

Sustainability Appraisal of the Minerals
and Waste Policies and Allocations
Document Publication Draft: November
2022

Contents

Sustainability Appraisal of the Minerals and Waste Policies and Allocations Document Publication Draft:

November 2022.....	i
Document Control.....	i
1. Introduction	1
2. Methodology.....	4
2.1 Overview of Stage A (Scoping)	7
2.2 Approach to Stage B (Assessment)	37
2.3 Preparing and Seeking Representations on the Sustainability Report (Stages C and D)	42
3. DPD Assessment – Vision and Objectives	44
4. DPD Assessment - Policies	52
4.1 Policy MW1: General Criteria for Considering Minerals and Waste Development	54
4.2 Policy MW2: Mineral Exploration	65
4.3 Policy MW3: Benefits of Minerals Extraction	71
4.4 Policy MW4: Noise	76
4.5 Policy MW5: Air Quality and Dust.....	82
4.6 Policy MW6: Blasting	86
4.7 Policy MW7: Traffic and Transport	90
4.8 Policy MW8: Mineral Rail Handling Facilities.....	98
4.9 Policy MW9: Borrow Pits	103
4.10 Policy MW10: Ancillary Minerals Related Infrastructure.....	109
4.11 Policy MW11: Periodic Review of Mineral Planning Permissions.....	117
4.12 Policy MW12: Oil and Gas Exploration, Appraisal and Production.....	122
4.13 Policy MW13: Transport of Oil and Gas.....	129
4.14 Policy MW14: Vein Minerals, Metalliferous Minerals, Lithium and Silica Sand	134
4.15 Policy MW15: Peat	142
4.16 Policy MW16: Inert waste ‘other recovery’	146
4.17 Policy MW17: Inert waste disposal via landfill	151
4.18 Policy MW18: Non-Hazardous Landfill	158
4.19 Policy MW19: Water Resources.....	164
4.20 Policy MW20: Mineral Site Restoration, Landfill and Landraise	169
5. DPD Assessment – Site Allocations	176
5.1 Potential Sand and Gravel Allocations	182
5.2 Potential Inert Waste Disposal Allocations.....	197
5.3 Policy MW21 Site Specific Allocation, land at Thrislington West Quarry	220
5.4 Policy MW22 Site Specific Allocation, northern extension to Crime Rigg Quarry	226

5.5 Policy MW23: Site Specific Allocation Inert Waste Disposal at Crime Rigg Quarry	234
5.6 Policy MW24: Site Specific Allocation Inert Waste Disposal at Cold Knuckle Quarry	244
6. Cumulative effects of the M&WDPD	252
7. Significant Effects and Monitoring Proposals	269
8. How the SA has influenced the M&WDPD	272
9. Conclusion and Outstanding Issues	279

Document Control

- Prepared by: Nadia Wetherell
Sustainability and Climate Change Officer, Low Carbon Economy
Team, Durham County Council
Date: 01/03/22 – 30/08/22
- Checked by: Stephen McDonald
Principal Sustainability Officer, Low Carbon Economy Team, Durham
County Council)
Date: 10/09/22

1. Introduction

1.1 All Councils are required to have a development plan for their local area 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 Minerals Local Plan and the Waste Local Plan.

1.2 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, where it is possible to do so:

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

1.3 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 if needed and justified.

1.4 Once adopted, the policies and provisions of the M&WDPD will replace the remaining saved policies of the County Durham Minerals Local Plan (adopted December 2000) and the saved policies of the County Durham Waste Local Plan (adopted April 2005).

Purpose of this Report

1.5 This report documents the findings of the Sustainability Appraisal and incorporated Strategic Environmental Assessment of the M&WDPD. 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.

1.6 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.

1.7 The M&WDPD has been subject to SA throughout its development and consultation on a draft version of the M&WDPD, its SA and other supporting documents was undertaken between the 24th September and the 5th November 2021. The purpose of this report is to present a sustainability appraisal which takes account of representations made during consultation, meets the relevant legal requirements and 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.

