). The economy objective also records a long term benefit arising from having greater access to minerals for extraction.

Recommendations

No mitigation is suggested.

Policy S03: Waste management facility safeguarding

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	?	?	+	?	?	m+	0	++	++	?	?	?	?	?	?	0	+
	m+	+		m+	m+				m-	m+	m+	m+	m+	m+	m+		
	-	-		-	-					-	-	-	-	-	-		
M	?	?	+	?	?	m+	0	++	++	?	?	?	?	?	?	0	+
	m+	+		m+	m+				m-	m+	m+	m+	m+	m+	m+		
	-	-		-	-					-	-	-	-	-	-		
L	?	?	+	?	?	m+	0	++	++	?	?	?	?	?	?	0	+
	m+	+		m+	m+				m-	m+	m+	m+	m+	m+	m+		
	-	-		-	-					-	-	-	-	-	-		

Summary of Sustainability Appraisal Findings

It is not possible to accurately identify effects against a number of environmental sustainability objectives as often the main sustainability effect arises as a result of a safeguarded site and its buffer displacing another type of development to an alternative location (which may be positive or negative for the SA objectives). On the other hand, there could be some positive benefits from not developing the area, including the buffer, which is safeguarded, and safeguarding sites also benefits a number of objectives because it simply reduces the need to develop wholly new sites.

This policy may also however provide positive effects in relation to a number of objectives including minimising the use of resources, managing waste as high up the waste hierarchy as practicable and meeting the needs of a changing population. Minor negative impacts may arise as the policy could also result in facilities that manage waste lower down the waste hierarchy (e.g. landfill and incineration facilities) being safeguarded.

Recommendations

None.

Policy S04: Transport infrastructure safeguarding

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	0	?	++	?	+	m+	0	++	0	0	0	+	0	0	0	0	0
	?		?	m+	?	?				?	?	?	?	?	?		?
M	0	?	++	?	+	m+	0	++	0	0	0	+	0	0	0	0	0
	?		?	m+	?	?				?	?	?	?	?	?		?
L	0	?	++	?	+	m+	0	++	0	0	0	+	0	0	+	0	0
	?		?	m+	?	?				?	?	?	?	?	?		?

Summary of Sustainability Appraisal Findings

This Policy would ensure that wharves and railheads/rail links are safeguarded for the transportation of minerals and waste but retains an element of flexibility to ensure that unused sites with little potential for future use or sites that would have greater benefit being used for an alternative purpose are not safeguarded. Positive impacts have been identified in relation to encouraging the use of more sustainable modes of transport, air quality, land use, climate change, resource use and the economy. There is an element of uncertainty throughout the assessment as safeguarding may displace other forms of development that may otherwise have taken place in an area and the consequences of this displacement is not known.

Recommendations

No mitigation is proposed.

Policy S05: Minerals ancillary infrastructure safeguarding

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	+	+	0	+	+	0	0	m+	+	+	+	+	+	+	+	0	-

	?	?		?	?					?	?		?	?	?		+
M	+	+	0	+	+	0	0	m+	+	+	+	+	+	+	+	0	-
	?	?		?	?					?	?		?	?	?		+
L	+	+	0	+	+	0	0	m+	+	+	+	+	+	+	+	0	-
	?	?		?	?					?	?		?	?	?		+

Summary of Sustainability Appraisal Findings

There are some very minor benefits that occur because this Policy essentially reduces the likelihood of development within 100m of safeguarded sites. Alternatively it may displace some development, leading to uncertain effects (which depend on the location to which that development is displaced).

Elsewhere in the assessment a moderate benefit was noted relating to minimising resource use, as safeguarding land for ancillary infrastructure would save the need for developing new plant. The Policy also enables retention of minerals ancillary infrastructure development for future use, which would add value to minerals and help promote economic viability.

Effects on communities and health are minimised by the application of the 100m buffer, whereas mixed positive and negative effects were predicted for the changing population objective (as some limited housing development might be displaced, but minerals supply would be facilitated).

Recommendations

No recommendations are made.

Policy S06: Consideration of applications in Consultation Areas

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	0	0	0	0	0	0	0	++	0	+	0	0	0	0	0	0	++
M	0	0	0	0	0	0	0	++	0	+	0	0	0	0	0	0	++
L	0	0	0	0	0	0	0	++	0	+	0	0	0	0	0	0	++

Summary of Sustainability Appraisal Findings

In most cases this Policy has no link with the SA objectives. However, there are indirect positive effects in relation to three objectives. In terms of minimising resource use, this would

prevent needless sterilisation[6] of minerals resources. In terms of the historic environment, building stone may be protected from sterilisation, and these benefits would also support the changing population objective. Similarly requiring consultation with the County Council over development affecting safeguarded infrastructure (minerals transport infrastructure, minerals ancillary infrastructure and waste infrastructure) performs positively as it reduces the need for resource use and supports future supply and distribution of minerals for the population.

Recommendations

No further mitigation is proposed.

Policy D01: Presumption in favour of sustainable minerals and waste development

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	0	0	0	0	0	0	0	0	0	0	0	+	+	0	+	0	+
M	0	0	0	0	0	0	0	0	0	0	0	+	+	0	+	0	+
L	?	?	?	?	?	?	?	?	?	?	+	+	+ ?	?	+ ?	?	- ?

Summary of Sustainability Appraisal Findings

Most environmental SA objectives report neutral effects in the short and medium term as a result of this Policy as this is largely an affirmation that the policies in the Joint Plan, and national policy and Neighbourhood Plans will be taken into account. However, uncertainty creeps into the assessment in the longer term as some locally distinctive issues may get a lesser degree of emphasis if the NPPF becomes the sole decision making document when the Joint Plan becomes out of date. In terms of National Parks and AONBs however, the continued application of the major development test positively supports the long term outlook for achieving the landscape objective.

The Policy supports the economic objective due to its 'pro-active approach' to finding solutions. It also supports the community vitality, wellbeing and population needs objectives in the short and medium term as it takes into account community defined Neighbourhood Plans. In the longer term the Policy makes decision making more reliant on national policy than local views.

[6] Sterilisation here means that other development may block the ability for a mineral to be extracted, for instance by building on top a minerals reserve.

Recommendations

No specific recommendation is made. However, when policies in the Joint Plan become out of date they should be updated to ensure that a locally relevant approach to sustainable development is still applied.

