

Non-Technical Summary: Sustainability  
Appraisal of the Minerals and Waste  
Policies and Allocation Document  
Publication Draft (November 2022)

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## 1. Introduction

1.1 This Non-Technical Summary (NTS) provides an overview of the Sustainability Appraisal (SA) Report produced as part of the SA of the Minerals and Waste Policies and Allocations Development Plan Document; hereafter referred to as the M&WDPD. The SA has been carried out in order to help integrate sustainable development into the M&WDPD.

1.2 The following sections of this NTS:

- Provide an overview of the M&WDPD;
- Describe the approach to undertaking the SA of the M&WDPD;
- Summarise the findings of the SA of the M&WDPD; and
- Set out the next steps in the SA of the M&WDPD

### What is the M&WDPD?

1.3 All Councils are required to have a development plan for their local area in order to guide its future development and contribute towards making sustainable places to live and work. The current development plan for County Durham is made up of several documents including the County Durham Plan, adopted Neighbourhood Plans, the County Durham Minerals Local Plan (adopted December 2000) and the County Durham Waste Local Plan (adopted April 2005).

1.4 The County Durham Plan sets out the Council's overarching strategy for the development and use of land to 2035 and was adopted in October 2020. In relation to minerals and waste development, the Plan establishes:

- The scale of future minerals extraction and waste management capacity needed;
- Where and when new mineral and waste development will be required;
- Policy to determine minerals and waste proposals against; and
- Strategic site allocations for minerals development.

1.5 In order to complement the minerals and waste content of the County Durham Plan, the Council is preparing a new Local Development Plan Document (DPD) entitled the Minerals and Waste Policies and Allocations Document (M&WDPD). The M&WDPD will:

- Set out specific policies for a number of minerals, not addressed by the County Durham Plan;
- Contain detailed development management policies; and
- Allocate additional, non-strategic sites for minerals and waste where needed and justified.

1.6 The stages of preparation for the M&WDPD are as follows:

1. Begin evidence gathering, engagement and document preparation
2. Preparation and consultation on the draft M&WDPD (Regulations 18)
3. Preparation and consultation on the Publication version of the M&WDPD (Regulation 19)
4. Submissions of the M&WDPD to the Secretary of State and Examination in Public
5. Adoption of the M&WDPD

1.7 The Council is currently at stage 3 of preparation. Once adopted (stage 5), the policies and provisions of the M&WDPD will replace the remaining saved policies of the County Durham Minerals Local Plan and the saved policies of the County Durham Waste Local Plan.

### What is Sustainability Appraisal?

1.8 The role of Sustainability Appraisal (SA) is to promote sustainable development by assessing the extent to which the emerging plan, when judged against reasonable alternatives, will help to achieve relevant social, economic and environmental objectives. The Planning and Compulsory Purchase Act 2004 requires local planning authorities to carry out a Sustainability Appraisal (SA) of each of the proposals in a plan during its preparation.

1.9 Sustainability appraisals also incorporate the requirements of the Environmental Assessment of Plans and Programmes Regulations 2004 (commonly referred to as the 'Strategic Environmental Assessment Regulations'). Strategic Environmental Assessment (SEA) is a systematic process for evaluating the environmental consequences of plans and programmes to ensure that environmental issues are integrated and given full consideration alongside social and economic issues at the earliest opportunity in the decision-making process. For the sake of brevity, the integrated SA/SEA process will be referred to as Sustainability Appraisal (SA) in this report.

1.10 The M&WDPD has been subject to SA throughout its development. In addition to promoting sustainable development and incorporating the requirements of the SEA Regulations, the latest SA presents:

- The SA of reasonable alternatives developed following consultation on the draft version of the M&WDPD or because of new evidence / information.
- The assessment of all M&WDPD policies, highlighting which have changed significantly, thereby requiring reassessment and where updates have been required to reflect new evidence and information.
- The assessment of new policies and their reasonable alternatives along with mitigating measures.
- Cumulative and significant effects of the M&WDPD and monitoring proposals.

## 2. What are the Key Stages in a Sustainability Appraisal?

2.1 There are five key stages in the SA process which should be undertaken alongside the preparation of a Plan. The stages are described as follows:

### 1. Stage A: Scoping

2.2 The Scoping stage provides the context, baseline information on social, economic and environmental conditions and trends in order to set the basis for the subsequent stages of SA. The key outcome of this stage is the production of a set of sustainability objectives and decision-making criteria known as a SA Framework which is then used to predict the social, economic and environmental effects of Plan objectives, policies and their alternatives.

2.3 As outlined in the Introduction to this report, the County Durham Plan sets out the Council's overarching strategy for the development and use of land to 2035, including minerals and waste development. A SA Scoping Report presented the information collated during the first stage of Sustainability Appraisal i.e. the scoping stage (Stage A) and was consulted upon in 2016. The report included minerals and waste as a topic and established the context, baseline situation, key issues and relevant social, economic and environmental objectives (known as the SA Framework) to assess the County Durham Plan against.

2.4 In 2018, a further Minerals and Waste Scoping Report Synopsis was published for comment in order to support the forthcoming development of the M&WDPD. This report highlighted the minerals and waste information contained within the County Durham Plan Scoping Report and affirmed the relevance and continued application of the SA framework to the M&WDPD. This is in line with guidance which states that one SA Scoping report can be produced for several Local Development Documents. Both the 2016 SA Scoping Report and 2018 Minerals and Waste Scoping Report Synopsis can be viewed in full at [County Durham Plan Evidence Library](#) Please see documents referenced C22 and MW10 respectively.

### 2. Stage B: Assessment

2.5 The tasks involved with Stage B can be collectively referred to as 'Assessment'. Within this stage, Plan objectives, policies and their reasonable alternatives are assessed (through impact prediction and evaluation) against the SA Framework and associated sustainability objectives and decision-making criteria. This NTS report provides an overview of the outcomes of stage B.

### 3. Stage C: Report

2.6 The main SA report, along with this NTS have been produced to present the outcomes of the SA of the M&WDPD to date. This is the second SA report and NTS report produced alongside the M&WDPD. The first was published in September 2021 alongside the M&WDPD Draft Plan.

#### 4. Stage D – Consultation

2.7 The SA report is made available alongside the M&WDPD for comment from statutory consultees i.e. Natural England, The Environment Agency and Historic England, other stakeholders and members of the public. Consultation on the M&WDPD Draft Plan, its SA and other supporting documents was undertaken between the 24<sup>th</sup> September and the 5<sup>th</sup> November 2021.

2.8 Only the statutory consultees have provided representation on the SA Report to date. Natural England supported the SA. The Environment Agency were pleased that the SA had highlighted risks to groundwater resources and suggested some minor amendments to the SA decision making criteria. Historic England also suggested some minor revisions to the SA decision making criteria, advised further Historic Impact Assessment (HIA) was undertaken of Shadforth Conservation Area and Ludworth Tower to inform the SA and asked that the SA reconsider how policy provisions (requiring proposals to ‘demonstrate that there will be no unacceptable adverse impacts on the environment’) are interpreted in the context of less than substantial harm to heritage assets.

2.9 The representations made and response can be viewed in full in the Appendices document to the SA report at Appendix A. However, as a brief overview:

- Minor revisions were made to the decision-making criteria where considered necessary;
- A HIA was subsequently undertaken which confirmed SA assessment outcomes; and
- The SA report has been updated throughout to accurately reflect how policy provisions will apply in respect of impacts that would cause ‘less than substantial harm’ to heritage assets.

2.10 The SA report and this NTS report for the Publication Draft M&WDPD (2022) will be made available for public consultation from Monday 28<sup>th</sup> November 2022 to Friday 13<sup>th</sup> January 2023. Representations will then be compiled and submitted to the Secretary of State for independent examination.

#### 5. Stage E – Post Adoption and Monitoring

Following Examination in Public, and subject to any significant changes to the M&WDPD that may require appraisal, the Council will issue a Post Adoption Statement as soon as reasonably practicable after the adoption of the M&WDPD. This will set out how the recommendations of the SA process have been incorporated into the M&WDPD. During the implementation period of the M&WDPD, the Council will monitor any significant social, economic and environmental effects.

### 3. How has the M&WDPD been Appraised?

3.1 To support the appraisal of the M&WDPD, a SA Framework was utilised. The framework consists of the following SA objectives, decision making criteria and relevant considerations for minerals and waste development:

**Table 1 SA Framework**

<b>Sustainability Appraisal Objectives</b>	<b>Will the Plan...</b>	<b>Relevant Considerations</b>
1. To provide everybody with the opportunity to live in a decent and affordable home	<ul style="list-style-type: none"> <li>• Ensure the requirement for affordable housing is met across a range of tenures?</li> <li>• Decrease the number of vacant properties and properties that don't meet the decent homes standard?</li> <li>• Site new housing in deliverable locations linked to identified need?</li> <li>• Ensure that a mix of housing type and size is available in the county?</li> <li>• Improve energy efficiency and reduce fuel poverty?</li> </ul>	<ul style="list-style-type: none"> <li>• Supply of minerals required to build new homes including affordable homes.</li> <li>• Management of construction and demolition waste linked to new housing provision</li> <li>• Management of household waste linked to new housing</li> <li>• Safeguarding of resources, sites, facilities and infrastructure relative to housing location/demand.</li> </ul>
2. To promote strong, secure communities	<ul style="list-style-type: none"> <li>• Enhance a sense of safety and security?</li> <li>• Deter / prevent crime?</li> <li>• Reduce the adverse impacts of traffic (including HGV's) on communities?</li> <li>• Encourage a sense of community or wider engagement in community activities or local democracy?</li> <li>• Promote mutual understanding of different ethnic and cultural groups?</li> <li>• Help cater for the needs of an ageing population?</li> </ul>	<ul style="list-style-type: none"> <li>• Safety and security of sites and infrastructure</li> <li>• Avoiding/minimising haulage impacts of minerals/waste</li> <li>• Accessibility and location of waste facilities to reduce fly tipping incidents</li> <li>• Opportunities for community engagement and involvement in minerals and waste decision making</li> <li>• Community benefits derived as a result of minerals and waste development</li> </ul>

<b>Sustainability Appraisal Objectives</b>	<b>Will the Plan...</b>	<b>Relevant Considerations</b>
	<ul style="list-style-type: none"> <li>• Increase cultural awareness through enhancing and promoting the local historic environment?</li> </ul>	<ul style="list-style-type: none"> <li>• Supporting community led waste management schemes</li> <li>• Understanding and responding to the waste management requirements of an ageing population</li> </ul>
<p>3. To improve education, training and life-long learning, and maintain a healthy labour market</p>	<ul style="list-style-type: none"> <li>• Increase the quantity or quality of education, training opportunities or facilities</li> <li>• Improve access to education or training opportunities?</li> <li>• Promote lifelong learning?</li> <li>• Raise educational and employment aspirations?</li> </ul>	<ul style="list-style-type: none"> <li>• Qualification, training and volunteer opportunities as a result of minerals and waste development and management</li> <li>• Awareness raising and behavioural change in relation to resource management and the waste hierarchy</li> <li>• Impacts of minerals and waste development on educational facilities</li> </ul>
<p>4. To reduce health inequalities and promote healthy lifestyles</p>	<ul style="list-style-type: none"> <li>• Contribute to promotion of healthier lifestyles and healthy leisure opportunities? (e.g. cycling and walking)</li> <li>• Improve access to public open space / multi-functional green infrastructure?</li> <li>• Reduce health inequalities?</li> <li>• Improve access to healthcare?</li> </ul>	<ul style="list-style-type: none"> <li>• Avoiding/minimising the impact of nuisances associated with minerals and waste development such as noise pollution, odour and dust</li> <li>• Impact of sites and facilities on existing green infrastructure and rights of way</li> <li>• Opportunities for the creation of new or enhanced access to recreation and leisure through restoration and afteruses.</li> </ul>
<p>5. To reduce the need to travel and promote use of sustainable transport options</p>	<ul style="list-style-type: none"> <li>• Reduce the need for travel/ transport (e.g. by ensuring local needs are met locally or by telecommunication)?</li> </ul>	<ul style="list-style-type: none"> <li>• Encouraging proximity between minerals and waste sites and processing facilities/markets/sources</li> <li>• Provision an improvement of public</li> </ul>