1.8 The SEA regulations require that a report is prepared which contains specific information. The following table signposts where this information can be located:

Table 1: Information for Sustainability / Environmental Reports

Information Requirements	Where to Locate this Information
(a) an outline of the contents, main objectives of the plan or programme and relationship with other relevant plans and programmes	<ul style="list-style-type: none"> • Section 2.1 • Scoping Reports (Please see documents referenced C22 and MW10. Available to view here: County Durham Plan Evidence Library)
(b) the relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programmes	<ul style="list-style-type: none"> • Section 2.1 • Scoping Reports (Please see documents referenced C22 and MW10. Available to view here: County Durham Plan Evidence Library)
(c) the environmental characteristics of areas likely to be significantly affected	<ul style="list-style-type: none"> • Section 2.1, 4, 5, 6 and 7 • Supporting SA Appendices • Scoping Reports (Please see documents referenced C22 and MW10. Available to view here: County Durham Plan Evidence Library)
(d) any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas	<ul style="list-style-type: none"> • Section 2.1, 4, 5, 6 and 7 • Supporting SA Appendices • Scoping Reports (Please see documents referenced C22 and MW10. Available to view here: County Durham Plan Evidence Library)

Information Requirements	Where to Locate this Information
designated pursuant to Directives 79/409/EEC (the Birds Directive) and 92/43/EEC (The Habitats Directive)	view here: County Durham Plan Evidence Library)
(e) the environmental protection objectives, established at International, Community or Member State level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation	<ul style="list-style-type: none"> • Section 2.1, 4, 5, 6 and 7 • Supporting SA Appendices • Scoping Reports (Please see documents referenced C22 and MW10. Available to view here: County Durham Plan Evidence Library)
(f) the likely significant effects on the environment, including on issues such as biodiversity, population, human health, fauna, flora, soil, water, air, climatic factors, material assets, cultural heritage including architectural and archaeological heritage, landscape and the interrelationship between the above factors	<ul style="list-style-type: none"> • Section 4, 5, 6 and 7 • Supporting SA Appendices
(g) the measures envisaged to prevent, reduce, and as fully as possible offset any significant adverse effects on the environment of implementing the plan or programme	<ul style="list-style-type: none"> • Section 4, 5, 6 and 7 • Supporting SA Appendices
(h) an outline of the reasons for selecting the alternatives dealt with, and a description of how the assessment was undertaken including any difficulties (such as technical deficiencies or lack of know-how) encountered in compiling the required information	<ul style="list-style-type: none"> • Section 4 and 5 • Supporting SA Appendices
(i) a description of the measures envisaged concerning monitoring in accordance with Article 10	Section 7
(j) a non-technical summary of the information provided under the above headings	Available to view on the Council's website alongside this main report.

2. Methodology

2.0.1 This section describes the methodology adhered to throughout the assessment of the M&WDPD.

2.0.2 Please note that whilst the Government's, Planning for the Future White Paper (August 2020) proposed to abolish the Sustainability Appraisal system and replace it with a new process, this is yet to be established for use by practitioners. The methodology is therefore aligned with current Planning Practice Guidance (PPG) on the Sustainability Appraisal process available at: [Planning Practice Guidance: SEA and SA](#)

2.0.3 Whilst the most up to date guidance is contained within the PPG, regard has also been given to 'Sustainability Appraisal of Regional Spatial Strategies and Local Development Documents' (ODPM, 2005) given that this is still considered to provide a useful interpretation of meeting the requirements of the SEA Directive in the development of SA of Development Plan Documents. Planning Advisory Service (PAS) SA guidance contained online under the 'Principles of Plan Making' also provided further information which has been considered along with the Royal Town and Planning Institute's (RTPI) practice advice document on SEA/SA effectiveness.¹

2.0.4 The SA follows the five key stage process outlined in the guidance and as broadly presented in the following table:

Table 2: Key Stages

M&WDPD	SA stages	Progress to Date
Begin evidence gathering, engagement and document preparation	<p>Stage A: Setting the context, establishing the baseline and deciding on the scope.</p> <p>A1: Identify other relevant policies, plans and programmes, and document sustainability objectives.</p> <p>A2: Collecting baseline information.</p> <p>A3: Identifying sustainability issues and problems.</p> <p>A4: Developing the SA framework.</p> <p>A5: Consulting on the scope of the SA.</p>	<ul style="list-style-type: none"> • Consultation on the County Durham Plan Scoping Report (covers minerals and waste context and issues) - February 2016 • Produce Final Scoping Report - May 2016 • Finalise and publish M&WDPD Scoping Report Synopsis for comment - June-August 2018
Preparation and consultation on the draft M&WDPD (Regulation	Stage B: Developing and refining options and assessing of effects.	The M&WDPD Draft and its supporting SA report was consulted upon between