Policy D02: Local amenity and cumulative impacts

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	+	++	m+	++	+	+	0	0	+	+	++	+ ?	++	++	++	0	+
M	+	++	m+	++	+	+	0	0	+	+	++	+ ?	++	++	++	0	+
L	+	++	m+	++	+	+	0	0	+	+	++	+ ?	++	++	++	0	+

Summary of Sustainability Appraisal Findings

Broadly this Policy performs very well against the sustainability appraisal objectives. In particular it strongly contributes to the wellbeing, health and safety objective, as well as objectives where it directly seeks to reduce relevant impacts, such as impacts to water and air. Although broadly positive for the economy as amenity is important to local businesses, there is an uncertain effect on the viability of some proposals.

Recommendations

No mitigation is proposed for this Policy. It will be important to address the uncertain effect on the viability of the local minerals industry through monitoring economic conditions in the industry through the sustainability appraisal.

Policy D03: Transport of minerals and waste and associated traffic impacts

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	0	0	m+	m+	0	+	0	0	0	0	?	+	+	0	+ ?	0	+
M	0	0	m+	m+	0	+	0	0	0	0	?	+	+	0	+ ?	0	+
L	0	0	m+	m+	0	+	0	0	0	0	?	+	+	0	+ ?	0	+

Summary of Sustainability Appraisal Findings

Mostly this Policy either supports or has no effect on the SA objectives. Key positives relate to the transport, air quality, climate change, economic growth, community vitality and population needs objectives. Some uncertainty was noted in relation to the effect of road improvements, etc., on sensitive landscapes as well as a mixed positive / uncertain outcome for the health and wellbeing objective as the Policy supporting text currently does not link well to other policies relating to amenity and cumulative impacts.

Recommendations

Better linkages between this policy and the amenity / cumulative effects policy (D02) in the 'key links to other relevant policies and objectives' box would help reduce the uncertainties identified in this assessment.

Policy D04: Development affecting the North York Moors National Park and the AONBs

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	+	+	+	+	-	+	0	0	0	+	++	+	+	++	+	0	0

		?								-		-			-		
M	+	+	+	+	-	+	0	0	0	+	++	+	+	++	+	0	0
		?								-		-			-		
L	+	+	+	+	-	+	0	0	0	+	++	+	+	++	+	0	0
		?								-		-			-		

Summary of Sustainability Appraisal Findings

Whilst the assessment identifies that there may be negative effects for the economy of these areas through restricting minerals and waste developments it also identifies potential positive effects on the tourism economy of maintaining these high quality environments. Particularly positive impacts have been identified in relation to recreation and leisure and landscape whilst some minor negative impacts have been identified in relation to land use, as development may be displaced to areas of higher agricultural land value, and cultural heritage, as this policy may restrict the supply of local building stone in the National Parks and AONBs. There are mixed effects for health and wellbeing as development will be less likely to happen in designated landscapes, reducing health effects there, but that development may take place somewhere else in the Plan area.

Recommendations

Overall the Policy is considered to be largely positive and no mitigation is suggested.

Policy D05: Minerals and waste development in the Green Belt

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	0	0	+	-	+	+	0	0	-	m+	++	+	+	+	+	0	0
					-	-				?		-					
M	0	0	m-	-	+	+	0	0	-	m+	++	+	+	+	+	0	0
					-	-				?		-					
L	0	0	m-	-	+	+	0	0	-	m+	++	+	+	m+	m+	0	0
					-	-				?		-					

Summary of Sustainability Appraisal Findings

For some SA objectives the predicted effects for the waste and minerals parts of this Policy diverge, with a continuation of minor positive effects resulting from minerals development

noted for the transport and climate change objectives, while at the same time negative effects are noted that arise from a number of restrictive factors in relation to waste sites in the Green Belt. Similarly, for the economy SA objective, while minerals sites may continue to bring jobs to Green Belt communities, waste related jobs may become scarcer (though it could also be argued that the policy is less restrictive than national policy, so from that perspective may support jobs).

Elsewhere effects are broadly neutral or positive, with strong (though indirect) positive effects noted for landscape. The soils objective notes positive effects from the policy's approach to waste in relation to conserving soils (as in the Green Belt allowable waste development will mostly be located in places such as quarry voids or established industrial sites), while negative effects are noted for minerals development (as the Green Belts coincide with a large amount of higher quality grade 2 and 3 land). Similarly effects on the waste hierarchy may be negative, as the Policy may drive some facilities to less optimal locations (which may affect the costs of operating waste sites or even viability for more some future facilities).

While the historic environment is predicted to benefit from this Policy's emphasis on protecting the special character of York, uncertain indirect effects were noted as some development may be displaced to other locations and have other impacts on the objective.

Recommendations

This Policy largely complements overall national policy objectives and affords a level of protection that, while having some minor effects, is balanced by a broad sweep of positive effects. Therefore no mitigation is recommended.

Policy D06: Landscape

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	+	-	+	+	-	+	0	0	0	++	++	+	+	+	+	-	0
	?	?	-	-	?	-				-		-	-		-		
M	+	-	+	+	-	+	0	0	0	++	++	+	+	+	+	-	0
	?	?	-	-	?	-				-		-	-		-		
L	+	-	+	+	-	+	0	0	0	++	++	+	+	+	+	-	0
	?	?	-	-	?	-				-		-	-		-		

Summary of Sustainability Appraisal Findings

This Policy is likely to result in a number of positive impacts particularly in relation to protection of the landscape. This is likely to also result in positive impacts in relation to cultural heritage, tourism and amenity in those areas of high landscape value. This Policy may to some extent result in a clustering of development outside of the designated and high value landscapes in the Plan area therefore resulting in cumulative negative impacts. These would largely be moderated by other development management measures in the Joint Plan.

Recommendations

None noted.

Policy D07: Biodiversity and geodiversity

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	++ ?	+	0	+	+	+ ?	+	0	0	0	m+	- +	- +	m+	+	+	-
M	++ ?	+	0	+	+	+ ?	+	0	0	0	m+	- +	- +	m+	+	+	-
L	++ ?	+	0	+	+	+ ?	++	0	0	0	m+	- +	- +	m+	+	+	-

Summary of Sustainability Appraisal Findings

This Policy will have a range of largely positive effects as it will enable the protection and enhancement of biodiversity and therefore valuable ecosystem services (important services provide by nature), such as water or air quality improvements, carbon storage benefits, or increased access to outdoor space. It may also benefit the local economy, helping to ensure that the Plan area remains attractive to tourists and investors. Some uncertainty was however noted in relation to biodiversity offsetting which while seeking to provide a net gain, might fail to fully replicate lost habitats (albeit that these are likely to be of local rather than national value), or might locate them some distance away from the original beneficiaries of habitats. Nonetheless, offsetting would provide minerals and waste developers with greater flexibility to locate in the best locations. Some negative effects were noted due the burden that this policy may put on new development.