Sustainability Appraisal Objectives	Will the Plan...	Relevant Considerations
	<ul style="list-style-type: none"> <li>• Help people to access jobs, services and facilities easily?</li> <li>• Protect / increase the range of shops, services, amenities and employment opportunities in town and village centres?</li> <li>• Promote / widen opportunities for 'greener' modes of travel (walking, cycling public or shared transport)?</li> <li>• Ensure development is served by an appropriate level of transport infrastructure including public and sustainable transport networks?</li> <li>• Move freight from road to rail / sea?</li> </ul>	<p>access to facilities enabling sustainable waste management</p> <ul style="list-style-type: none"> <li>• Encouraging more sustainable forms of minerals and waste transportation</li> <li>• Resources which support the transition to Electric Vehicles</li> </ul>
6. To alleviate deprivation and poverty	<ul style="list-style-type: none"> <li>• Help those on lower incomes?</li> <li>• Contribute towards local regeneration initiatives, or benefit areas suffering from economic deprivation?</li> <li>• Improve economic, social and environmental conditions in the most deprived areas and for the most deprived groups?</li> <li>• Improve physical access to jobs?</li> <li>• Help reduce unemployment?</li> <li>• Encourage higher incomes?</li> </ul>	<ul style="list-style-type: none"> <li>• Potential impacts of minerals and waste development on social, economic and environmental conditions in deprived areas</li> <li>• Potential opportunities for restoration of sites to contribute towards addressing legacy issues and/or regeneration initiatives</li> <li>• The safeguarding or creation of jobs in deprived areas</li> </ul>

<b>Sustainability Appraisal Objectives</b>	<b>Will the Plan...</b>	<b>Relevant Considerations</b>
7. To develop a sustainable and diverse economy with high levels of employment	<ul style="list-style-type: none"> <li>• Safeguard employment or create new employment opportunities?</li> <li>• Promote business expansion / development?</li> <li>• Promote growth in key economic sectors?</li> <li>• Encourage clean technologies to locate in the area?</li> <li>• Reduce road congestion and help reduce journey times to key employment sites?</li> <li>• Encourage young people to stay in the area?</li> <li>• Encourage the use of local labour, goods and services?</li> <li>• Improve the diversity /resilience of the economy?</li> <li>• Help realise the economic potential of the County's natural and historic assets in a sustainable way?</li> </ul>	<ul style="list-style-type: none"> <li>• Safeguarding and creation of direct and indirect jobs in the minerals and waste sector</li> <li>• Contribution to a green, economic recovery from the Covid 19 pandemic</li> <li>• Contribution that the provision of a steady and adequate supply of mineral resources makes to the local, regional and national economy</li> <li>• Ensuring that County Durham's mineral resources are not needlessly sterilised and that they are conserved and used appropriately</li> <li>• Capturing value from waste streams by creating saleable products from them</li> <li>• Innovation and competitiveness within minerals and waste industry</li> <li>• Long term investment requirements for minerals and waste infrastructure</li> <li>• Rural diversification</li> <li>• Impact of development on key visitor locations</li> <li>• Potential for mineral site restoration to create new visitor attractions</li> </ul>
8. To reduce the causes of climate change	<ul style="list-style-type: none"> <li>• Reduce the demand for energy or increase energy efficiency of buildings, transport or industry?</li> </ul>	<ul style="list-style-type: none"> <li>• Reducing emissions from minerals and waste development through use of energy efficient and low and zero carbon design and adoption of</li> </ul>

Sustainability Appraisal Objectives	Will the Plan...	Relevant Considerations
	<ul style="list-style-type: none"> <li>• Minimise greenhouse gas emissions from waste management?</li> <li>• Contribute to the development / wider use of renewable energy sources</li> <li>• Contribute to the absorption of carbon dioxide?</li> </ul>	<p>efficient plant, fleet and processes.</p> <ul style="list-style-type: none"> <li>• Reducing haulage associated emissions (see SA objective 5)</li> <li>• Development which supports the transition to a low carbon future</li> <li>• Locations for development which avoid carbon sinks e.g. peatland</li> <li>• Opportunities through restoration to increase carbon sequestration</li> <li>• Encouraging the recovery of energy from waste</li> <li>• Enabling increased levels of waste recovery, recycling and composting</li> <li>• Preventing the loss of embodied energy by promoting the use of recycled, recyclable and secondary resources</li> </ul>
<p>9. To respond and enable adaptation to the inevitable impacts of climate change</p>	<ul style="list-style-type: none"> <li>• Reduce and minimise the risk of / from flooding or coastal erosion, including in areas at risk from rising mine water?</li> <li>• Discourage inappropriate development in areas at risk from flooding?</li> <li>• Ensure that new development does not give rise to flood risk elsewhere?</li> <li>• Help to cope with climate extremes, e.g. design of buildings and urban areas</li> </ul>	<ul style="list-style-type: none"> <li>• Impact of minerals and waste development on increasing or potentially alleviating flood risk</li> <li>• Ensuring that minerals and waste developments are not susceptible to the effects of climate change and do not exacerbate these.</li> </ul>

Sustainability Appraisal Objectives	Will the Plan...	Relevant Considerations
	<ul style="list-style-type: none"> <li>• Allow for habitats or species of biodiversity importance to adapt to climate change?</li> </ul>	
10. To protect and enhance biodiversity and geodiversity	<ul style="list-style-type: none"> <li>• Protect or enhance internationally designated wildlife / geological sites?</li> <li>• Protect or enhance nationally designated wildlife / geological sites and protected species?</li> <li>• Protect or enhance UK and Durham Biodiversity Action Plan priority habitats and species?</li> <li>• Protect or enhance other areas of local importance for biodiversity or geodiversity (LNR's, CWS, CGS, semi-natural ancient woodland)?</li> <li>• Prevent deterioration and fragmentation of habitat and establish and maintain sustainable habitat networks?</li> <li>• Improve access to or understanding of local biodiversity / geodiversity resources?</li> <li>• Ensure adequate and appropriate mitigation for any biodiversity loss which may occur as a result of development?</li> <li>• Create new areas or sites of biodiversity / geodiversity value?</li> </ul>	<ul style="list-style-type: none"> <li>• Location and effects of minerals and waste development on biodiversity/geodiversity</li> <li>• Potential opportunities for enhancement and net gains through restoration</li> <li>• Potential creation of new areas of geodiversity value through minerals working</li> <li>• Potential spread of invasive species through composting activity</li> <li>• Compatibility with nature recovery plans/projects</li> </ul>
11. To protect and enhance the quality and character of landscape and townscape	<ul style="list-style-type: none"> <li>• Protect and enhance designated protected landscape areas (i.e. AONB, Durham Heritage Coast)?</li> </ul>	<ul style="list-style-type: none"> <li>• Location and effects of minerals and waste development to landscape character and quality</li> </ul>

Sustainability Appraisal Objectives	Will the Plan...	Relevant Considerations
	<ul style="list-style-type: none"> <li>• Protect and enhance local landscape character and quality?</li> <li>• Protect and maintain the openness of the green belt?</li> <li>• Ensure that new developments reflect the distinctive character and appearance of the local area?</li> <li>• Encourage good quality design in new development?</li> <li>• Protect and enhance the vitality and viability of the county's town centres and main village centres?</li> <li>• Protect and improve the quality of public areas / discourage fly tipping and reduce litter?</li> <li>• Help regeneration of degraded built environments?</li> </ul>	<ul style="list-style-type: none"> <li>• Potential opportunities for landscape enhancement on restoration</li> <li>• Contribution that working of traditional building materials make to character</li> <li>• Accessibility and location of waste facilities to reduce fly tipping incidents</li> <li>• Preserving openness of the greenbelt</li> <li>• Co-location of waste facilities with complementary industrial facilities where possible to reduce visual intrusion</li> </ul>
12. To protect and enhance cultural heritage & the historic environment	<ul style="list-style-type: none"> <li>• Protect and enhance the significance of designated and non-designated heritage assets, including their setting?</li> <li>• Reduce the number or severity of designated and non-designated heritage assets at risk?</li> <li>• Protect and enhance locally and regionally important designated and non-designated heritage assets?</li> <li>• Realise the economic and educational potential of designated and non-designated</li> </ul>	<ul style="list-style-type: none"> <li>• Location and effects of minerals and waste development on the historic environment</li> <li>• Industrial heritage and cultural identity of County Durham as a result of minerals working</li> <li>• Potential opportunities to reveal undiscovered archaeological features and improve understanding</li> <li>• Supply of building and roofing stone for the repair and construction of buildings and structures</li> </ul>

Sustainability Appraisal Objectives	Will the Plan...	Relevant Considerations
	<p>heritage assets and help make them accessible?</p> <ul style="list-style-type: none"> <li>• Recognise the contribution of conserving and enhancing existing buildings and other heritage assets to local distinctiveness, sustainable resource use and climate change mitigation</li> <li>• Ensure the recording and appropriate protection of undiscovered archaeological features in areas of potential development?</li> </ul>	<ul style="list-style-type: none"> <li>• Contribution the re-use and restoration of historic buildings makes to waste prevention, reuse and architectural salvage.</li> </ul>
<p>13. To protect and improve air, water and soil resources</p>	<ul style="list-style-type: none"> <li>• Protect and improve local air quality?</li> <li>• Protect and maintain or improve surface &amp; groundwater quality or the physical integrity of aquifers?</li> <li>• Reduce the amount of water used?</li> <li>• Keep water consumption / emission within local carrying capacity limits?</li> <li>• Improve areas of historic land contamination and prevent contamination to new areas?</li> <li>• Encourage the location of development on previously developed land (while taking account of biodiversity value that may be present?)</li> <li>• Minimise the loss of better quality agricultural land to development?</li> </ul>	<ul style="list-style-type: none"> <li>• Reducing emissions to air, including dust from minerals and waste development.</li> <li>• Avoiding pollution of surface and groundwater sources</li> <li>• Addressing legacy issues of mine water pollution</li> <li>• Quantitative status of groundwater and impacts of abstraction/dewatering</li> <li>• Protecting the best and most versatile agricultural land / land restoration proposals</li> <li>• Conserving and enhancing soil resources</li> <li>• Avoiding contamination and opportunities to reduce the amount of derelict, contaminated and degraded land</li> </ul>

Sustainability Appraisal Objectives	Will the Plan...	Relevant Considerations
	<ul style="list-style-type: none"> <li>• Promote good soil management and health and avoid exacerbating dryness associated with drought.</li> </ul>	
<p>14. To reduce waste and encourage the sustainable and efficient use of materials</p>	<ul style="list-style-type: none"> <li>• Encourage an increase in the reduction, re-use, recycling and recovery of energy from waste (progress away from landfill and up the “waste hierarchy”)</li> <li>• Encourage the use of recycled / reused materials?</li> <li>• Minimise the use of new non-renewable resources?</li> <li>• Reduce the adverse impacts of waste management facilities to acceptable levels?</li> <li>• Encourage the community to take responsibility for reducing its own waste</li> <li>• Promote the maintenance, sensitive adaptation and re-use of buildings?</li> </ul>	<p>The SA objective and more detailed decision-making criteria are directly related to sustainable resources use, waste reduction and developing a circular economy. Commentary against this objective also helps to summarise the effects predicted against all preceding SA objectives in relation to a waste related policy or site assessment.</p>
<p>15. To improve the sustainability of minerals extraction and use and reduce adverse impacts on communities and the environment</p>	<ul style="list-style-type: none"> <li>• Help meet an identified need for minerals?</li> <li>• Reduce the adverse impacts of minerals processing and extraction to acceptable levels?</li> <li>• Reduce the energy used in minerals extraction, processing and transport?</li> <li>• Ensure the efficient use of minerals resources?</li> </ul>	<p>The SA objective and more detailed decision-making criteria are directly related to sustainable resources use, waste reduction and developing a circular economy. Commentary against this objective also helps to summarise the effects predicted against all preceding SA objectives in relation to a waste related policy or site assessment.</p>