¹ RTPI (January 2018) Improving the Effectiveness and Efficiency of SEA/SA for Land Use Plans RTPI Practice Advice

M&WDPD	SA stages	Progress to Date
18)	<p>B1: Testing the DPD objectives against the SA framework.</p> <p>B2: Developing the DPD options.</p> <p>B3: Predict and Evaluate the effects of the DPD.</p> <p>B4: Considering ways of mitigating adverse effects and maximising beneficial effects.</p> <p>B5: Proposing measures to monitor the significant effects of implementing the DPD.</p> <p>Stage C: Preparing the Sustainability Appraisal Report.</p> <p>Stage D: Seek representation on the sustainability appraisal report from consultation bodies and the public.</p>	September and November 2021.
Preparation and consultation on the Publication version of the M&WDPD (Regulation 19)	Repeat stages B-D. This involves the appraisal of significant changes to the draft M&WDPD following the Regulation 18 consultation	Documented within this Report . Consultation to commence November 2022
Submission of DPD to Secretary of State and Examination in Public (EIP)	Submit SA Report	Not commenced
Adoption of M&WDPD	<p>Stage E: Post adoption reporting and monitoring</p> <p>E1: Prepare and publish post adoption statement</p> <p>E2: Monitor the significant effects of implementing the DPD.</p> <p>E3: Respond to adverse effects</p>	SA Statement on adoption. Indicative timing: May 2023

2.0.5 Whilst the SA process is subdivided into five key stages, guidance emphasises that SA is an iterative process, with stage B being revisited as many times as necessary during the Plan making process. Several supporting assessments have also informed the SA and an overview of these is provided as follows.

Habitats Regulations Assessment

2.0.6 The Conservation of Habitats and Species (Amendment)(EU Exit) Regulations 2019 require that planning authorities assess the likely effects of their plans, alone and in combination with other plans and projects, on sites that host species listed in Annexes I and II of the Habitats Directive or make an important contribution to the overarching aims of the Wild Birds Directive.

2.0.7 In County Durham there are six sites designated as Special Areas of Conservation (SAC). These sites are protected because they make a significant contribution to conserving habitats and species listed in the Habitats Directive. County Durham also has three designated Special Protection Areas (SPA), protected because they constitute internationally important areas for breeding, feeding, wintering or the migration of rare and vulnerable species of birds. A sub-set of the coastline designated as SPA is also designated as an internationally important wetland under the Ramsar Convention of 1971 and receives the same level of protection as a SPA.

2.0.8 A Habitats Regulations Assessment (HRA) screening report, prepared by the Council's Ecologists identifies the relevant SAC, SPA and Ramsar sites, the conservation objectives that apply to each and provides an assessment of the likely impacts of the M&WDPD on them. The HRA was able to screen out any likely significant effects to the relevant sites and concluded that no further assessment (known as 'appropriate assessment') of the M&WDPD is required.

2.0.9 Please note that whilst SA and HRA are two separate processes and should be reported upon separately, they are complimentary. For example, the:

- Evidence gathering for HRA has fed into the evidence that informs SA;
- SA has referred to the HRA to help predict effects against biodiversity objectives; and
- The SA has ensured that wider interest features of the SAC's and SPA's that are not within the scope of the HRA such as component Sites of Special Scientific Interest (SSSI) are also considered.

Sustainability Appraisal of the County Durham Plan

2.0.10 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

2.0.11 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 Assessment², 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

2.0.12 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.

M&WDPD Heritage Impact Assessment

2.0.13 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.

2.1 Overview of Stage A (Scoping)

2.1.1 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.