Recommendations

Broadly the policy is seen as positive in terms of most SA objectives. However, the uncertainties raised over biodiversity offsetting may benefit from additional clarification on the circumstances when it would be suitable (i.e. when exceptional circumstances might apply, the offset metrics expected of developers and the geographical scope of its application)[7]. As national guidance is not currently available, this clarification may be best developed either as supporting information to the Joint Plan (e.g. through a Supplementary Planning Document) or could be incorporated when the Joint Plan is reviewed.

Policy D08: Historic environment

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	0	0	0	0	0	0	0	?	? -	++	++	- +	+	+	0	0	-
M	0	0	0	0	0	0	0	?	? -	++	++	- +	+	+	0	0	-
L	0	0	0	0	0	0	0	?	? -	++	++	- +	+	+	0	0	-

Summary of Sustainability Appraisal Findings

This Policy would have particularly strong positive impacts in relation to the historic environment and landscape objectives. The Policy would conserve and where appropriate enhance the historic environment and affords particular protection for the most significant historic assets within the Plan area. Positive impacts are also likely to result in relation to tourism, recreation, community viability and vitality and the economy as this policy may boost tourism and conserve and enhance the special qualities of the National Park. Some negative impacts may result particularly in relation to the economy and meeting the needs of a changing population should this policy result in prevention of minerals and waste development due to historic environment considerations.

Recommendations

None noted.

[7] National guidance on biodiversity offsetting has not yet been finalised. Information on the pilot work and consultation work run by Defra is available at https://www.gov.uk/biodiversity-offsetting.

Policy D09: Water environment

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	++	++	0	0	0	+	++	0	0	0	0	++	++	+	++	++	+
M	++	++	0	0	0	+	++	0	0	0	0	++	++	+	++	++	+
L	++	++	0	0	0	+	++	0	0	0	0	++	++	+	++	++	+

Summary of Sustainability Appraisal Findings

This is a generally positive development management policy, with benefits to biodiversity, water, climate change mitigation and adaptation, the economy, community vitality, recreation, health and wellbeing and a changing population. It will work well alongside the environmental permitting and water licensing regimes. The Policy is also supported by supporting text referring to the importance of not impeding the achievement of water status objectives (which is important in meeting obligations under the Water Framework Directive).

Recommendations

None noted.

Policy D10: Reclamation and afteruse

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	++	+	+	+	++	+	++	+	+	++	+	+	+	+	m+	++	++
								?	?		++	?					
M	++	+	+	+	++	+	++	+	+	++	+	+	+	++	m+	++	++
								?	?		++	?					
L	++	+	+	+	++	m+	++	+	+	++	+	+	+	++	m+	++	++
								?	?		++	?					

Summary of Sustainability Appraisal Findings

This Policy is likely to result in largely positive impacts with particularly strong positive effects recorded in relation to biodiversity, land use, climate change adaptation, historic environment, flood risk and meeting the needs of a changing population due to the wide range of considerations promoted by the Policy. Some uncertainties were noted in relation to the material resources and waste management objectives as the preference for using onsite materials for reclamation purposes could reduce the opportunities for disposing of inert wastes, which would represent a positive effect, though the magnitude of that effect is highly uncertain.

Recommendations

This policy is considered to be largely positive and no mitigation is proposed.

Policy D11: Sustainable design, construction and operation of development

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	m+	m+	m+	+	m+	+ ++	++	+	++	+	+	?	0	0	+ - ?	m+	0
M	m+	m+	m+	+	m+	+ ++	++	+	++	+	+	?	0	0	+ - ?	m+	0
L	m+	m+	m+	+	m+	+ ++	++	+	++	+	+	?	0	0	+ - ?	m+	0

Summary of Sustainability Appraisal Findings

It is considered that this Policy would have an overall positive effect on achieving sustainable design, construction and operation of developments. The Policy performs positively against most SA objectives, particularly those relating to air quality, climate change and flooding. Some areas of uncertainty have been highlighted including in relation to objective 12 (economic growth) as the costs associated with developing a site are likely to increase given the requirement for high standards of sustainable design and construction and additional mitigation where required.. These additional costs would be balanced with the gains that are likely to accrue through low running costs due to the energy efficiency of any development and cost reduction through re-using resources. However, this will vary depending on the site.

Recommendations

This Policy is largely very positive and no mitigation is proposed.

Policy D12: Protection of agricultural land and soils

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	++	+	0	0	++	++	++	+	+	+	++	m+ -	+	+	+	+	++
M	++	+	0	0	++	++	++	+	+	+	++	m+ -	+	+	+	+	++
L	++ -	+	0	0	++	++	++	+	+	+	++	m+ -	+	+ -	+ -	+ -	++

Summary of Sustainability Appraisal Findings

This Policy will help towards the sustainable conservation of our most important soil resources. It performs positively against most SA objectives, particularly those relating to protecting soils and land, adapting to climate change, protecting landscapes and supporting a changing population's needs. While some mixed outcomes may be expected in the long term when the benefits of low level quarry restoration are considered (i.e. for the biodiversity, recreation and health objectives) these are minor exceptions to a broadly very positive assessment. Mixed effects are also observed in relation to the sustainable economy objective, as the policy may prove restrictive to some development. However, there are also key economic benefits from conserving soils, which underpin the agricultural and food retail economies.

Recommendations

This Policy is highly positive and further mitigation is not noted

Policy D13: Consideration of applications in Development High Risk Areas

SA Scores

Timescale	1.Bio / geo-diversity	2.Water	3.Transport	4. Air	5. Soil / land	6. Climate change	7. Climate adaptation	8. Minimise resources	9. Waste hierarchy	10. Historic environment	11. Landscape	12. Sustainable Economy	13. Community vitality	14. Recreation	15. Health / wellbeing	16. Flooding	17. Changing population
S	0	0	0	0	+	0	+	0	0	0	0	0	0	0	+	+	+
M	0	0	0	0	+	0	+	0	0	0	0	0	0	0	+	+	+
L	0	0	0	0	++	0	+	0	0	0	0	0	0	0	+	+	+

Summary of Sustainability Appraisal Findings

There are unlikely to be widespread effects as a result of this Policy, however, there are some small scale positive effects on soil / land, climate change adaptation, health and wellbeing, flood risk and meeting the needs of the population. This is because the Policy is likely to ensure that development is less prone to land instability impacts (such as subsidence) which can impact on the aforementioned objectives.