Sustainability Appraisal Objectives	Will the Plan...	Relevant Considerations
	<ul style="list-style-type: none"> <li>• Avoid the sterilisation of economically important mineral resources?</li> <li>• Promote good practice in land reclamation having regard to sustainable after-use appropriate to the locality?</li> </ul>	

3.2 The compatibility of the M&WDPD has been assessed against the SA Framework using the following scoring system:

**Table 2: Assessment Key**

Effects Predicted	Symbol
Likely to have a very positive effect	✓✓
Likely to have a positive effect	✓
Minor effect / No effect / No clear link	0
Uncertain or insufficient information to determine effect	?
Likely to have a negative effect	×
Likely to have a very negative effect	××
Could have a positive or negative effect depending on implementation	✓/×

3.3 The scores against each SA objective for each element of the M&WDPD were recorded in SA matrices that also:

- Identified how likely the predicted effects would occur;
- On what geographic scale effects could occur e.g. settlement scale, ward/parish level, countywide or wider North East region;
- If the effects predicted were direct or indirect and whether they were likely to be temporary or permanent in nature;
- Justification for effects prediction including a commentary on which receptors (e.g. people, economy, biodiversity) are likely to be affected and why; and
- Mitigation measures including; whether negative effects could be prevented/avoided, reduced or offset; whether positive effects could be enhanced or if there any residual effects.

3.4 The SA matrices can be located within the accompanying Appendices document to the SA Report.

## Supporting Evidence and Tools

3.5 In addition to the information collected at the Stage A (Scoping Stage) and supporting assessments several other information sources, tools and supporting assessments were used to help predict and evaluate effects. These included:

- **Literature Review** - includes published research studies, websites, environmental impact assessments, articles in journals, and government or government agency reports. The sources of information utilised have been referenced within the detailed assessment matrices and the main body of full SA report.
- **County Durham Plan evidence base** - relevant documents informed the SA e.g. Minerals Technical Paper
- **Additional Data Sources** - e.g. the Council's Annual Monitoring Reports 2019/20 and 2020/21, Environment Agency Waste Data Interrogator, Joint Local Aggregate Assessment.
- **Professional Judgement** - Assessors are suitably qualified with experience in the sustainability field and of undertaking SA. The assessors are also independent from those developing the M&WDPD, working within a different team and Council directorate (Neighbourhoods and Climate Change). Input from other specialist teams within the Council e.g. Ecology etc were also sought to help inform the prediction and evaluation of effects where necessary.
- **Geographic Information Systems (GIS)** - GIS are databases that are displayed on a map. Wherever possible, mapped data was used to predict the spatial extent of effects and to identify possible social, economic and environmental constraints. GIS was used extensively in the assessment of potential site allocations.
- **Habitats Regulations Assessment** - A Habitats Regulations Assessment (HRA) screening report, prepared by the Council's Ecologists identified the relevant Special Areas of Conservation (SAC), Special Protection Areas (SPA) and Ramsar sites, the conservation objectives that apply to each and provided an assessment of the likely impacts of the M&WDPD on them.
- **Sustainability Appraisal of the County Durham Plan** - The County Durham Plan establishes the strategic approach to minerals and waste development over the Plan period to 2035. The SA of the Plan's vision, objectives, minerals and waste policies and their associated alternatives provided a useful reference point for the further prediction of effects of the M&WDPD.
- **Site Assessment Document** - The Council's Site Assessment Document includes information on all the sites submitted to the Council for allocation. This document includes details of what has been proposed by site operators along with an assessment of need and potential social and environmental impacts. The document has been informed by data from the most recent Joint Local Aggregates Assessment, Environment Agency and by specialist teams within the Council such as Landscape and Ecology. The information on the proposals, working method, commencement and duration was key to informing the SA of reasonable alternatives and site allocations.

- **Landscape and Visual Impact Appraisal** - The Council's Landscape Team provided individual landscape and visual impacts appraisals for each of the sites submitted to the Council for allocation. These appraisals were used to inform the Site Assessment Document mentioned above but were also used to help inform the assessment of effects against SA objective 11 (landscaper character and quality) for each of the reasonable, site allocation alternatives, preferred allocated sites and mitigation potential.
- **Heritage Impact Assessment** - The Council's Heritage Team provided individual Heritage Impact Assessments for each of the sites submitted to the Council for allocation. These assessments were used to inform the Site Assessment Document mentioned above but were also used to help inform the assessment of effects against SA objective 12 (historic environment) for each of the reasonable, site allocation alternatives, preferred allocated sites and mitigation potential.

## 4. What were the Findings of the Sustainability Appraisal?

4.0.1 This section of the NTS provides an overview of the key findings of the SA

### 4.1 M&WDPD Objectives

4.1.1 The M&WDPD includes a number of non-strategic objectives in order to set the direction for the policies that it seeks to deliver. With the exception of following objectives, no areas of potential conflict between the M&WDPD and SA objectives were identified:

- Objective 3: To provide for other Minerals of Local and National Importance
- Objective 4: To ensure the 'Other Recovery' and disposal of Inert and Non-Hazardous Waste
- Objective 6: Meeting our future needs

4.1.2 To address the potential areas of conflict associated with objectives 3, 4 and 6 the SA recommended that as the M&WDPD develops it should:

- Provide the context / background as to why the future working of minerals not currently worked in the County cannot be discounted
- Provide the context / background as to why inert waste disposal schemes are required
- M&WDPD policies should also:
  - Ensure that waste cannot be managed at a higher level of the waste hierarchy;
  - Ensure that proposals reflect the optimal method of inert waste recovery and disposal;
  - Include criteria which ensures that significant adverse effects are avoided and harm is mitigated; and
  - Include criteria which ensures that community and environmental benefits from minerals and wasted development are realised.

4.1.3 The SA also recommended that M&WDPD objective 4 should be renamed to better reflect the waste hierarchy as previously disposal was cited before recovery. All SA recommendations regarding the M&WDPD objectives were accepted.

## 4.2 Reasonable Alternatives

4.2.1 Reasonable alternatives to meeting the M&WDPD objectives have been considered by the SA throughout the development of the Plan. The SA considered that there were reasonable alternatives to the sites that could be allocated to provide the required sand and gravel resources to maintain a steady and adequate supply and a seven-year landbank at 2035. Forecasts derived from the Council's Local Aggregate Assessment (April 2022) require that provision is made for a further 5.059 million tonnes of sand and gravel.

4.2.2 The SA also considered that there were reasonable alternatives to the sites that could be allocated to meet the need for further waste disposal capacity in County Durham over the Plan period to 2035. County Durham Plan Policy 60 (Waste Management Provision) identified a capacity gap for inert Landfill and Non-Hazardous Landfill of 3,682,800 cubic metres to 2035. This was qualified by the supporting text of the County Durham Plan to only relate to inert landfill. The forecasting suggested that, based on landfill capacity and the closure dates of existing sites, capacity would be exhausted by 2032.

4.2.3 In considering the issue of inert waste disposal in County Durham, the SA took several factors into account, including Environment Agency Data and the availability of void space which is yet to be created.

### Potential Sand and Gravel Allocations

- **Thrislington West Quarry** - The option covers an area of nearly 18.5 hectares within the eastern part of the operational quarry void, to the west of the A1(M). The potential mineral reserve is estimated at 5.8 million tonnes of basal Permian sand.
- **Crime Rigg Quarry (northern extension)** - The option extends to 9.5 hectares and would form a northern extension to Crime Rigg Quarry. The potential mineral reserve is estimated at 1.775 million tonnes of magnesian limestone and 910,000 tonnes of basal Permian sand.
- **Low Harperley (western extension)** - The extension extends to approximately 20 hectares and is situated within the floodplain of the River Wear. The potential mineral reserve is estimated at 700,000 tonnes of fluvial sand and gravel.
- **Quarrington North** - The option is commensurate with part of the existing planning permissions at Old Quarrington Quarry, which is not currently operating and requires a scheme of new modern working and restoration conditions. However, the operator has advised the Council that they do not intend to work the area underlying national wildlife designations and would apply stand offs from these sites. The operator has also advised the Council that working a smaller, revised area could provide 1.7 million tonnes of basal Permian sand (which underlies a reported 9.3 million tonnes of magnesian limestone) and from maps provided of the working area the Council have calculated this to be 24 hectares. Given that the operator does not intend to

work the full extent of the permission area this was not considered to be a reasonable alternative and the SA assessed the smaller, revised area.

### Potential Inert Waste Disposal Allocations

- **Crime Rigg Quarry** - The option involves the restoration of the eastern part of Crime Rigg quarry by means of infilling with imported inert construction, demolition and excavation waste (CDEW). Three scenarios were assessed in relation to this option namely:
  - **Scenario 1 (Rectify Current Restoration Profile)** – This scenario seeks to address issues that the operator have identified with the approved restoration contours for the existing quarry permission. The operator has advised that this scenario would result in an increase of approximately 434,000 cubic metres of capacity and would result in a very minor extension of the landfill towards the eastern quarry void.
  - **Scenario 2 (Low Level Restoration within Eastern Void)** - This would result in an increase in capacity in the region of 1,691,000 cubic metres, minus additional engineering works which would reduce the net increase to approximately 1,541,000 cubic metres (Durham County Council estimate).
  - **Scenario 3 (Restore to surrounding land levels)** - This option would result in the complete restoration of the quarry void to surrounding land levels This would result in an increase of approximately 3,526,000 cubic metres, minus additional engineering works which would reduce the net increase to approximately 3,226,000 cubic metres (Durham County Council estimate).
- **Cold Knuckle Quarry** – The option would enable the sale of 0.9 million tonnes of magnesian limestone which would otherwise be extracted and used to achieve the previously approved restoration at Cold Knuckle Quarry. Alternatively, the operator wishes to substitute the magnesian limestone with the importation of 400,000 cubic metres of inert waste for use in the reconstruction of the escarpment face and extend the existing landfill operation at Old Quarrington Quarry into Cold Knuckle Quarry.
- **Quarrington North** - In addition to the proposed allocation for basal Permian sand extraction in the northern part of the quarry, the operator has also proposed that the void created could be allocated for inert landfill. the operator has advised the Council that they do not intend to work the area underlying the national wildlife designations and would apply stand offs from these sites. The operator has also advised the Council that the void associated with working a smaller, revised area could accommodate up to 4.93 million cubic metres of inert waste and from maps provided on the working/disposal area the Council have calculated this to be 24 hectares. Given that the operator does not intend to extract and infill the full extent of the permission area this was not considered to be a reasonable alternative and the SA assessed the smaller, revised area.

## Outcome Following Assessment of Reasonable Alternatives

4.2.4 In relation to the sand and gravel alternatives, the SA was able to rank them as follows in terms of their sustainability:

1. Thrislington West Quarry
2. Crime Rigg (northern extension)
3. Low Harperley (western extension)
4. Quarrington North

4.2.5 Consideration was given to whether only Thrislington West Quarry should be allocated due to its quantity of reported sand reserves. However, this was not considered to be a reasonable approach as should only one site be allocated, there will be a greater risk that continuity of supply could be impeded for site specific reasons, affecting the Council's ability to maintain the sand and gravel landbank as required by the NPP5. In addition, the NPPF also requires Minerals Planning Authorities to ensure that large landbanks bound up in very few sites do not stifle competition.