2.1.2 In 2018, a further Minerals and Waste Scoping Report Synopsis was published for comment to support the then, 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

² Joint Local Aggregate Assessment for County Durham, Northumberland and Tyne and Wear (2020 and 2019 Sales and Reserves Data), April 2022.

to the M&WDPD. This is in line with guidance which states that one SA Scoping report can be produced for several Local Development Documents³

2.1.3 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. However, for ease of reference an overview of the Stage A tasks and relevant minerals and waste information, is provided within this section. This section also reflects any new or more recent information which has become available in the interim period.

Background

2.1.4 Due to its varied and complex geology County Durham has benefited from a long association with mineral working. The county is historically renowned for coal mining which has had a significant impact on settlement patterns, landscape, economy and the cultural heritage of the Durham Coalfield. Many of the minerals worked from County Durham's quarries today are essential in enabling the construction industry to deliver new built development including new homes, shops, offices, factories, hospitals, schools, flood and coastal defences, infrastructure and maintain the built fabric, character and aesthetics of existing communities. The most important minerals extracted in County Durham today in quantitative terms are aggregates including magnesian limestone, carboniferous limestone, dolerite and sand and gravel. A range of other non-aggregate minerals are also currently extracted including natural building and roofing stone, and brick clay.

2.1.5 By volume, the three main types of waste produced or managed in County Durham are Non-Hazardous waste; Hazardous waste; and Inert / Construction and Demolition Waste. Non-hazardous waste includes household waste (known as Local Authority Collected Waste LACW) which has the highest profile of all the waste streams but is not the most significant in terms of volume in County Durham. Environment Agency Data from 2021 shows Inert waste to be the most significant. Waste Management facilities in County Durham received a total of 1,092,061 tonnes of inert/construction and demolition waste, representing 54% of the total volume of waste received.⁴ By comparison, the Council collects or receives at its Household Waste Recycling Centres over 231,341 tonnes of household waste from across County Durham, of which over 41% is reused, recycled and composted. County Durham continues to import more waste for management than it exports.

2.1.6 Historically, County Durham has relied on landfill as the main method of waste management. There is a national trend for moving away from landfill in line with the waste hierarchy which places disposal as the last resort. There are currently four operational landfill sites in County Durham, dealing primarily with inert/construction and demolition waste. The remaining landfill void space for inert waste in County Durham is 7.261 million cubic metres. Landfill capacity for inert waste is anticipated to be exhausted by 2032.

³ ODPM (2005) Sustainability Appraisal of Regional Spatial Strategies and Local Development Documents (section 3)

⁴ Source: Durham County Council Annual Monitoring Report 2020/21 - Environment Agency Waste Data Interrogator 2021

2.1.7 Household waste placed in refuse bins as opposed to recycling bins and boxes is currently exported to an energy from waste plant in Teesside. Other infrastructure that supports waste management within County Durham include transfer stations, materials recycling facilities, household waste recycling centres, end of life vehicle and scrap yards, composting operations and both anaerobic and aerobic digesters.

Setting the Sustainability Context (Task A1)

2.1.8 Task A1 of the Scoping Stage requires a review of relevant policies, plans and programmes (PPP's). The purpose of the review (often referred to as a 'context review') is to ensure that the social, economic and environmental objectives of the PPP's are taken into account throughout the development of the statutory development plan for County Durham, of which the M&WDPD forms a part and its sustainability assessment. Over 120 PPP's were reviewed as part of this process and the following specific key messages for minerals and waste were identified:

Minerals

- Minerals planning should ensure, so far as practicable, the prudent, efficient and sustainable use of minerals and recycling of suitable materials, thereby minimising the need for new primary extraction.
- Adequate and steady supplies of minerals needed by society should be secured within the limits set by the environment.
- The sustainable transport of minerals by rail or sea should be promoted.
- The protection and enhancement of the quality of the environment once extraction has ceased should be sought through high standards of restoration.
- The use of high-quality materials for the purpose they are most suitable should be encouraged.
- The Plan should identify sufficient resource of minerals over the Plan Period taking into account available quantities of secondary and recycled materials.
- The approach to conventional and unconventional hydrocarbons and likely prospects for extraction should be made clear.