Recommendations

No further mitigation is proposed

8. Appraisal of Sites in the Joint Plan

The assessment of sites has been a core part of the sustainability appraisal process and the SA has assisted the selection of a number of allocated sites. To carry out this task we have followed a Site Identification and Assessment Methodology. This methodology followed a stepped approach to assessing sites:

Step 1: Identification and initial screening of potentially suitable Sites and Areas;
Step 2: Identification and mapping of key constraints;
Step 3: Initial sustainability appraisal of Sites[8];
Step 4: Panel review of initial SA findings and feedback to the Sustainability Appraisal Report

Following the initial screening at step 1, all sites were mapped and considered against a broad range of constraints and opportunities, most of which were available as mapped information, although other data sets, such as studies and reports were also considered. These datasets are listed in the Site Identification and Assessment Methodology.

This information was used to complete an assessment of each site against the 17 SA objectives that have also been used for the assessment of policy options. A key difference, however, was that a series of site based (rather than strategic) questions to ask of each site were defined to support each objective[9]. Following the completion of these assessments 3 specialist panels were convened to review sites. The details of the panel sessions and the key points raised are published on the Evidence base website. The findings of these panel sessions allowed us to refine the assessments. Proposals for mitigation were then developed.

The key issues and mitigation identified for each site are summarised in appendix 3 of the main Sustainability Appraisal Report. Readers should, refer to appendix 3 for a full explanation of significant effects and mitigation.

We have summarised the appraisals of Sites, Preferred Areas and Areas of Search in a separate appendix to this Non-Technical Summary (Non-Technical Summary Appendix 1).

[8] See the site identification and assessment methodology for the detailed description of Step 3
[9] Equivalent to the sub objectives used in the sustainability appraisal of policies. See the site identification and assessment methodology , which includes the full methodology for undertaking this work.

9. Consideration of Secondary, cumulative and synergistic effects

In both the assessments of policies and sites we have included consideration of secondary, cumulative and synergistic effects in the full SA findings at appendix 2 and 3 of the main Sustainability Appraisal Report and key effects, which may include secondary, cumulative and synergistic effects are referred to in the summaries of assessment findings in this report.

- Secondary (or indirect) effects are effects that do not directly result from the implementation of the plan. For instance, where the direct effect of a policy might include the loss of some hedgerows, an indirect effect might be that, as a result of that loss, the erosion rate of soils increases.

- Cumulative effects are where effects, that may not in themselves be significant, are, when taken together with other effects, significant.

- Synergistic effects are where two or more effects interact to create an effect that is greater than the sum of those effects. For example, an air pollutant in the presence of other pollutants may have a different effect than an air pollutant on its own.

Effects of the Joint Plan were very often cumulative or secondary, with key cumulative issues often relating to traffic and climate change in particular. Indirect effects were often noted in the policy assessments, particularly where the exclusion of part of the Plan area was referred to in a policy, which was often predicted to have possible displacement effects to other parts of the Plan area or other plan areas.

10. Key limitations and uncertainties encountered during assessment

This Sustainability Appraisal represents a strategic (over-arching) appraisal of the likely significant effects of the Joint Plan. As such it considers the policies and sites and areas presented in the Joint Plan. The assessment has been carried out at a high level however, using a combination of pre-existing information, such as government reports, information presented with past planning applications and software tools such as geographical information systems, as well as limited empirical information, such as information provided by submitters of sites, information provided through site visits and specially commissioned assessments such as Strategic Flood Risk Assessment. Professional judgement has been employed to interpret the evidence and to make the appraisals, and the assessments have been validated by earlier consultation at the issues and options and preferred options stages of plan production. However, Sustainability Appraisal is not Environmental Impact Assessment, so detailed information about the environmental effects of sites has often not been available either to the process of site assessment, or to draw from to inform the assessment of policies.

This means that while appraisal predicts the environmental, social and economic effects of the Joint Plan, in a complex environment, predictions can often turn out to be less than accurate. For instance, while we may predict a negative effect on biodiversity on the basis of a map showing the presence of priority habitat, the reality may be that what was once habitat may recently have been ploughed up after it was mapped. Only detailed ecological survey can verify the actual level of impact that a policy or site might have on biodiversity. The same is true of almost all the S.A. objectives. Predictions are presented on the basis of the best available knowledge, but this is not the same as testing out the effects of the Joint Plan through detailed empirical survey.

In some instances we have encountered difficulty obtaining data. In particular, we have not been able to obtain data on local geological sites (such as Regionally Important Geological Sites) and have relied on information from geological SSSI citations to make assessments. In addition, while early strategic work was undertaken on ecosystem services at the scoping stage of this SA, only limited evidence on ecosystem services has been available to the assessors as the Joint Plan has developed. Similarly, a change of government and a referendum on EU membership have taken place during the authoring of the sustainability appraisal. This has left assessors with a degree of uncertainty over the future status of some plans and legislation.

Our predictions too are often qualified with uncertainty. For instance, we have often reported an uncertain effect because we simply do not know what form development will take when a planning application comes forward or where a planning application outside of the allocations in the Joint Plan might occur. The design and location of development can make a significant difference to its sustainability effects.

To help overcome this uncertainty we have proposed a series of indicators that should help us review sustainability effects. These are listed in the next section of this report.

11. Proposals for Monitoring

Monitoring the significant environmental effects of implementing a plan is an important part of Sustainability Appraisal.

It is proposed that a series of indicators will be monitored on an annual reporting cycle where practical. The table below sets out the initial proposed indicators.

SA objective	Key issues Identified by SA	Possible Indicator
1. Protect and enhance biodiversity and geo-diversity and improve habitat connectivity	• Effects on protected species • Effects on priority habitats • Effects on protected sites	• Number of Planning Applications supported by a Habitat Regulations Assessment • SSSI condition status
2. Enhance or maintain water quality and supply and improve efficiency of water use	• Diversion of or pollution of watercourses • Effects on groundwater	• Water body status for key rivers
3. Reduce transport miles and associated emissions from transport and encourage the use of sustainable modes of transportation	• HGV use on minor roads • Traffic generated by offsite disposal of hydrocarbon wastes	• Number of planning applications with a travel plan / traffic assessment • Number of traffic assessments accounting for cumulative effects • Number of planning applications utilising rail or water transport • Vehicle numbers required for offsite disposal of hydrocarbons listed in EIAs
4. Protect and improve air quality	• Impacts on AQMAs • Dust in reaching receptors	• Number of Air Quality Management Areas
5. Use soil and land efficiently and safeguard or enhance their quality	• Loss of Best and Most Versatile Land	• Area of BMV land lost.
6. Reduce the causes of climate change	• Embodied energy in built infrastructure	• Number of planning applications providing a BREEAM pre-assessment
7. Respond and adapt to the effects of climate change	• Development prone to flooding • Ecological networks become fragmented	• Percentage of planning applications submitted with a Flood Risk Assessment. • Area of Minerals Applications providing flood storage.
8. Minimise the use of resources and encourage their re-use and safeguarding	• Secondary and recycled aggregate use • Potash extraction may be directed to areas outside of designated landscapes • Supply of DSG (desulphogypsum)	• Number of Sites providing Secondary or Recycled Aggregates / volume provided • Potash applications inside of / outside of designated landscapes • Number of applications for DSG
9. Minimise waste generation and prioritise management of waste as high up the waste hierarchy as practicable	• Volumes of waste managed	• Municipal Waste to Landfill