4.2.6 The SA therefore recommended the allocation of Thrislington West Quarry and a northern extension to Crime Rigg in the M&WDPD. These sites were selected for allocation.

4.2.7 In relation to the inert waste disposal alternatives, the SA found Crime Rigg Quarry (Scenario 2) to be the most sustainable followed by Cold Knuckle Quarry. The SA recommended that these options should be allocated in the M&WDPD to contribute towards addressing the identified capacity gap. Cold Knuckle Quarry was selected for allocation. However, in relation to Crime Rigg Quarry the M&WDPD has opted for a flexible approach which could allow proposals for either Scenario 2 or Scenario 3 to come forward over the Plan period.

4.2.8 The SA advised that Scenario 3 should not be considered further for allocation unless justification can be provided that the benefits of allocating it outweigh the potential harm to Crime Rigg Quarry (geological) SSSI. The Spatial Policy Team justified their selection of this option as Natural England have advised the Council through correspondence that harm can potentially be avoided through compensatory measures, if it can be demonstrated that the northern extension to Crime Rigg Quarry (as selected for allocation in the M&WDPD) can become the replacement SSSI whilst at the same time demonstrating that comparable special interest features will be exposed during the transition period. Spatial Policy advised that the policy would be worded accordingly to ensure that harm would be avoided. The SA accepted this justification and recognised that subsequent policy wording and assessment of it would be key.

4.2.9 The SA concluded that the implementation of Policy MW22 (Site Specific Allocation, northern extension to Crime Rigg Quarry) and MW23 (Site Specific Allocation Inert Waste Disposal at Crime Rigg Quarry) should ensure that significant adverse effects to Crime Rigg SSSI are avoided.

### 4.3 M&WDPD Policies

4.3.1 The M&WDPD includes 24 policies which include site allocations, cover a variety of development management issues and set out the provisions for determining applications for minerals that are not currently worked within the County, should they be forthcoming over the Plan period.

4.3.2 The policies were subject to an individual SA which highlighted their predicted social, economic and environmental effects along with ways in which the policy could be redrafted or other mitigating measures applied to either avoid or minimise negative effects, enhance positive effects or reduce uncertainty. Where revisions have been made to the policies at this stage of Plan development, the SA has also considered whether the revisions were significant, thereby requiring a re-assessment to be undertaken. Those requiring reassessment included:

- MW1: General Criteria for considering Minerals and Waste Development
- MW4: Noise
- MW5: Air Quality and Dust
- MW7: Traffic and Transport
- MW10: Ancillary Minerals Related Infrastructure
- MW14: Vein Minerals, Metalliferous Minerals, Lithium and Silica Sand
- MW19: Water Resources

4.3.3 Furthermore, the SA has taken account of the deletion of two former policies:

- MW11: Storage of Minerals
- MW13: Local Liaison Groups

4.3.4 The following table provides an overview of the changes made to the M&WDPD Policies following the acceptance of SA recommendations.

**Table 3 Key changes made to M&WDPD Policies following SA**

Section / Policy	Key Changes	Outcome
Non Strategic Objectives	Re-ordering of objective 4 in relation to waste recovery and disposal to better reflect the waste hierarchy.	Improved compatibility of the M&WDPD with SA objective 14: To reduce waste and encourage the sustainable and efficient use of materials
MW1: General Criteria for considering Minerals and Waste Development	Greater recognition given in supporting text of the potential impact of minerals and waste development on green infrastructure and where loss / new provision can affect health and wellbeing.	Improved compatibility of the M&WDPD with SA objectives: <ul style="list-style-type: none"> <li>• 4: To reduce health inequalities and promote healthy lifestyles</li> <li>• 5: To reduce the need to travel and promote</li> </ul>

Section / Policy	Key Changes	Outcome
	<p>Greater recognition is also given in the supporting text to the use of sustainable transport. Policy wording has been strengthened to make it clear that minerals and waste proposals will need to be accompanied by details of intended climate mitigation measures. This is not optional. The supporting text recognises the national and local targets in relation to net zero and signposts to latest best practice guidance on assessing and evaluating greenhouses gas emissions.</p>	<p>sustainable transport options</p> <ul style="list-style-type: none"> <li>• 8: To reduce the causes of climate change</li> </ul>
MW2: Mineral Exploration	Not applicable – SA recommendations not accepted	Whilst recommendations were not accepted the justification provided was accepted. No outstanding issues
MW3: Benefits of Minerals Extraction	<p>In response to the SA the clarity of the policy has been improved in relation to the need for effective engagement with communities and that the consideration of environmental benefit is not limited to only the restoration and after-use elements of minerals extraction proposals.</p>	<p>Improved compatibility of the M&amp;WDPD with SA objectives:</p> <ul style="list-style-type: none"> <li>• 2: To promote strong, secure communities</li> <li>• All environmental SA objectives namely SA objective 5, 8, 9, 10, 11, 12, 13, 14 and 15.</li> </ul>
MW4: Noise	<p>Movement of text relating to noise assessments from the supporting text into the policy in order to make this a specific, policy requirement.</p>	<p>Improved compatibility of the M&amp;WDPD with SA objectives:</p> <ul style="list-style-type: none"> <li>• 2: To promote strong, secure communities</li> <li>• 4: To reduce health inequalities and promote healthy lifestyles</li> <li>• 10: To protect and enhance biodiversity and geodiversity</li> </ul>
MW5: Air Quality and Dust	<p>Movement of text relating to dust assessments from the supporting text into the policy in order to make this a specific, policy requirement.</p>	<p>Improved compatibility of the M&amp;WDPD with SA objectives:</p> <ul style="list-style-type: none"> <li>• 2: To promote strong, secure communities</li> <li>• 4: To reduce health inequalities and promote healthy lifestyles</li> </ul>

Section / Policy	Key Changes	Outcome
		<ul style="list-style-type: none"> <li>• 10: To protect and enhance biodiversity and geodiversity</li> </ul>
MW6: Blasting	Movement of text relating to the provision of a blasting and vibration monitoring scheme from the supporting text into the policy in order to make this a specific, policy requirement.	<p>Improved compatibility of the M&amp;WDPD with SA objectives:</p> <ul style="list-style-type: none"> <li>• 2: To promote strong, secure communities</li> <li>• 4: To reduce health inequalities and promote healthy lifestyles</li> <li>• 10: To protect and enhance biodiversity and geodiversity</li> </ul>
MW7: Traffic and Transport	Acceptance of the recommendation regarding the use of B roads to access the lorry route network and strengthening the emphasis of the policy from 'considering' to maximising the use of sustainable modes where practical and economic.	Improved compatibility of the M&WDPD with SA objectives 2 (communities), 4 (health), 5 (travel), 7 (economy), 8 (climate change), 13 (air, water and soil), 14 (resources) and 15 (impact of minerals development).
MW8: Mineral Rail Handling Facilities	Not applicable – SA recommendations not accepted	Whilst recommendations were not accepted the justification provided was accepted. No outstanding issues
MW9: Borrow Pits	<p>In response to SA recommendations, the policy:</p> <ul style="list-style-type: none"> <li>• Provides greater clarity around the type of project, borrow pits will be considered for;</li> <li>• Places greater emphasis on the role of existing quarries to the economy through re-ordering of criteria;</li> <li>• Goes some way to clarifying what spatial scale will be applied when considering existing quarries in 'the area';</li> <li>• Improves flexibility given to borrow pit proposals which may be well related to the construction site but require some public highways use to work and restore them;</li> </ul>	Improved compatibility of the M&WDPD with social SA objectives 2 (communities) and 4 (health) and environmental SA objectives 8 – 15.

Section / Policy	Key Changes	Outcome
	<ul style="list-style-type: none"> <li>• Ensures that the social and environmental acceptability of working and restoring borrow pits is included within the decision making criteria; and</li> <li>• Improves clarity around the approach to the importation of waste to restore sites. This will only be considered in the event that the use of onsite material provides an unsatisfactory form of restoration</li> </ul>	
MW10: Ancillary Minerals Related Infrastructure	Given that the processing of minerals is likely to have further emissions associated with individual oil or diesel generators additional supporting text was added requiring the consideration of grid connections, renewable energy generation and battery storage. Revisions were also made to the wording order i.e. renewable energy generation prior to grid connection to better reflect the energy hierarchy	Improved compatibility of the M&WDPD with SA Objective 8: To reduce the causes of climate change
MW11: Periodic Review of Mineral Planning Permissions	As a result of the SA the policy ambition has been strengthened to acknowledge that agreeing new conditions as part of the periodic review process should go beyond avoiding unacceptable adverse impacts and rather, should ensure continuously high working and environmental standards	Improved compatibility of the M&WDPD with SA objective 15: to improve the sustainability of minerals extraction and use and reduce adverse impacts on communities and the environment
MW12: Oil and Gas Exploration, Appraisal and Production	In the event the oil and gas development proposals are forthcoming, the SA has ensured that the policy considers the benefits of utilising existing permitted infrastructure if any additional oil or gas fields are discovered. Furthermore, the SA has ensured that the policy takes greater	Improved compatibility of the M&WDPD with SA objectives: <ul style="list-style-type: none"> <li>• 8: To reduce the causes of climate change; and</li> <li>• 14: To reduce waste and encourage the sustainable and efficient use of materials.</li> </ul>

Section / Policy	Key Changes	Outcome
	account of local climate emergency targets when determining proposals and the need to ensure that these can demonstrate carbon neutrality.	
MW13: Transport of Oil and Gas	Following SA, pipeline proposals should demonstrate that the number of pipelines represent the minimum necessary to safely, serve the development and the optimal route in respect of minimising impacts to communities, businesses and the environment.	Improved compatibility of the M&WDPD with SA objectives: <ul style="list-style-type: none"> <li>• 2: To promote strong, secure communities</li> <li>• 4: To reduce health inequalities and promote healthy lifestyles</li> <li>• 7: To develop a sustainable and diverse economy with high levels of employment</li> <li>• 10: To protect and enhance biodiversity and geodiversity</li> <li>• 11: To protect and enhance the quality and character of landscape and townscape</li> <li>• 12: To protect and enhance cultural heritage &amp; the historic environment</li> <li>• 13: To protect and improve air, water and soil resources</li> </ul>
MW14: Vein Minerals, Metalliferous Minerals, Lithium and Silica Sand	<p>The SA identified that the policy could give particular regard to opportunities to meet the national demand for lithium locally and by methods which have a lower environmental impact e.g. extraction from geothermal waters could minimise energy use and water resources for example.</p> <p>The policy also ensures, following SA that minerals extracted are used only for the purposes for which their specific qualities are essential in order to ensure the most efficient use of resources.</p>	Improved compatibility of the M&WDPD with SA objectives: <ul style="list-style-type: none"> <li>• 8. To reduce the causes of climate change;</li> <li>• 14. To reduce waste and encourage the sustainable and efficient use of materials; and</li> <li>• 15: To improve the sustainability of minerals extraction and use and reduce adverse impacts on communities and the environment.</li> </ul>