Waste

- Waste management needs to be driven up the waste hierarchy, addressing waste as a resource and looking to disposal as the last option, but one which must be adequately catered for.
- Sufficient opportunities for the provision of waste management facilities should be provided in appropriate locations including for waste disposal. Sites should be located and designed so as to minimise impacts to communities and the environment.
- The Plan should ensure new development has easy access to waste and recycling services.
- A move to a circular economy should be supported. A circular economy is an alternative to a traditional linear economy (make, use, dispose) in which resources

are kept in use for as long as possible, the maximum value is extracted from them whilst in use, then products and materials are recovered and regenerated at the end of each service life.

Establishing the Sustainability Baseline (Task A2)

2.1.9 Task A2 of the Scoping Stage requires the collection and analysis of baseline information and trends. Establishing the economic, social and environmental baseline of County Durham provides the basis for:

- An understanding of existing sustainability problems within specific areas in the County.
- Understanding 'business as usual' trends which may affect the implementation of the Plan.
- Formulating the SA objectives to reduce these problems.
- Suggesting alternative approaches.
- Predicting the effects of the Local Plan; and
- Proposing suitable mitigation and monitoring measures.

2.1.10 Baseline information was collected and analysed according to the topics in the following table. All topics are relevant to minerals and waste as they can either:

- Be directly or indirectly impacted by minerals and waste development.
- Impact on the future levels of minerals and waste development that may be required; or
- Impact on the future levels of minerals and waste development that can be delivered.

Table 3: Baseline Information

Topic	Trend	Relevance to Minerals and Waste
Social Welfare and Communities	<p>The majority of the population will continue to live to the east of the A68. The main towns will continue to be the most densely populated and the western dales the most sparsely populated.</p> <p>The population will continue to increase (increasing by 3.7% by 2028 and by 6.6% overall by 2023, ONS). Rate of increase will be broadly in line with the nation average but predicted to be higher than that for the North East region.⁵</p> <p>Ageing population - whilst people aged 20-24 are projected to make up the greatest % of County Durham's population by 2041, this is closely followed by people aged 70-74 and 75-79. The greatest increase in population by age bracket between 2018 and 2041 occur in the age brackets 70-74, 80-84, 85-89 and 90+ (ONS: Sub-national population projections)</p>	<p>The centres of population or areas which experience population growth within County Durham can constrain minerals and waste development in respect of competing demands for land use and protecting local amenity.</p> <p>An increasing population is likely to increase need for new housing and other social infrastructure which will require greater use of resources including minerals and will increase overall levels of waste produced in County Durham. An ageing population can increase demand for healthcare products which in turn can increase volumes of certain waste streams such as clinical and hazardous waste.</p>
Health	<p>There is likely to be a continuing trend of overall improvement against health indicators but the gap between the county and national performance will be difficult to close.</p> <p>Health inequalities across the County are likely to persist with higher levels of health deprivation in East Durham and parts of South and North Durham.</p>	<p>Potential for minerals and waste development to impact upon health and wellbeing through:</p> <ul style="list-style-type: none"> • Noise and vibration associated with the operation of minerals and waste sites • Dust and other emissions to air • Odour

⁵ Population change 2018-2041 (County Durham = 5%, North East = 3%) Office for National Statistics (ONS): Sub-national population projections (SNPPs).

Topic	Trend	Relevance to Minerals and Waste
	Existing health and other socio-economic inequalities are likely to increase as a result of Covid-19. ⁶	<ul style="list-style-type: none"> • Traffic <p>Minerals and Waste Development should not exacerbate existing inequalities but should safeguard health and wellbeing and where possible and applicable, provide benefits too e.g., through new recreation and leisure provision on restoration / after use of sites.</p>
Housing	<p>9% increase in new County Durham households to 2041. This is higher than the North East % of 7% but lower than the national projected 15% increase.⁷</p> <p>County Durham continues to be highly ranked in relation to deprivation - Barriers to Housing (ranked 13th out of 151 upper tier authorities. 1= most deprived). However, County Durham is less deprived than other NE authorities with the exception of Sunderland.</p> <p>The County Durham Plans for a net minimum of 24,852 new homes of mixed type, size and tenure over the period 2016 to 2035 (1,308 new homes per year)</p> <p>The total number of dwellings in County Durham as of 2017 was 242,160 of which approximately 9,807 (4%) were vacant.⁸</p>	<p>Mineral resources are required for the construction of new homes and associated infrastructure in County Durham and the wider region to meet housing need and contribute towards addressing barriers to housing. Housing development generates construction (and in some cases demolition) waste and requires increased Council services provision in respect of collecting, recycling and disposing of householder waste from new households. The redevelopment and occupation of vacant homes can contribute towards reducing resources use and waste.</p>
Economic Vitality	County Durham - Improving economic activity and employment rates which are marginally better than those for the North East	Minerals and waste development and management make an important contribution