10. Conserve and enhance the historic environment, heritage assets and their settings.	• Loss of heritage assets • Effects on the setting of heritage	• Number of sites on Heritage at Risk Register
11. Protect and enhance the quality and character of landscapes and townscapes	• Visibility of sites • Loss of tranquillity	• Planning applications including a Landscape and Visual Impact Assessment
12. Achieve sustainable economic growth and create and support jobs	• Value added to minerals • Viability of businesses subjected to policies in the plan	• Total employment in the minerals and waste sector
13. Maintain and enhance the viability and vitality of local communities	• Creation of Jobs • Effects on the tourism economy	• Economically active rate of 16-64 year olds
14. Provide opportunities to enable recreation, leisure and learning	• Diversion of rights of way	• Number of minerals / waste sites restored to accessible open space
15. Protect and improve the wellbeing, health and safety of local communities	• Dust / particulates affecting wellbeing	• Number of planning applications providing an air quality / dust assessment
16. Minimise flood risk and reduce the impact of flooding	• Development prone to flooding	• Percentage of planning applications submitted with a Flood Risk Assessment. • Area of Minerals Applications providing flood storage.
17. Address the needs of a changing population in a sustainable and inclusive manner	• Minerals supply to support housing	• House completions

12. Conclusions

This assessment has followed the requirements of the SEA Directive and documents the key sustainability effects associated with implementing the Joint Plan. It has also documented the alternatives considered as the Joint Plan has developed, and documented the sustainability effects of each of these alternatives.

While minerals and waste planning deals with issues that are often hard to reconcile with sustainability, the Joint Plan attempts to choose the most sustainable approach to minerals and waste planning. Inevitably environmental, social and economic impacts remain, though these effects, in the most part cannot be attributed to the Joint Plan. Rather it is society's continued demand for minerals, and our continued consumption of resources that eventually become waste that produces many of these effects.

Minerals and Waste operators have a role to play too, and much good work has been undertaken by the industry to improve the sustainability of their operations. It will be important to continue this work, and the findings of this S.A. should not be read as a substitute for other non-planning related initiatives associated with good environmental management.

Where the sustainability appraisal has observed sustainability effects that are within the ability of the Joint Plan to avoid, it has made recommendations in relation to these. While the Joint Plan is not duty bound to take on board these recommendations, we hope that the guidance issued by this S.A. will improve the sustainability of future minerals and waste development.

We have also referred to the way in which we propose to monitor the sustainability effects of the Joint Plan and, should the need arise, it will be important to use the findings of this monitoring to suggest further action to remedy sustainability effects.

13. Consultation

We would like to hear your views on this report. A consultation questionnaire has been prepared which allows the chance to comment and is available on the Joint Plan and Sustainability Appraisal website.

Please complete this questionnaire and let us know what you think.

North Yorkshire County Council, City of York Council and the North York Moors National Park

Sustainability Appraisal

Non-Technical Summary - Supplementary Appendix to Report - Site Assessment Findings

October 2016

Contents

1. Introduction

This appendix accompanies the Sustainability Appraisal Non-Technical Summary and reports the findings of the sustainability appraisal of sites, preferred areas and areas of search in the Joint Plan.

As reported in the Non-Technical Summary the assessment of sites has been a core part of the sustainability appraisal process and the SA has helped to select a number of allocated sites. To carry out this task we have followed a Site Identification and Assessment Methodology. This methodology took a stepped approach to assessing sites:

Step 1: Identification and initial screening of potentially suitable Sites and Areas;
Step 2: Identification and mapping of key constraints;
Step 3: Initial sustainability appraisal of Sites[1];
Step 4: Panel review of initial SA findings and feedback to Sustainability Appraisal Report

Following the initial screening at step 1, all sites were mapped and considered against a broad range of constraints and opportunities, most of which was available as mapped information, though other data sets, such as studies and reports were also considered. These datasets are listed in the Site Identification and Assessment Methodology.

This information was used to complete an assessment of each site against the 17 SA objectives that have also been used for the assessment of policy options. A key difference, however, was that a series of site based (rather than strategic) questions to ask of each site were defined to support each objective[2]. Following the completion of these assessments 3 specialist panels were convened to review sites. The findings of these panel sessions allowed us to refine the assessments. Proposals for mitigation were then developed.

The key issues and mitigation identified for each site are summarised in appendix 3 of the main Sustainability Appraisal Report. Readers should, refer to appendix 3 of that report for a full explanation of significant effects and mitigation.

[1] See the site identification and assessment methodology for the detailed description of Step 3

[2] Equivalent to the sub objectives used in the sustainability appraisal of policies. See the site identification and assessment methodology , which includes the full methodology for undertaking this work; and Appendix 1 of the full Sustainability Appraisal Report includes a copy of the Sustainability Appraisal Framework for Sites.

2. Summaries of Site Assessment Findings

A summary of the site assessments is presented below, categorised by District Council area. Full assessments, including assessments of discounted sites, are reported in appendix 3 of the Sustainability Appraisal.

S1 – Craven

Site Reference	Site Name	Type of Site
WJP13	Halton East, near Skipton	Retention of waste transfer station with higher vehicle numbers and hours of operation
Site Summary – The site is an existing waste transfer station, although the inclusion of the site within the Waste Plan with a greater permissible throughput would lead to the requirement for any future design to have consideration towards how suitable access can be made through local roads, particularly through the provision of an appropriate traffic management plan. In addition, it will be necessary to provide appropriate arrangements for noise and dust control as well as landscaping to mitigate potential impacts upon the setting of conservation areas and the Yorkshire Dales National Park.		
Site Reference	**Site Name**	**Type of Site**
WJP17	Skibeden, near Skipton	Retention of Household Waste Recycling Centre for waste transfer of household and some commercial waste
Site Summary – The site is an existing Household Waste Recycling Centre although the restoration plan for the site in the long term should consider mitigation measures to address and control invasive species and how the landscaping of the site could mitigate impacts upon the setting of the Yorkshire Dales National Park.		