Section / Policy	Key Changes	Outcome
MW15: Peat	Following the SA the policy helps to highlight the additional benefits of protecting peat (to water management) and clarifies how the policy works in conjunction with biodiversity policies in the County Durham Plan to consider this valuable resource when making planning decisions.	Improved compatibility of the M&WDPD with SA objectives: <ul style="list-style-type: none"> <li>• 10: To protect and enhance biodiversity and geodiversity</li> <li>• 13: To protect and improve air, water and soil resources</li> </ul>
MW16: Inert Waste 'Other Recovery'	Not applicable – SA recommendations not accepted	Whilst recommendations were not accepted the justification provided was accepted. No outstanding issues
MW17: Inert Waste Disposal via Landfill	Amendments were made to policy wording to signpost applicants to the Environment Agency's landfill technical guidance and to better reflect County Durham's appropriate contribution towards regional net self-sufficiency	Improved compatibility of the M&WDPD with SA objectives: <ul style="list-style-type: none"> <li>• 5: To reduce the need to travel and promote sustainable transport options; and</li> <li>• 13: To protect and improve air, water and soil resources</li> </ul>
MW18: Non-Hazardous Waste Landfill	Amendments were made to policy wording to better reflect County Durham's appropriate contribution towards regional net self-sufficiency, encourage full recovery of landfill gas or where this is not technically possible, ensure residual emissions are offset.	Improved compatibility of the M&WDPD with SA objectives: <ul style="list-style-type: none"> <li>• 5: To reduce the need to travel and promote sustainable transport options; and</li> <li>• 8: To reduce the causes of climate change.</li> </ul>
MW19: Water Resources	Improved clarity of policy in respect of its application to the protection of coastal waters	Improved compatibility of the M&WDPD with SA objectives: <ul style="list-style-type: none"> <li>• 13: To protect and improve air, water and soil resources</li> </ul>
MW20: Mineral Site Restoration, Landfill and Landraise	As a result of acceptance of SA recommendations the policy and its supporting text: <ul style="list-style-type: none"> <li>• Further recognise the links between the after use of sites and their potential to contribute towards addressing climate change</li> <li>• Ensures that the policy does not inadvertently contradict</li> </ul>	Improved compatibility of the M&WDPD with SA objectives: <ul style="list-style-type: none"> <li>• 8: To reduce the causes of climate change;</li> <li>• 10: To protect and enhance biodiversity and geodiversity; and</li> <li>• 15: To improve the sustainability of minerals extraction and use and</li> </ul>

Section / Policy	Key Changes	Outcome
	<p>the achievement of biodiversity net gain and reflects the preference for mitigation to be achieved on or near to site; and</p> <ul style="list-style-type: none"> <li>• Ensures that the need to avoid or minimise environmental effects as a result of undertaking restoration is a specific requirement within the main policy wording to highlight its importance.</li> </ul>	<p>reduce adverse impacts on communities and the environment</p>
<p>MW21: Site Specific Allocation at Thrislington West Quarry</p>	<p>No changes to policy wording were recommended.</p>	<p>Whilst no change to the policy wording were recommended the SA identified the need for further detailed assessments (namely health, climate change, ecological and hydrogeological) to support the planning application stage, overcome any existing uncertainties and ensure that proposals can be mitigated sufficiently.</p>
<p>MW22: Site Specific Allocation, Northern Extension to Crime Rigg Quarry</p>	<p>No changes to policy wording were recommended.</p>	<p>Whilst no change to the policy wording were recommended the SA identified the need for further detailed assessments (namely health, climate change, ecological and hydrogeological) to support the planning application stage, overcome any existing uncertainties and ensure that proposals can be mitigated sufficiently.</p>
<p>MW23: Site Specific Allocation, Inert Waste Disposal at Crime Rigg Quarry</p>	<p>Not applicable – SA recommendations not accepted</p>	<p>Whilst policy wording recommendations were not accepted the justification provided was accepted. The SA also identified the need for further detailed assessments (namely health, climate change, ecological and hydrogeological)</p>

Section / Policy	Key Changes	Outcome
		to support the planning application stage, overcome any existing uncertainties and ensure that proposals can be mitigated sufficiently.
MW24: Site Specific Allocation, Inert Waste Disposal at Cold Knuckle Quarry	No changes to policy wording were recommended.	Whilst no change to the policy wording were recommended the SA identified the need for further detailed assessments (namely health, climate change, ecological and hydrogeological) to support the planning application stage, overcome any existing uncertainties and ensure that proposals can be mitigated sufficiently.

#### 4.4 Cumulative Effects

4.4.1 In addition to the individual assessment of the policies against the SA Framework a cumulative impact assessment was also undertaken. This is required because many sustainability issues result from the accumulation of multiple, small and often indirect effects, rather than a few large, direct effects.

4.4.2 The SA predicts that the implementation of the M&WDPD will have positive cumulative effects against the social and economic SA objectives. The M&WDPD is predicted to have predominantly positive, environmental effects although uncertain cumulative effects are predicted against SA objective 9 (adaptation) and both positive and negative effects are predicted against SA objectives 13 (air, water and soil) and 15 (minerals). This is due to potential impacts to groundwater resources. An overview of the cumulative effects predicted against each SA objective is provided as follows. The overview also explains what changes have been made since the previous cumulative effects assessment of the M&WDPD Draft Plan.

#### SA Objective 1: To provide everybody with the opportunity to live in a decent and affordable home (Minor Positive)

4.4.3 Minor positive cumulative effects are predicted as the two sand and gravel site allocations at Thrislington and Crime Rigg Quarries will supply Basal Permian sand which is mainly worked as a source of building sand used for housebuilding and other construction projects. Cumulative effects were previously assessed as 'minor positive' against this SA objective.

#### SA Objective 2: To promote strong, secure communities (Positive)

4.4.4 Positive cumulative effects are predicted as the M&WDPD policies aim to safeguard communities from the main impacts of minerals and waste development and secure community benefits through restoration and afteruse. Whilst the M&WDPD no longer requires the establishment of local liaison groups, these groups are expected to continue to form as part of business-as-usual activity and the Council will encourage them.

4.4.5 Since the previous cumulative effects assessment, two additional sites have been allocated in the M&WDPD for inert waste disposal. Crime Rigg Quarry is also now allocated for both sand and gravel extraction and inert waste disposal, albeit these activities will be occurring in different parts of the quarry. For all of the site allocations, it is anticipated that proposals will be commensurate with current rates of permitted activity and will effectively represent a continuation of current operations.

4.4.6 There may be some increase in HGV movements associated with the concurrent working of sand and gravel at Crime Rigg Quarry in the northern extension area with the existing extraction area, for a limited time period but traffic levels are not expected to increase over and above levels conditioned by existing consents.

4.4.7 The main issue identified by the SA is that the allocations will extend the operational life of each quarry, with the potential for the allocations at Crime Rigg Quarry to extend its operational life for the longest and especially if a high level, inert waste disposal, restoration scheme is forthcoming. However, as the proposals are expected to represent a continuation of current operations, this issue is considered to be outweighed by the collective approach taken within the M&WDPD policies to safeguarding communities and securing benefits.

4.4.8 Adverse cumulative impacts to communities from the working of the proposed allocations in combination with existing minerals and waste activity is not anticipated. Policy MW1 also aims to ensure that unacceptable adverse cumulative effects will not occur. Positive cumulative effects as previously predicted against SA objective 1 can therefore be retained. However, it is considered that monitoring of this issue and traffic levels will be beneficial to ensure that there are no unintended consequences.

#### SA Objective 3: To improve education, training and life-long learning, and maintain a healthy labour market (Positive)

4.4.9 Positive cumulative effects are predicted as the M&WDPD policies will contribute towards safeguarding existing educational /training facilities from the main impacts of minerals and waste development which could potentially disrupt or cause disturbance to the delivery of education and training e.g., as a result of noise. In addition, the M&WDPD will also either indirectly safeguard existing or provide new training/skill development linked to the minerals and waste industry in County Durham. Opportunities for skills development in the geology, engineering and haulage sectors could be of particular merit. Cumulative effects were previously assessed as 'positive' against this SA objective.

#### SA Objective 4: To reduce health inequalities and promote healthy lifestyles (Positive)

4.4.10 Positive cumulative effects are predicted as the M&WDPD policies will contribute towards safeguarding communities and sensitive land uses such as care homes and hospitals from the individual and cumulative impacts of minerals and waste development which can adversely affect health and wellbeing e.g. noise, odours, dust, light pollution etc. Benefits to health and wellbeing can also be secured through the restoration and afteruse of sites e.g. enhancements to the public right of way network, creation of community woodlands and informal recreation space etc.

4.4.11 Whilst it is not possible to predict the effects of the site allocations with any greater certainty until a detailed health impact assessment is undertaken to support planning applications, given that operations are likely to represent a continuation of existing activity and due to distances involved it is considered likely that sand and gravel extraction and inert waste disposal can take place without any significant individual or cumulative adverse impacts to health and wellbeing. Cumulative effects were previously assessed as 'positive' against this SA objective.

#### SA Objective 5: To reduce the need to travel and promote use of sustainable transport options (Positive)

4.4.12 Overall, the M&WDPD is assessed as having overriding positive cumulative effects against SA objective 5 despite the negative effects predicted against three of the four site allocations. Negative effects relate to:

- Additional trips required to remove the overlying magnesian limestone to access sand and gravel from the northern extension to Crime Rigg Quarry;
- Additional trips associated with greater levels of inert waste disposal to achieve the restoration of Crime Rigg Quarry compared to the current approved restoration; and
- Additional trips to import inert waste to Cold Knuckle Quarry to achieve restoration as opposed to the current approved restoration which utilises onsite magnesian limestone.

4.4.13 However, the SA recognises that the site allocations represent a continuation of current operations in terms of daily vehicle levels. Together, the positive cumulative aspects of the M&WDPD which are considered to outweigh negative effects include the following collective measures:

- Requires applicant to maximise the use of sustainable transport modes for the transportation of minerals and waste where suitable opportunities exist;
- The enhancement of the public rights of way network is recognised as a benefit of minerals development;
- A permissive approach is taken to the establishment of rail handling facilities to enable the transfer of minerals from road to rail;
- Ensures close proximity between mineral extraction and ancillary infrastructure, through the co-location of plant and equipment, reducing transportation distances;
- The sequential approach to the transportation of oil and gas (if proposals are forthcoming) reduces the need to travel through the use of pipelines in the first instance;

- Inert or non-hazardous landfill proposals can be resisted where they could lead to an excessive importation (and associated transportation) of waste into County Durham; and
- Ensures the best use of onsite materials for restoration of sites, avoiding the need to transport materials to site for this purpose.

4.4.14 Cumulative effects were previously assessed as ‘positive’ against this SA objective.

#### SA Objective 6: To alleviate deprivation and poverty (Positive)

4.4.15 Whilst there were no clear links between the majority of the M&WDPD policies and this SA objective, positive cumulative effects can be predicted overall. The allocations may help to provide employment opportunities in areas of deprivation. In addition, they could also secure community benefits and afteruses which provide facilities or projects that contribute towards local regeneration initiatives. Cumulative effects were previously assessed as ‘positive’ against this SA objective.

#### SA Objective 7: To develop a sustainable and diverse economy with high levels of employment (Positive)

4.4.16 The positive, cumulative economic effects predicted relate to the following measures within the M&WDPD when considered collectively:

- Short term, direct and indirect employment opportunities may be linked to mineral exploration activity;
- The M&WDPD will ensure that the economic benefits of mineral extraction proposals are taken into account when determining planning applications;
- Policy criteria will ensure that the supply of minerals from existing, local mineral businesses in County Durham are considered prior to the use of temporary borrow pits;
- The ancillary minerals related infrastructure policy contributes towards the steady and adequate supply of minerals needed in the local economy;
- Requirements to ensure that inert waste recovery proposals provide genuine and significant benefits to agricultural land quality may improve the overall productivity of land and its associated contribution towards County Durham's rural economy;
- Permitting new inert waste disposal capacity and new non-hazardous landfill capacity (where it meets the policy requirements) may contribute towards the creation of new employment opportunities in the waste sector;
- Restoration requirements which ensure that provision is made for the longer term management of areas may create employment. The restoration of minerals and temporary waste sites to a high standard, more generally, will also contribute towards maintaining County Durham’s natural environment and its appeal to the visitor economy;
- As County Durham does not have a recent history of working the minerals addressed by Policy MW14 or any history relating to lithium extraction, new industry could help to diversify County Durham’s economy and create economic benefits locally through

the creation of direct employment together with indirect, supply chain jobs. Lithium is currently subject to interest for exploration within Weardale in County Durham and the UK's Critical Mineral Strategy (2022) supports the further development of industrial cluster for mining and refining lithium both in Cornwall and North East England; and

- The site allocations will extend the operational life of three quarries in County Durham, thereby prolonging their contribution to the local economy, safeguarding existing employment and potentially creating new jobs.