⁶ Source: [County Durham: Health Impact Assessment on Health Inequalities in Response to the Covid 19 Pandemic \(June 2020\)](#)

⁷ ONS Household Projections for County Durham to 2041

⁸ Source: Ministry of Housing, Communities and Local Government

Topic	Trend	Relevance to Minerals and Waste
	<p>region. However, economic performance gap between the county and nation. The employment rate gap between the county and nation is increasing.⁹</p> <p>High levels of employment deprivation prevail. County Durham is ranked 26 out of 151 upper tier authorities (1= most deprived)</p> <p>Ageing population likely to have implications for workforce and loss of skills</p> <p>Mining and Quarrying comprise a low proportion of County Durham Industries (0.9%) and provide low levels of employment by industry (1.5%)¹⁰</p> <p>The distinctive physical assets of the County (i.e. its environmental and cultural assets) can help to differentiate it from other areas (The Tyne & Wear City Region) and can continue to act as an economic driver.</p>	<p>to the local economy, through both direct and indirect employment. Whilst the proportion of mining and quarrying industries in County Durham and associated employment is low, they make a valuable contribution to rural diversification and support the construction and transport industries which provide higher levels of employment by industry.</p> <p>County Durham’s mineral resources are also an important local, regional and national economic asset. Economic benefits can be derived from waste minimisation/ resource efficiency.</p> <p>Whilst consideration would need to be given to the impact of minerals and waste development on other economic drivers, restoration of sites can contribute positively to tourism and provide attractions such as Northumberlandia and the Eden Project.</p>
Education and Skills	GCSE attainment is higher than the North East average and on par with the national average. However, in respect of higher educational attainment County Durham lags behind the national average. The % of students achieving at least 3 AS/A levels is as follows: County Durham 80%, North East 78%, England 84.7%. ¹¹	Minerals and waste development and management within County Durham creates training opportunities including attainment of qualifications.

⁹ Source: ONS Annual Population Survey - Main Economic Indicators 2021-12

¹⁰ Source: ONS National Statistics Inter Departmental Business Register and APS: Employment by Sector (2018)

¹¹ Source: Department of Education: www.compare-school-performance.service.gov.uk (2012-2017)

Topic	Trend	Relevance to Minerals and Waste
	<p>There is likely to be a loss of skills and experience from the County and workforce as the population ages. The retention of qualified/skilled persons of working age will therefore be a key challenge.</p>	
<p>Access and Transport</p>	<p>Dispersed settlement patterns creates challenges in respect of access and transport in some parts of the county. Continued dependency on private car use in the rural west. Impact of Covid 19 pandemic may also continue to affect public transport patronage across County Durham.</p>	<p>Whilst minerals can only be worked where they are found, opportunities to minimise distances they are transported and by sustainable means (move freight from road to rail) should be sought where possible. Requirement to have regard to net self-sufficiency (the proximity principle) in order to minimise waste transportation distances where this is compatible with effective waste management solutions. Despite dispersed settlement patterns, good and equitable access to waste management services should be provided.</p>
<p>Climate Change</p>	<p>Decreasing carbon emissions from all sources (Industrial, Domestic and Transport). By the end of 2019 the County's emissions were 54% lower than in the baseline year of 1990. However, rate of decline across the sectors has not been even with minimal decline in transport emissions compared to industrial and domestic sources. Source: BEIS - Local Authority CO₂ emission estimates (2019)</p> <p>National and locally declared Climate Emergency 2050 net zero targets should contribute to a declining trend in emissions.</p>	<p>Waste development can support a reduction in greenhouse gas emissions through the provision of facilities which reuse, recycle and compost waste. Local extraction and use of minerals also minimises emissions associated with their transportation.</p> <p>However, it is recognised that activities associated with minerals and waste development emit greenhouse gases through</p>