S2 – Hambleton District

Site Reference	Site Name	Type of Site
MJP06	Langwith Hall Farm, east of Well	Extraction of sand and gravel
Site Summary – The site lies in proximity to heritage assets including Thornborough Henges, a Scheduled Ancient Monument and ecological assets such as Moor Lane SINC. During development and as part of restoration it will be necessary to mitigate impacts upon this and other assets such as listed buildings in Nosterfield and Well and the Kirklington Conservation Areas. High quality soils should be protected as part of any management plan for this best and most versatile land, and mitigation for a diverted stream will also be necessary.		
Site Reference	**Site Name**	**Type of Site**
MJP07	Oaklands, near Well	Extraction of sand and gravel
Site Summary – Mitigation will need to be considered to avoid impacts upon Moor Lane SINC and Ings Goit Beck. Similarly to MJP06, the setting of heritage assets will need to be considered and a traffic management plan on the B6267 and Moor Lane will be required. High quality soil is also present on site and should be managed accordingly.		
Site Reference	**Site Name**	**Type of Site**
MJP33	Home Farm, Kirkby	Extraction of sand and gravel

	Fleetham	
Site Summary – The site lies in proximity to a Source Protection Zone 3 and hence the protection of the aquifer will need to be a consideration during operation. Public rights of way will need to be diverted or retained as appropriate. The site offers opportunities for the creation of a coherent habitat network upon restoration.		

S3 – Harrogate and Hambleton Districts (Split)

Site Reference	Site Name	Type of Site
MJP11	Gebdykes Quarry	Extraction of magnesium limestone
Site Summary – Site MJP11 lies on the opposite side of an un-named road to an existing quarry. The design will therefore need to factor in suitable arrangements for crossing between the two. The site has the potential to impact upon heritage assets such as listed buildings (Low Mains Farmhouse, Low Burton Hall & Dovecote), conservation area and a registered park and garden. There is also the potential for significant undiscovered remains. Mitigation for ecological impacts should be considered particularly for hydrological impacts upon Mar Field Fen SSSI.		

S4 –Hambleton and Richmondshire (Split)

Site Reference	Site Name	Type of Site
MJP21	Land at Killerby	Extraction of sand and gravel
Site Summary – Ecological interests near and on the site will need to be considered, especially the avoidance of impacts on Swale Lakes SSSI, the river Swale and protected species. Invasive species will also need to be suitably managed. The design of the development will need to minimise the loss of the best of most versatile soil that is present, and the landscaping should mitigate impacts upon heritage assets including a listed building and archaeological remains.		
Site Reference	**Site Name**	**Type of Site**
MJP17	Land to South of Catterick	Extraction of sand and gravel
Site Summary – Swale Lakes SSSI lies in reasonably close proximity and the design should avoid impacts upon this designated site. Heritage assets nearby include Rudd Hall and Ghyll Hall (both listed buildings) and Hornby Castle Park. The design will need to include for mitigation measures as appropriate including for public rights of way, especially for the bridleway along Ghyll Lane.		

S5 – Harrogate Borough

Site Reference	Site Name	Type of Site
MJP14	Ripon Quarry, North Stainley	Extraction of sand and gravel
Site Summary – The site lies in proximity to SSSIs and impacts will need to be avoided. The site also lies in proximity to heritage assets including listed buildings, and a registered park and garden which will also require mitigation should it be necessary. The design should also include for arrangements to mitigate impacts upon rights of way including the Ripon Rowel Walk.		
Site Reference	**Site Name**	**Type of Site**
MJP10	Potgate Quarry, North Stainley	Extraction of Magnesium limestone

Site Summary – Any impacts upon the adjacent Five Ponds Wood SINC would need to be mitigated through any design to ensure protection of this locally important site. Hedgerows and mature trees are also present and would require suitable protection. The Grade 1 listed Friars Hurst is within 150m of the site boundary and mitigation of this heritage asset and the Nidderdale AONB would be essential for any development to progress at the site. Traffic using Water Lane to access the A6108 would also need to be managed given the lane's status as a public right of way.		
Site Reference	**Site Name**	**Type of Site**
WJP08	Allerton Park, near Knaresborough	Retention of landfill and associated landfill gas utilisation plant and use of site for growth of energy/biomass crops beyond 2018
Site Summary – Any design should incorporate appropriate mitigation for impacts upon the Allerton Park Lakes SINC and the setting of heritage assets such as Allerton Park Registered Park and Garden, Coneythorpe conservation area and listed buildings.		
Site Reference	**Site Name**	**Type of Site**
WJP24	Potgate (former plant site), North Stainley	Recycling of inert construction and demolition waste for secondary aggregates.
Site Summary – Water Lane is a public right of way and any traffic management plan needs to take this into account. Appropriate restoration opportunities exist in so far that it can be tied into the existing Potgate quarry scheme.		

S6 – Richmondshire

Site Reference	Site Name	Type of Site
WJP18	Tancred, near Scorton	Landfill, recycling (including treatment, bulking and transfer), open windrow composting
Site Summary – The site design and management should allow for the mitigation and control of invasive species. Access to the B6271 will need to be improved and arrangements for the control of noise, dust and odour will be required to mitigate for businesses, tourism and the community. As the site lies partially in Flood Zone 2 and 3 there will be the requirement for an emergency plan to be in place. Upon restoration there are opportunities for habitat creation in the context of the adjacent Scorton Quarry.		

S7 – Ryedale

Site Reference	Site Name	Type of Site
MJP08	Settrington Quarry	Extraction of Jurassic limestone
Site Summary – Hydrological impacts on the River Derwent SAC will need to be avoided and the loss of the best and most versatile soil should be minimised. Impacts upon heritage assets, including Town Green Scheduled Monuments and listed buildings should be mitigated through the design. The design should also mitigate for other rights of way such as Langton Lane as appropriate.		
Site Reference	**Site Name**	**Type of Site**
MJP30	West Heslerton Quarry	Extraction of sand
Site Summary – The site will access onto the A64 and therefore an appropriate standard of access should be maintained. Mitigation for noise and dust, undiscovered archaeology and protected species will need to be provided as appropriate.		

Site Reference	Site Name	Type of Site
MJP63	Brows Quarry, Malton	Extraction of building stone
Site Summary – Safe access onto the B1248 should be provided as part of the design. Hydrological impacts upon the River Derwent SAC should be avoided and the design should minimise impacts on best and most versatile agricultural land.		