4.4.17 Cumulative effects were previously assessed as 'positive' against this SA objective.

#### SA Objective 8: To reduce the causes of climate change (Positive)

4.4.18 Please note that whilst the M&WDPD includes policies which could be considered as directly incompatible with the SA objective (e.g. oil and gas development, and non-hazardous waste landfill), these policies have been included so that the M&WDPD is not silent on these issues and can be responsive to the current level of uncertainty as to whether such proposals will be forthcoming or not over the Plan period. In effect, the M&WDPD does not encourage such development in County Durham. Rather, its purpose is to set the planning framework by which, proposals if submitted, could be determined.

4.4.19 Previously the SA predicted overriding positive cumulative effects against SA objective 8 as the M&WDPD Draft Plan contained the following collective measures:

- Ensures that minerals and waste proposals will not significantly affect County Durham's ability to transition to a net zero future (Policy MW1) and that details of mitigation measures are provided;
- Particular regard will be given to benefits arising from minerals development which help to mitigate climate change e.g. afteruses such as community woodland creation, renewable energy generation projects etc;
- Policies work together to reduce the need to travel and promote sustainable transport options which contribute towards minimising vehicular related emissions (please see commentary against SA objective 5);
- Particular regard will be given to opportunities to help meet the UK's demand for lithium locally, to create the batteries to decarbonise the transport sector and meet net zero targets;
- Confirms that no commercial peat extraction will take place in County Durham;
- Requires waste recovery and disposal proposals to demonstrate that they cannot be managed at a higher level of the waste hierarchy in the first instance;
- Requires the full recovery of energy from landfill gas along with measures to offset residual emissions;
- Requires any oil or gas proposals (in the event that they are forthcoming) to demonstrate carbon neutrality; and
- Encourages local renewable energy generation with battery storage or grid connections to mineral sites to power processing plant and equipment.

4.4.20 Whilst applicants are still required to demonstrate how they will mitigate the impacts of their proposals on climate change revisions have been made to Policy MW1 (bullet 1) to align the wording of the policy with the NPPF. The NPPF states that the planning system should support the transition to a low carbon future. The previous reference to ‘net zero’ future has therefore been replaced with ‘low carbon’ future. Further discussion between the Low Carbon Economy Team and Spatial Policy Team was held to discuss the revisions and their implications.

4.4.21 Whilst reference to ‘net zero’ would still be preferred by SA it is understood that over the Plan period to 2035, national and local carbon budgets do not require the achievement of net zero. However, the supporting text to the policy states that the Council will determine the likely significant effects of proposals on climate change over the life of the development, both positively and negatively in accordance with EIA regulations. If the life of a minerals or waste proposal exceeds 2035 it is highly likely that its contribution towards reducing emissions consistent with a trajectory towards net zero will be assessed as part of its EIA (where it constitutes EIA development) to determine the significance of effects. The policy now includes a footnote signposting the applicant to the latest best practice guidance from the Institute of Environmental Management and Assessment (IEMA) on how to assess greenhouse gas emissions and evaluate their significance in EIA.<sup>1</sup> This, includes the contextualisation of a proposal’s carbon footprint against carbon budgets and net zero trajectories. The Council is required to take account of the EIA and subsequent information presented in the Environmental Statement when determining whether planning permission can be granted.

4.4.22 In addition, the policy also includes reference to the national and local net zero targets helping to raise awareness of these with applicants. The revisions made to the policy are therefore considered unlikely to materially affect what should happen in practice when determining applications. The contribution of a proposal towards meeting net zero should still be considered where the development is EIA development.<sup>2</sup> However, as an outstanding issue it is recommended that the policy is subject to review following any updates to the NPPF or Planning Practice Guidance on the contribution of the planning system to net zero.

4.4.23 The changes made to policy MW1 are not considered to alter the positive cumulative effects previously predicted against SA objective 8 (climate change). Whilst mineral exploration and the allocation of four sites in the M&WDPD are likely to increase greenhouse gas emissions policy MW1 provides the safeguard to ensure that they will not have an unacceptable adverse individual or cumulative impact on climate change. The allocations are likely to be Schedule 2 developments for the purposes of EIA and therefore likely to require a greenhouse gas assessment in line with the policy which states that where an EIA is required, applicants will be expected to demonstrate an understanding of the impact of the project on climate change. All the other collective measures which contribute

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<sup>1</sup> [IEMA Guide \(Feb 2022\) Assessing Greenhouse Gas Emissions and Evaluating their Significance \(2nd Edition\)](#)

<sup>2</sup> Proposals requiring Environmental Impact Assessment (EIA) are those that could have a significant effect on the environment and are therefore more likely to affect the ability to meet climate change targets.

positively to climate change have been retained in the M&WDPD (please see measures 2-9 on the previous page)

#### SA Objective 9: To respond and enable adaptation to the inevitable impacts of climate change (Uncertain)

4.4.24 Whilst the M&WDPD supports opportunities to mitigate flood risk through the creation of flood storage areas; will direct minerals facilities to the least sensitive locations and restricts landraise proposals which could affect water flow and drainage, cumulative effects are currently assessed as uncertain. This is because the sand and gravel allocations would remove some of the principal Magnesian Limestone aquifer and the inert waste allocations will also require tipping to the aquifer. This could potentially lead to instances of groundwater flooding elsewhere or affect the qualitative status of groundwater supplies which could be exacerbated by hotter summers / drought conditions. Detailed hydrogeological assessment will be required at the planning application stage to determine the significance of effects further. The Environment Agency will be pivotal to determining whether risks can be successfully mitigated. Cumulative effects were previously assessed as 'uncertain' against this SA objective.

#### SA Objective 10: To protect and enhance biodiversity and geodiversity (Positive)

4.4.25 Overall, the M&WDPD is assessed as having positive cumulative effects towards protecting biodiversity and geodiversity. Cumulative effects were also previously assessed as 'positive' against this SA objective.

4.4.26 Whilst mineral exploration activity may cause harm to biodiversity, such effects are likely to be short term, temporary and time limited. Conformity with other policies within the M&WDPD and County Durham Plan should also ensure that temporary effects are not significant and requirements around restoration could also bring about longer-term benefits.

4.4.27 Whilst some potential for disturbance to biodiversity was predicted in relation to the allocation of a northern extension to Crime Rigg Quarry, the majority of the land is arable and likely to be of low ecological value. Please note that the effects of working within the existing void within Thrislington West Quarry on biodiversity were assessed as negligible and were screened out by the Habitats Regulations Assessment. At Cold Knuckle Quarry, substituting magnesian limestone for inert waste to achieve the restoration is considered unlikely to cause any additional harm to biodiversity or geodiversity. The inert waste allocation at Crime Rigg Quarry could result in the burial of the existing geological SSSI depending on whether a high level restoration scheme for this site is forthcoming. However, provision is made within the M&WDPD to ensure that this would only be found acceptable if it can be demonstrated that the northern extension to Crime Rigg for sand and gravel working could become the replacement geological SSSI. An ecological assessment will be required for all sites.

4.4.28 The overriding positive cumulative aspects of the M&WDPD relate to the following measures:

- The restoration, after-use and aftercare of minerals and waste development provide opportunities to contribute towards targets for priority habitat creation, biodiversity net gains, local nature recovery and create features of geological interest. The M&WDPD supports this and recognises that there may be circumstances where it may be appropriate to extend the period for aftercare and maintenance in some circumstances in order to ensure that habitats become established as intended;
- As new or updated conditions for working and restoring minerals sites are agreed through the periodic review process, these could directly and indirectly safeguard biodiversity and geodiversity from any adverse effects of minerals working (e.g. by updating conditions relating to noise which could disturb species etc) and contribute towards the achievement of biodiversity net gains on restoration; and
- The policies of the M&WDPD include criteria which is likely to safeguard biodiversity and geodiversity e.g.
  - Criteria within policies relating to the need for proposals to demonstrate that there will be no unacceptable individual or cumulative adverse impacts on the environment and the achievement of genuine, significant ecological benefits are likely to ensure that areas of high ecological value are avoided, impacts of schemes to biodiversity as they are being undertaken can be mitigated and that resulting benefits outweigh harm;
  - Requirement for ancillary facilities and infrastructure to be located in the least sensitive locations;
  - Recognition is given to internationally, nationally and locally protected sites and species in relation to the location of vein minerals, metalliferous minerals, lithium and silica sand;
  - Confirms that no commercial peat extraction will take place in County Durham which provides an additional layer of protection to this habitat and associated international and national wildlife designations;
  - Resisting waste development proposals where waste cannot be managed at a higher level of the waste hierarchy or be accommodated by existing facilities will minimise the number of new landfill or landraise schemes in County Durham and their associated impacts to biodiversity and geodiversity; and
  - Measures which aim to limit the impact of noise, dust and blasting will also minimise disturbance to species and protect habitats.

#### SA Objective 11: To protect and enhance the quality and character of landscape and townscape (Positive)

4.4.29 Whilst it is acknowledged that mineral exploration activity may cause harm to landscape character, such effects are likely to be short term, temporary and time limited. Conformity with other policies within the M&WDPD and County Durham Plan should also ensure that temporary effects are not significant and requirements around restoration could also bring about longer-term enhancements. Whilst measures to mitigate noise such as bunding / baffle mounds may have some adverse effects on the landscape, these can largely be mitigated to acceptable levels through design. The SA also recognised that new

rail handling facilities could have adverse effects on landscape character but the M&WDPD recognises that the location of any new rail handling facilities will need to be carefully assessed to avoid unacceptable adverse impacts.

4.4.30 The allocation of a northern extension to Crime Rigg for basal Permian sand (and magnesian limestone extraction) is unlikely to result in significant landscape and visual effects subject to detailed design and working within the existing quarry void within Thrislington West Quarry is unlikely to have any landscape and visual impacts. Both a lower and high-level inert waste restoration scheme at Crime Rigg Quarry could provide further benefits to landscape character and quality than the existing approved restoration and the substitution of magnesian limestone for inert waste would have no material effect on the final restoration of Cold Knuckle Quarry.