Topic	Trend	Relevance to Minerals and Waste
	<p>Flooding will continue to be a key issue for many communities across County Durham and the frequency of extreme weather events is likely to increase because of climate change. Impacts including for example, human health, delivery of services, economic productivity, habitat and species populations, distribution and composition, rate of soil erosion etc.</p>	<p>for example extraction, processing, recycling, flaring, energy use in site buildings and facilities, restoration activity and transportation. Opportunities to minimise emissions could be sought through for example:</p> <ul style="list-style-type: none"> • Minimising the need for minerals and waste development in the first instance by use of secondary aggregates, waste reduction etc, • Minimising emissions whilst sites are operational and recovering energy from waste. • Where it is not possible to minimise emissions, offsetting of emissions should be considered and could form part of site restoration plans. <p>Minerals and waste development should also consider their impact on the ability to adapt to the effects of climate change, for example their compatibility or incompatibility with flood risk. Minerals working could potentially create additional flood storage capacity.</p> <p>The impact of minerals and waste development on climate change and greenhouse gas emissions should be considered as part of</p>

Topic	Trend	Relevance to Minerals and Waste
		<p>determining the environmental acceptability of proposals. Minerals and Waste policies should have regard to the UK's and local climate change commitments and support the transition to a low carbon future as far as is possible and where environmentally acceptable. Interest in resources such as lithium to support battery production may grow.</p>
<p>Air, Water and Soil Quality</p>	<p>Air:</p> <ul style="list-style-type: none"> • Good air quality across County Durham except for Durham City and a small area within Chester-Le-Street which is subject to an Air Quality Management Area (AQMA). However, air quality in these areas is likely to continue to improve as a result of implementing Air Quality Action Plans, transition to Electric Vehicles and potential prolonged changes to travel/commute patterns as a result of agile working arrangements. The latter measures are also likely to benefit air quality across County Durham. <p>Water:</p> <p>The current <u>Northumbria River Basin Management Plan</u> establishes the following in relation to surface and groundwater quality status</p> <ol style="list-style-type: none"> 1) Steady improvements to water quality in both the Tees and Wear catchments will continue to be made, however achieving good status by 2027 will continue to be a significant challenge. 	<p>Potential for minerals and/or waste development to increase emissions to air, contaminate water (including bathing water in the case of sewage waste) and soil resources, partially remove aquifers, increase levels of water abstraction and incur the loss of the best and most versatile agricultural land on a temporary or permanent basis. The use and conservation of soils during minerals working and restoration is also a key consideration. Legacy issues also exist in respects of previous minerals and waste development e.g. mine water pollution.</p>

Topic	Trend	Relevance to Minerals and Waste
	<p>2) Groundwater quality may improve slowly as the Environment Agency continues to work with the Coal Authority (re mine water pollution), water companies to manage abstractions and local authorities, site owners and developers to prevent further land contamination and groundwater pollution.</p> <p>3) Between 2016 and 2019 bathing water quality has been classified as 'Excellent' for the bathing waters at Seaham Beach and Crimdon and 'Good' for Seaham Hall Beach Source: <u>Environment Agency: Bathing Water Quality</u> Population growth may increase the risk and frequency of reduced bathing water quality.</p> <p>Soil:</p> <ul style="list-style-type: none"> • The current (2015) <u>Contaminated Land Inspection Strategy</u> highlights a significant volume of potentially contaminated sites (7,000) due to County Durham's industrial past. The remediation of land where contamination is presenting unacceptable environmental risks will continue in line with Council objectives and policy 32 of the County Durham Plan (Despoiled, Degraded, Derelict, Contaminated and Unstable Land) • No Grade 1 (Excellent) Agricultural land is identified within County Durham or the North East. Pockets of Grade 2 (very good) agricultural land exists in County Durham close to the Teesdale/Darlington border and along a stretch of the River Wear between Great Lumley to the north and Bishop Auckland to the South. A large proportion of land is classified as Grade 4 (poor) and Grade 5 (very poor) 	