S8 - Scarborough

Site Reference	Site Name	Type of Site
WJP15	Seamer Carr, Scarborough	Retention of existing recycling (including treatment, bulking and transfer), open windrow composting, and energy from waste (biomass) facilities beyond end of current planning permissions which are limited to 2020 and new inert waste screening facility
Site Summary – Drains near the site link to the River Hertford SINC and impacts upon this site should be avoided. The design should mitigate impacts on best and most versatile agricultural land and the landscaping should mitigate impacts on Starr Carr Scheduled Ancient Monument and its setting. As the site is upon a Source Protection Zone 1, the protection of the aquifer needs to be a principal consideration.		

S9 – Selby

Site Reference	Site Name	Type of Site
MJP45	Land to north of Hemingbrough	Extraction of clay
Site Summary – The site will need to mitigate for a range of issues, including impacts on Hagg Lane Green SINC, best and most versatile land, heritage assets around Hemingbrough, local landscape charter, the setting of the Trans Pennine Trail and a range of other issues.		
Site Reference	**Site Name**	**Type of Site**
MJP55	Land adjacent to former Escrick brickworks	Extraction of clay
Site Summary – Any design will need to mitigate any impacts upon Heron Wood SINC and ancient woodland. Any hydrological connection with Skipwith Common SAC and SSSI will need to be investigated and mitigated accordingly. The Trans Pennine Trail bisects the site and therefore views from this public right of way will need to be carefully considered. Any design will also need to mitigate the impact upon heritage assets and as the site is partly within Flood Zone 2 and 3 it will need to be suitably managed with an emergency plan in place.		
Site Reference	**Site Name**	**Type of Site**
MJP28	Barnsdale Bar Quarry, Kirk Smeaton	Extraction of Magnesian limestone
Site Summary – The site lies in Green Belt and therefore any restoration will need to incorporate this consideration as well as the local important landscape area within which the site is located. Suitable public right of way provision will need to be maintained.		
Site Reference	**Site Name**	**Type of Site**
MJP29	Went Edge Quarry, Kirk	Extraction of Magnesian limestone

	Smeaton	
Site Summary – The design of the site and the restoration area needs to consider impacts upon the sites location within the Green Belt and close to Brockadale SSSI and the locally important landscape area as well as the best and most versatile agricultural land that is present.		
Site Reference	**Site Name**	**Type of Site**
MJP23	Jackdaw Crag, Stutton	Extraction of Magnesian limestone
Site Summary – Impacts upon Crag Wood SINC should be mitigated as appropriate with potential for measures to reduce its isolated nature. Heritage assets including Listed Buildings and a Registered Battlefield (the Battle of Towton) which is just over 1km away will need to be carefully mitigated so that their setting is not impacted upon. The site also lies in Green Belt and the restoration scheme should allow for consideration this accordingly.		
Site Reference	**Site Name**	**Type of Site**
MJP22	Hensall Quarry	Extraction of sand
Site Summary – The site lies in Flood Zone 3 and therefore an emergency plan needs to be in place to mitigate any danger during a flood event. The site lies near to listed buildings and their setting will need to be mitigated during design.		
Site Reference	**Site Name**	**Type of Site**
MJP44	Land between Plasmor Block making plant, Great Heck and Pollington Airfield	Extraction of sand
Site Summary – The design should mitigate impacts upon Sand Quarry SINC and also minimise the loss of best and most versatile agricultural land. The restoration scheme should take account of the distinctive landscape character of the area.		
Site Reference	**Site Name**	**Type of Site**
MJP54	Mill Balk Quarry, Great Heck	Extraction of sand
Site Summary – Appropriate traffic management will need to be in place to manage access along Mill Balk Road to the A645 especially in the area of the Hensall Community Primary School. The design should minimise the loss of the best and most versatile agricultural land.		
Site Reference	**Site Name**	**Type of Site**
MJP09	Barlby Road, Selby	Rail and road freight distribution facility including handling facility for aggregates
Site Summary – The design of the site should include mitigation for the users of local roads the Trans Pennine Trail. The Listed Buildings should also have their setting mitigated as appropriate.		
Site Reference	**Site Name**	**Type of Site**
MJP24	Darrington Quarry processing plant site and haul road	Retention of plant site and haul road for processing of Magnesian limestone
Site Summary – The design of the site and its restoration should mitigate the fact the site is in Green Belt. Suitable public right of way provision should be maintained for Leys Lane.		
Site Reference	**Site Name**	**Type of Site**
MJP27	Darrington Quarry (recycling)	Recycling of inert waste
Site Summary – The design of the site and its restoration should mitigate the fact the site is in Green Belt and a locally important landscape area. Groundwater resources will also need to be		

protected through the site design.

Site Reference	Site Name	Type of Site
MJP26	Barnsdale Bar, near Kirk Smeaton (recycling)	Recycling of inert waste
Site Summary – The management of the site development will need to minimise the loss of the best and most versatile agricultural land as well as provide suitable groundwater protection. The access along Long Land to Woodfield Road will also need to be maintained to a suitable standard. The restoration of the site will need to be compatible with its location in the Green Belt and a locally important landscape area.		
Site Reference	**Site Name**	**Type of Site**
WJP10	Went Edge Quarry recycling, near Kirk Smeaton	Recycling of construction and demolition waste for secondary aggregate
Site Summary – The site is adjacent to Brockadale SSSI and therefore this will need to form an important part of any mitigation strategy. Measures to address and control invasive weeds will also be necessary. Suitable access onto Went Edge Road will also need to be provided. An appropriate restoration scheme, including one which is compatible with the Green Belt location, will also need to be secured.		
Site Reference	**Site Name**	**Type of Site**
WJP16	Common Lane, Burn	Bulking and transfer of municipal and commercial waste
Site Summary – The site design will need to consider mitigation upon users of the Trans Pennine Trail as well as the local landscape character. Suitable access onto Common Lane will need to be provided.		
Site Reference	**Site Name**	**Type of Site**
WJP06	Land adjacent to former Escrick brickworks, Escrick	Landfill of inert waste for restoration of extraction site
Site Summary – Impacts upon the immediately adjacent Heron Wood SINC/ancient woodland will need to be mitigated accordingly as will any potential hydrological impact upon Skipwith Common SAC/SSSI. The minimisation of the loss of best and most versatile agricultural land is also an important consideration. Escrick Conservation area lies approximately 1km to the north east and its setting will need to be a consideration for mitigation. As the site is partly within flood zone 2 and 3 an emergency plan will need to be in place. Users of the Trans Pennine Trail will need to have been mitigated through appropriate crossing arrangements.		
Site Reference	**Site Name**	**Type of Site**
WJP21	Brotherton Quarry, Burton Salmon	Import of inert waste for restoration purposes
Site Summary – Impacts upon Byram Park SINC should be mitigated and invasive species should be dealt with accordingly. Measures should be put in place for the minimisation of the loss of best and most versatile agricultural land and any restoration scheme should use the opportunities for habitat creation and an appearance consistent with the site's location in the Green Belt.		
Site Reference	**Site Name**	**Type of Site**
WJP22	Land on former Pollington airfield	• Import of wood for wood pellet production • Modification to biomass plant permission (reduction to throughput and output) • Additional infrastructure associated with wood