4.4.31 The positive cumulative aspects of the M&WDPD which are therefore considered to collectively outweigh temporary or some potential negative effects comprise the following collective measures:

- Ensuring that the environmental benefits of minerals extraction are taken into account when determining planning applications and the provision of environmental enhancements through the restoration of minerals and temporary waste development could improve landscape character and help deliver the requirements of the County Durham Landscape Strategy;
- As new or updated conditions for working and restoring minerals sites are agreed through the periodic review process, these could directly and indirectly safeguard landscape character and quality from any adverse effects of minerals working (e.g. by updating conditions relating to the phased working and restoration of sites for example) and contribute towards the achievement of landscape enhancement following restoration; and
- The policies of the M&WDPD include criteria which is likely to safeguard County Durham's landscape character and quality e.g.
  - Criteria within the M&WDPD relating to the need for proposals to demonstrate that there will be no unacceptable individual or cumulative adverse impacts on the environment and the achievement of genuine environmental benefits are likely to ensure that areas of high landscape value / sensitivity are avoided, impacts of schemes to landscape character as they are being undertaken can be mitigated and that resulting benefits outweigh any harm;
  - Requirement for ancillary facilities and infrastructure to be located in the least sensitive locations;
  - Criteria within the M&WDPD which will only permit borrow pit proposals where certain criteria are met, will protect County Durham's landscape from the potential cumulative impacts of numerous borrow pits;
  - Particular recognition is given to the protection of the North Pennines Area of Outstanding Natural Beauty (AONB) in relation to the location of vein minerals, metalliferous minerals, lithium and silica sand;

- Confirms that no commercial peat extraction will take place in County Durham which provides an additional layer of protection to the North Pennines AONB;
- Requirement to ensure that restoration schemes are carried out at the earliest opportunity and are progressive in nature is likely to contribute towards minimising the landscape and visual impacts of minerals and temporary waste development. Ensuring that schemes are high-quality and appropriate to the site and its surroundings is also likely to ensure that schemes are compatible with local landscape character;
- Ensuring that landraise schemes are not normally permitted will minimise the creation of unnatural landforms above ground which can adversely impact upon County Durham's natural topography and landscape character; and
- Resisting waste development proposals where waste cannot be managed at a higher level of the waste hierarchy or be accommodated by existing facilities will minimise the number of new landfill or landraise schemes in County Durham and their associated impacts to landscape character and quality.

4.4.32 Cumulative effects were previously assessed as 'positive' against this SA objective.

#### SA Objective 12: To protect and enhance cultural heritage & the historic environment (Positive)

4.4.33 The M&WDPD is assessed as having positive cumulative effects towards protecting cultural heritage and the historic environment. The Heritage Impact Assessments undertaken for each of the site allocations assessed impacts to heritage assets as either nil or neutral. Similar to the cumulative effects assessment against SA objectives 10 and 11, the positive cumulative effects result from the following measures when considered collectively:

- Ensuring that the environmental benefits of minerals extraction are taken into account when determining planning applications could include potential opportunities to reveal undiscovered archaeological features and improve understanding / access to these;
- As new or updated conditions for working and restoring minerals sites are agreed through the periodic review process, these could safeguard the historic environment from any adverse effects of minerals working (e.g. by updating conditions relating to archaeological assessment, for example); and
- The policies of the M&WDPD include criteria which is likely to safeguard County Durham's historic environment e.g.
  - Criteria within the M&WDPD relating to the need for proposals to demonstrate that there will be no unacceptable individual or cumulative adverse impacts on the environment will help to avoid harm as much as possible to heritage assets, including to their setting;
  - Requirement for ancillary facilities and infrastructure to be located in the least sensitive locations;

- Requirement to ensure that restoration schemes are carried out at the earliest opportunity and are progressive in nature is likely to ensure that the duration of any impact to the setting of heritage assets because of mineral working or waste development will be lessened. The requirement to deliver high-quality restoration appropriate to the site and its surroundings is also likely to ensure that schemes are compatible with the local historic environment and context. The M&WDPD also recognises that the environmentally beneficial enhancements of restoration can include those which enhance or reveal the significance of heritage assets, historic character and the archaeology of the site;
- Ensuring that landraise schemes are not normally permitted will minimise the creation of unnatural landforms and their impact on the ability to read historic landscapes such as registered battlefields for example;
- Resisting waste development proposals where waste cannot be managed at a higher level of the waste hierarchy or be accommodated by existing facilities will minimise the number of new landfill or landraise schemes in County Durham and their potential impacts to cultural heritage and the historic environment; and
- Measures which aim to limit the impact of noise, dust, and blasting could also minimise indirect harm to heritage assets.

#### SA Objective 13: To protect and improve air water and soil resources (Positive/Negative)

4.4.34 Overall, the M&WDPD has been assessed as having a cumulative mixed positive and negative effects on this objective. However, positive/negative effects relate to water resources whereas positive cumulative effects can be predicted for air and soil resources. There has been no change to the previous cumulative effects assessment which was also assessed as positive/negative.

#### **Air**

4.4.35 Positive cumulative effects result from the following measures when considered collectively:

- The overarching requirement to ensure that there will be no unacceptable individual or cumulative adverse impacts upon the environment or human health will contribute towards safeguarding air quality from pollution;
- The positive cumulative effects relating to reducing the need to travel and promoting sustainable transport also contribute cumulatively to minimising vehicular emissions to air such as nitrogen dioxide;
- Requirements in relation to dust suppression and blasting will protect air quality from particulate matter and policy MW5 will protect air quality from all other sources of air pollutants;

- As new or updated conditions for working and restoring minerals sites are agreed through the periodic review process, these could safeguard air quality from any adverse effects of minerals working (e.g. by updating conditions relating to dust suppression etc);
- Resisting waste development proposals where waste cannot be managed at a higher level of the waste hierarchy or be accommodated by existing facilities will minimise the number of new landfill or landraise schemes in County Durham and their potential impacts to air quality; and
- Requiring non hazardous landfill proposals to be supported for the long-term management of landfill gas, including energy recovery from landfill gas will minimise fugitive emissions of landfill gas to air.

## **Water**

4.4.36 Mixed cumulative effects result from the following positive and negative measures when considered collectively:

Positive:

- The overarching requirement to ensure that there will be no unacceptable adverse impacts upon the environment or human health will contribute towards safeguarding water resources from pollution;
- Positive effects are possible where environmental benefits considered include opportunities to address legacy issues of mine water pollution;
- As new or updated conditions for working and restoring minerals sites are agreed through the periodic review process, these could safeguard water resources from any adverse effects of minerals working (e.g. by updating conditions relating to water abstraction etc);
- Directs unallocated landfill and landraise proposals away from the most sensitive groundwater protection zones;
- Takes a risk based approach to the exploration of lithium;
- Requirement for facilities and infrastructure to be located in the least sensitive locations could direct ancillary development away from groundwater source protection zones;
- Confirms that no commercial peat extraction will take place in County Durham which safeguards its water attenuation role;
- Resisting waste development proposals where waste cannot be managed at a higher level of the waste hierarchy or be accommodated by existing facilities will minimise the number of new landfill or landraise schemes in County Durham and their potential impacts to water resources; and
- Requiring non hazardous landfill proposals to be supported for the long-term management of leachate will protect surface and groundwater quality.
- Ensures that no infilling with waste will be permitted in the northern extension area to Crime Rigg or at Thrislington Quarry.

Negative:

4.4.37 Requirements in relation to dust suppression may increase water usage e.g. dampening but the M&WDPD's largest potential impact on water resources is the partial loss of Magnesian Limestone and yellow sands which are Principal Aquifers as a result of allocating both Thrislington West Quarry and a northern extension to Crime Rigg Quarry. The inert waste allocations are also situated upon the Principal Aquifer.

4.4.38 In further correspondence with the Council on this issue, the Environment Agency have highlighted that many limestone quarries are now below the water table and would potentially be unsuitable for landfill.<sup>3</sup> It may be possible to undertake disposal activities at Cold Knuckle Quarry and Crime Rigg Quarry above the water table in line with existing activity but sufficient evidence for these allocations, along with the sand and gravel allocations will need to be provided as part of a planning application. This will need to demonstrate that risks to controlled waters (including groundwater) are low or can be suitably mitigated during and post operation. The Environment Agency will be pivotal to determining whether risks can be successfully mitigated.

4.4.39 The implementation of Policy MW1 (general criteria) and Policy MW19 (water resources) will also be key to ensuring that the allocations will not result in individual or cumulative unacceptable adverse impacts on groundwater resources (and surface water).

## **Soil**

4.4.40 Positive cumulative effects result from the following measures when considered collectively:

- The overarching requirement to ensure that there will be no unacceptable adverse impacts upon the environment or human health will contribute towards safeguarding soil resources from pollution;
- Positive effects are possible where minerals extraction results in the improvement of areas of degraded land or agricultural land quality;
- Requirements in relation to blasting will minimise the impact blasting related vibrations have on soil structure and quality;
- As new or updated conditions for working and restoring minerals sites are agreed through the periodic review process, these could safeguard soil resources from any adverse effects of minerals working (e.g. by updating conditions relating to soil management etc);
- Requirement for facilities and infrastructure to be located in the least sensitive locations could direct ancillary development away from best and most versatile agricultural land;
- Confirms that no commercial peat extraction will take place in County Durham which safeguards this soil resource;

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<sup>3</sup> Environment Agency Letter (26<sup>th</sup> May 2022) Reference: NA/2009/103652/OT07/PO1-L01

- Requirement for inert waste recovery proposals to demonstrate the achievement of genuine, significant agricultural benefits could ensure enhancement to agricultural land quality;
- Resisting waste development proposals where waste cannot be managed at a higher level of the waste hierarchy or be accommodated by existing facilities will minimise the number of new landfill or landraise schemes in County Durham and their potential impacts to soil resources;
- The requirement to make the best use of onsite materials for restoration of minerals and temporary waste development should ensure that soils are conserved and managed properly throughout the operational lifetime of the development; and
- The requirement for site restoration to be carried out at the earliest opportunity and to be progressive in nature should ensure that soil quality does not deteriorate to the extent that agricultural land cannot be restored to at least its original quality.

#### SA Objective 14: To reduce waste and encourage the sustainable and efficient use of materials (Positive)

4.4.41 The M&WDPD is assessed as having a positive cumulative effect on this objective despite the inclusion of allocations for the disposal of inert waste. The need to make inert waste disposal provision towards the end of the Plan period and beyond is acknowledged by the SA. The fact that waste disposal permissions are often long term permissions is also understood. Whilst there is still considered to be uncertainty regarding what disposal capacity will be required beyond the Plan period and how existing quarries/landfill sites will be operating, Policy MW17 ensures that any additional proposals to those allocated in the Plan can be resisted if they constitute 'excessive void space.' In addition, the sand and gravel allocations policies ensure that no infilling with waste will be permitted within them.

4.4.42 Policy MW17 (Inert Waste Disposal via Landfill) and MW18 (Non-Hazardous Landfill) also require applicants to first demonstrate that waste cannot be managed at a higher level of the waste hierarchy and it would not prejudice the restoration of existing permitted mineral sites where inert materials can be classified as 'recovery' for this purpose. The policies also ensure that proposals do not result in the creation of an over-provision of landfill capacity. Policy MW18 has been included as a backstop position only, in the event that new regional energy recovery and treatment capacity does not come on stream as expected.

4.4.43 The M&WDPD is also assessed as having positive cumulative effects on SA objective 14 despite the allocation of the northern extension to Crime Rigg Quarry which would require the prior extraction of Magnesian Limestone, where no further provision is required to extract underlying Basal Permian Sand. However, County Durham Plan policy 47 is permissive towards the concurrent working of minerals.

4.4.44 Positive overriding, cumulative effects result from the following measures when considered collectively:

- Borrow pit proposals will need to demonstrate that their need for aggregates cannot be met by secondary and recycled materials which will help to conserve primary, natural resources;
- Borrow pit proposals will also need to make use of excavated materials in restoration which will minimise the need for its disposal;
- As new or updated conditions for working and restoring minerals sites are agreed through the periodic review process these could ensure for example that soil resources are managed properly so they can be recovered through the restoration of sites as opposed to disposed of elsewhere;
- Ensuring that existing permitted, ancillary facilities and infrastructure are used to support mineral development will contribute towards the efficient use of materials and avoid waste associated with the decommissioning stages;
- Supports the efficient use of mineral resources by requiring proposals to demonstrate that the minerals will be extracted for the purposes for which their specific qualities are essential;
- The M&WDPD sets the parameters for the 'other recovery' of inert waste whilst also requiring proposals to demonstrate that the waste which is to be used cannot be managed at a higher level of the waste hierarchy and represents a 'genuine' recovery scheme as opposed to disposal;
- Ensures that no infilling of the proposed allocations with inert waste is proposed as part of the scheme thereby contributing towards managing waste at a higher levels of the waste hierarchy; and
- The allocation at Cold Knuckle Quarry avoids the sterilisation of mineral resources.