		processing
Site Summary – The loss of best and most versatile agricultural land should be mitigated as appropriate and the design of the development should mitigate impact upon archaeological remains and local landscape features. Groundwater protection measures should be in place.		
Site Reference	**Site Name**	**Type of Site**
WJP03	Southmoor Energy Centre	Energy from Waste Facility
Site Summary – Mitigation measures are detailed in the Environmental Statement for the proposal.		
Site Reference	**Site Name**	**Type of Site**
WJP25	Former Arbre Power Station	Energy Recover facility with Advanced Thermal Treatment
Site Summary – Mitigation measures are detailed in the Environmental Statement for the proposal. The change in noise, in the noise important area, however, should be monitored through the SEA process.		

S10 – North York Moors

Site Reference	Site Name	Type of Site
WJP19	Fairfield Road, Whitby	Recycling and transfer of municipal and commercial waste
Site Summary – The design of the site needs to mitigate impacts on the North York Moors National Park, as well as Low Laithes Farm SAM, listed buildings and registered parks and gardens. The control of invasive species should be part of any mitigation proposals and suitable access from the site onto the A171 and local roads should be provided.		

S11 – City of York

Site Reference	Site Name	Type of Site
MJP52	Field SE5356 9513, to north of Duttons Farm, Upper Poppleton	Extraction of clay
Site Summary – The allocation of MJP52 is unlikely to lead to significant effects upon the environment, although the design of any development will need to consider in greater detail how impacts upon ecology, agricultural land and the setting of heritage assets will be mitigated. This could be addressed through a suitable restoration scheme that uses opportunities for habitat creation and a final use compatible with the site's Green Belt location		
Site Reference	**Site Name**	**Type of Site**
WJP05	Field to north of Duttons Farm, Upper Poppleton	Landfill and recycling of waste from construction industry
Site Summary – The allocation of WJP05 is unlikely to lead to significant effects upon the environment, although the design of any development will need to consider in greater detail how impacts upon ecology, agricultural land and the setting of heritage assets will be mitigated. This could be addressed through a suitable restoration scheme that uses opportunities for habitat creation and a final use compatible with the site's Green Belt location		
Site	**Site Name**	**Type of Site**

Reference		
WJP11	Harewood Whin, Rufforth	Retention of the following facilities beyond 2017 • landfill, • recycling (including treatment bulking and transfer) and liquid waste treatment • energy from waste (biomass and landfill gas utilisation) • kerbside recycling and waste transfer operation and Construction of new waste transfer station
Site Summary – The allocation of WJP11 is unlikely to lead to significant effects upon the environment, although the design of the development will need to consider in greater detail how mitigation will be delivered to reduce impacts upon heritage assets. This will particularly need to focus upon the potential for undiscovered archaeological remains, and built heritage assets at Rufforth Village and the City of York. The location of the site within the Green Belt would also need to be considered, including in the development of any restoration scheme and this should incorporate mitigation measures for the potential presence of protected species and also best and most versatile agricultural land.		
Site Reference	**Site Name**	**Type of Site**
WJP02	Former North Selby Mine Site, Deighton	Anaerobic digestion (AD)
Site Summary – Planning permission for the site has already been granted and a number of environmental matters have already been addressed in greater detail than is appropriate at the SA stage. It is noteworthy, however, that several beneficial effects have been identified in the sustainability appraisal specifically related to the use of waste to create energy and a bio-digestate that can be used as a fertiliser. The location of the site within the Green Belt would also need to be considered, including in the development of any restoration scheme.		

3. Areas of Search Findings

Sustainability Appraisal was also undertaken on the Areas of Search in the Joint Plan following the approach in the Site Identification and Assessment Methodology. Of the 3 Areas of Search for Sand and Gravel that were considered the SA reported a full set of findings that are reported at Appendix 3L of the main Sustainability Appraisal Report.

The assessments scored each area against the SA objectives and made recommendations to show how any sites that might come forward may best deal with the sustainability effects seen as most likely to occur in these areas. After this mitigation was applied the following observations were made:

Area A: With mitigation in place, most sustainability effects can be reduced to a negligible or temporary minor negative level or even increased to positive effects in some cases (particularly in the longer term). Particular care will need to be observed in relation to landscape effects as the Settled Vale Farmland and floodplain landscape area will be sensitive to change, so design and mitigation will be required to lessen impact on views and natural course of the river. Similarly, effects on soils may, in many cases, lead to at least a temporary negative effect.

However, these effects would depend entirely on the details of individual developments which cannot be known until appropriate environmental assessment is undertaken to support planning applications.

Area B: With mitigation in place, most sustainability effects can be reduced to a negligible or temporary minor negative level or even increased to positive effects in some cases (particularly in the longer term). Particular care will need to be observed in relation to landscape effects as the Magnesian Limestone Ridge landscape area will be sensitive to change, so careful design and mitigation will be required to lessen impact on views and the natural course of the river. Similarly, effects on soils may, in many cases, lead to at least a temporary negative effect.

However, these effects would depend entirely on the details of individual developments which cannot be known until appropriate environmental assessment is undertaken to support planning applications.

Area C: With mitigation in place, most sustainability effects can be reduced to a negligible or temporary minor negative level or even increased to positive effects in some cases (particularly in the longer term). Particular care will need to be observed in relation to landscape effects as the Magnesian Limestone Ridge landscape area will be sensitive to change, so careful design and mitigation will be required to lessen impact on views and natural course of the river. Similarly, effects on soils may, in many cases, lead to at least a temporary negative effect. However, such effects are to a degree inherent to sand and gravel extraction, so effects can only be reduced, with the onus on restoration in the longer term.

However, these effects would depend entirely on the details of individual developments which cannot be known until appropriate assessment is undertaken to support planning applications.

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