SA Objective 15: To improve the sustainability of minerals extraction and use and reduce adverse impacts on communities and the environment  
(Positive/Negative)

4.4.45 Overall, the M&WDPD has been assessed as having a cumulative mixed positive and negative effects on this objective. There are many more positive effects than negative but the negative cumulative effects relating to the partial loss of a principal aquifer may be significant.

**Positive:**

- Ensuring that social, economic and environmental benefits of minerals extraction are taken into account when determining planning proposals will contribute directly towards the sustainability of minerals development in County Durham;
- Requirements contribute to the sustainability of mineral extraction by reducing the adverse impact of the nuisance of noise pollution on communities and the environment;
- M&WDPD requirements such as covering haulage and speed limits will, reduce the adverse impact that dust emissions from relevant operations will have on communities and the environment;

- Blasting requirements in line with British Institution Standards will minimise the impacts of mineral extraction on communities and the environment;
- The agreement of new schemes of conditions to ensure that the continued working and restoration of active minerals sites and resumption of working/restoration at dormant sites ensures continuously high working and environmental standards will contribute directly towards the sustainability of minerals development in County Durham;
- The overarching requirement to ensure that there will be no unacceptable adverse individual or cumulative impacts upon the environment, human health or the amenity of local communities in several M&WDPD policies should contribute towards safeguarding communities and the environment from significant adverse effects;
- Confirms that no commercial peat extraction will take place in County Durham which safeguards the ecological, carbon, landscape and water attenuation value of this soil resource;
- Ensures proposals to create new disposal capacity do not prejudice the restoration of existing permitted minerals sites where inert material is required for site restoration;
- Ensures the delivery of progressive, high quality restoration schemes which secure benefits for the communities and the environment;
- In the case of the allocation of Thrislington West Quarry, this directs minerals working to an existing quarry void which minimises impacts to communities and the environment. The allocation for inert waste disposal at Cold Knuckle Quarry and Crime Rigg Quarry also directs disposal toward an existing quarry void; and
- The allocation at Cold Knuckle Quarry avoids the sterilisation of mineral resources.

**Negative:**

- The allocation of a northern extension to Crime Rigg Quarry would require the prior extraction of Magnesian Limestone where no further provision is required (see comments against SA objective 14); and
- Partial loss of Magnesian Limestone and yellow sands which are Principal Aquifers as a result of allocating both Thrislington West Quarry and a northern extension to Crime Rigg Quarry. The inert waste allocations are also situated upon the Principal Aquifer. This is a potentially significant cumulative effect. (see further comments against SA objective 13)

## 4.5 Significant Effects

4.5.1 Individual and cumulative significant effects have been considered throughout the SA. To determine the significance of effects in a consistent manner, the SEA Directive's criteria for determining the likely significance of effects (Annex II, 2) was used. Whilst the criteria relate to deciding whether plans or programmes require SEA, they provide a useful indication of the factors to consider when establishing significance and include:

- The probability, duration, frequency and reversibility of the effects;
- The cumulative nature of the effects;
- The transboundary nature of the effects;
- The risks to human health or the environment (e.g. Due to accidents);
- The magnitude and spatial extent of the effects (geographical area and size of the population likely to be affected);
- The value and vulnerability of the area likely to be affected due to:
  - Special natural characteristics or cultural heritage;
  - Exceeded environmental quality standards or limit values;
  - Intensive land-use; and
  - The effects on areas or landscapes which have a recognised national, (European) Community or international protection status.

4.5.2 The only outstanding significant individual and cumulative effect of the M&WDPD identified is the impact to groundwater resources as a result of allocating four sites upon the Magnesian Limestone Principal aquifer, within Groundwater Source Protection Zone 3 and also within groundwater Nitrate Vulnerable Zones. Although it is understood that previous working at the sites has been found to be acceptable.

4.5.3 The significance of effects cannot be evaluated further until a hydrogeological assessment is undertaken and/or other evidence is submitted in support of a planning application. The Environment Agency will be pivotal to determining whether risks can be successfully mitigated. If proposals are found to be acceptable it is likely that ongoing monitoring on site will be required.

## 5. Monitoring Proposals

5.1 It is a requirement of the SEA Directive to establish how the significant sustainability effects of implementing the Plan will be monitored. However, as earlier government guidance on SEA (ODPM et al, 2005) notes, it is not necessary to monitor everything, or monitor an effect indefinitely. Instead, monitoring needs to be focused on significant sustainability effects e.g., those that:

- Indicate a likely breach of international, national or local legislation, recognised guidelines or standards;
- May give rise to irreversible damage, with a view to identifying trends before such damage is caused; and
- Where there was uncertainty in the SA, and where monitoring would enable preventative or mitigation measures to be taken.

5.2 In addition to the potential impacts to groundwater key areas of uncertainty identified within the SA include:

- Whether a replacement geological SSSI at Crime Rigg Quarry can be created if a proposal for high level inert waste proposal is forthcoming
- Quantity of landfill capacity required beyond the Plan period; and
- Actual impacts of site allocations on health and wellbeing - these cannot be predicted with any greater certainty until detailed health impact assessments are undertaken to support planning applications.

5.3 Furthermore, whilst it is anticipated that traffic levels from the proposed site allocations will be commensurate with existing operations, it is considered beneficial to monitor this to ensure impacts to communities do not exceed existing levels. It is also considered beneficial to monitor the climate impact of proposals and use of sustainable modes for the transportation of minerals and waste to ensure that the positive effects predicted occur as intended. The following table sets out the monitoring proposals against relevant SA objectives.

**Table 4 Monitoring Proposals**

<b>Relevant SA objective</b>	<b>Proposed Indicator</b>	<b>Source(s)</b>
To promote strong, secure communities	<ul style="list-style-type: none"> <li>• Existing consented vehicle limits at Thrislington Quarry, Crime Rigg Quarry and Cold Knuckle Quarry</li> <li>• Vehicle limits permitted following the grant of planning permission</li> </ul>	Durham County Council: <ul style="list-style-type: none"> <li>• Existing planning permissions and conditions</li> <li>• New planning permissions and conditions</li> </ul>
To reduce health inequalities and promote healthy lifestyles	<ul style="list-style-type: none"> <li>• Existing consented vehicle limits at Thrislington Quarry, Crime Rigg Quarry and Cold Knuckle Quarry</li> <li>• Vehicle limits permitted following the grant of planning permission</li> <li>• Implementation of measures, where required to minimise noise, vibration and emissions to air</li> </ul>	Durham County Council: <ul style="list-style-type: none"> <li>• Existing planning permissions and conditions</li> <li>• New planning permissions and conditions</li> <li>• Annual Site Monitoring Reports</li> </ul>

Relevant SA objective	Proposed Indicator	Source(s)
	<p>associated with allocated sites</p> <ul style="list-style-type: none"> <li>Any planning permissions given contrary to Health and Safety Executive advice</li> </ul>	
<p>To reduce the need to travel and promote use of sustainable transport options</p>	<ul style="list-style-type: none"> <li>Applications accompanied by a Transport Assessment or Statement that consider scope for sustainable modes and state that they will implement viable opportunities</li> </ul>	<p>Transport information submitted to the Council in support of planning applications</p>
<p>To reduce the causes of climate change</p>	<ul style="list-style-type: none"> <li>Applications accompanied by an assessment of greenhouse gas emissions where EIA development</li> <li>County Durham greenhouse gas emission data</li> <li>Number of applications permitted that significantly affect County Durham's ability to meet the challenge of climate change (target is 0%)</li> </ul>	<ul style="list-style-type: none"> <li>Greenhouse gas information submitted to the Council in support of planning applications (Environmental Statement)</li> <li>Government statistics: UK local authority and regional greenhouse gas emissions</li> <li>Durham County Council: Development Management Teams</li> </ul>
<p>To respond and enable adaptation to the inevitable impacts of climate change</p>	<ul style="list-style-type: none"> <li>Implementation of measures where required, to minimise impacts to groundwater resources associated with allocated sites</li> </ul>	<ul style="list-style-type: none"> <li>Site Annual Monitoring Reports</li> </ul>
<p>To protect and enhance biodiversity and geodiversity</p>	<ul style="list-style-type: none"> <li>Implementation of measures where required, to ensure that a replacement geological SSSI can</li> </ul>	<ul style="list-style-type: none"> <li>Site Annual Monitoring Reports</li> </ul>

<b>Relevant SA objective</b>	<b>Proposed Indicator</b>	<b>Source(s)</b>
	be phased and created accordingly	
To protect and improve air water and soil resources	<ul style="list-style-type: none"> <li>• Implementation of measures, where required, to minimise impacts to groundwater resources associated with allocated sites</li> </ul>	<ul style="list-style-type: none"> <li>• Site Annual Monitoring Reports</li> </ul>
To improve the sustainability of minerals extraction and use and reduce adverse impacts on communities and the environment	<ul style="list-style-type: none"> <li>• All indicators as outlined above</li> </ul>	<ul style="list-style-type: none"> <li>• As outlined above</li> </ul>
To reduce waste and encourage the sustainable and efficient use of materials	<ul style="list-style-type: none"> <li>• Landfill capacity</li> </ul>	<ul style="list-style-type: none"> <li>• Annual Monitoring Report</li> </ul>

## 6. Conclusion and Outstanding Issues

6.1 The SA of the M&WDPD Publication Draft Plan has:

- Assessed Plan Objectives and the revisions made to them
- Considered and assessed reasonable alternatives, including whether there were new reasonable alternatives following representations made on the M&WDPD Draft Plan, new evidence etc
- Reassessed M&WDPD policies where significant changes have been made to them since the publication of the M&WDPD Draft Plan
- Assessed cumulative and significant effects
- Identified and proposed mitigation measures, including changes to policy wording to improve compatibility with the objectives of sustainable development
- Proposed monitoring measures

6.2 The M&WDPD is aligned with the SA recommendations regarding the selection of reasonable alternatives, except for the high level, inert waste restoration option at Crime Rigg Quarry (Scenario 3). However, it is considered that the issues identified by the SA have been overcome by policies which ensure that:

- The northern extension to Crime Rigg Quarry can become the replacement SSSI whilst demonstrating that comparable special interest features will be exposed during the transition period; and
- Non allocated inert waste disposal sites can be resisted where they would lead to excessive landfill provision

6.3 Overall, the M&WDPD is assessed as having positive cumulative effects against most sustainability objectives. Negative impacts to groundwater resources have been identified by the SA as a potential significant individual and cumulative issue due to the allocation of four sites upon the Magnesian Limestone Principal aquifer, within Groundwater Source Protection Zone 3 and also within groundwater Nitrate Vulnerable Zones. Although it is understood that previous working at the sites has been found to be acceptable. The significance of effects cannot be evaluated further until a hydrogeological assessment is undertaken and/or other evidence is submitted in support of a planning application. The Environment Agency will be pivotal to determining whether risks can be successfully mitigated.

6.4 Positive cumulative effects have been predicted against SA objective 8 (reducing the causes of climate change) and the revisions made to Policy MW1 (General criteria for considering minerals and waste development) will not materially affect the way in which the contribution of a proposal towards net zero should be considered when determining planning consent for EIA development.

6.5 However, as an outstanding issue it is recommended that the policy is subject to review following any updates to the NPPF or Planning Practice Guidance on the contribution of the planning system to net zero.

#### Next Steps

6.6 This SA report for the Publication Draft M&WDPD (2022) will be made available for public consultation from Monday 28th November 2022 to Friday 13th January 2023. Representations will then be compiled and submitted to the Secretary of State for independent examination.