Topic	Trend	Relevance to Minerals and Waste
	<p>predominantly in western, upland areas of the county. Source: <u>North East Region: Agricultural Land Classification</u></p>	
<p>Biodiversity and Geodiversity</p>	<p>Nature is in crisis with unprecedented rates of decline reported globally. One million animal and plant species are threatened with extinction and global populations of mammals, birds, fish, amphibians and reptiles plunged by 68% on average between 1970 and 2016.¹²</p> <p>County Durham contains a rich variety of ecological habitats and species associated with its woodlands, coastline, moorlands, rivers and farmland along with areas of geological interest that are subject to international, national and local designation due to their importance. However, this is subject to many varied pressures which, like the global picture, are causing decline or threatening recovery.</p> <p>An increased focus on tackling climate change and nature recovery, the ecological emergency along with changes to agricultural practices following Brexit (Environmental Land Management scheme) and mandatory net gains in biodiversity offer hope but it is too early to determine whether rates of recovery will outstrip rates of decline. Some key issues are highlighted below:</p> <p>Loss of some native species/habitat and change in their distribution is likely to occur as a result of climate change. Potential for</p>	<p>The location of some mineral resources within County Durham coincides with areas of high ecological value. Minerals and waste development can incur the direct or indirect loss of habitats and species through for example land take, water abstraction and disturbance, pollution incidents. There are however opportunities on restoration of sites to provide net gains in biodiversity. Minerals working can also contribute to revealing areas of geological interest.</p>

¹² Source: IPBES (2019) Global assessment report on biodiversity and ecosystem service of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services and WWF (2020) Living Planet Report 2020 - Bending the curve of biodiversity loss. Almond, R.E.A., Grooten M. and Petersen, T. (Eds). WWF, Gland, Switzerland.

Topic	Trend	Relevance to Minerals and Waste
	<p>increased colonisation by non-native species as species migrate from other countries.</p> <p>The majority of Sites of Special Scientific Interest (SSSI's) are in an unfavourable / recovering condition and have been for many years, often due to grazing pressure.¹³</p> <p>Coastal European Protected sites and species are threatened by recreational pressure such as trampling and enrichment of habitat and direct disturbance, predominantly from dogs. This could also impact upon SSSI's designated for bird interest. Measures outlined in the Habitats Regulations Assessment for the County Durham Plan and associated guidance will help to mitigate this pressure.</p> <p>Whilst improvement in condition is occurring, and an active programme of peatland restoration is in place, western upland European Protected sites and species are likely to continue to be threatened by excessive livestock grazing, drainage of wet areas, over-intensive and inappropriate burning, creation of access tracks, acid and nitrogen deposition, illegal persecution of birds of prey and populations of non native species.</p> <p>Threats to priority habitats such as drainage and recreational pressure are likely to continue to threaten the survival of priority habitats and species.</p>	

¹³ Source: Natural England: Designated Sites

Topic	Trend	Relevance to Minerals and Waste
	<p>Increasing but low proportion of locally protected sites in active management.</p> <p>Increased tree planting, peatland restoration and marine/blue carbon habitat creation in response to the Council's Climate Emergency Response Plan</p>	
Landscape	<p>County Durham's landscape continues to be of vast contrast and diversity being split into 6 national character areas:</p> <ul style="list-style-type: none"> • North Pennines • Pennine Dales Fringe • Durham Coalfield Pennine Fringe • Tyne and Wear Lowlands • Durham Magnesian Limestone Plateau • Tees Lowland <p>Each area has its own future trends, challenges and threats e.g., lack of management, hedgerow removal, urban expansion, climate change etc. The North Pennines Area of Outstanding National Beauty (AONB) and the Durham Heritage Coast are nationally protected landscape within County Durham. Areas of greenbelt are also designated around Durham City, North and East Durham.</p>	<p>Many of County Durham's character areas have been strongly shaped by minerals development leaving a very clear mark on landscapes and identity. Some legacy issues remain in respect of land remediation. Minerals and waste development can adversely impact on landscape quality and character although there may be opportunities, particularly in respect of minerals working for longer term enhancements on restoration. It is also recognised that whilst the quarrying of sandstone in County Durham may have some adverse impacts, the use of the stone in the local area as a building and roofing material contributes to maintaining local character and distinctiveness. Some mineral resources such as carboniferous limestone and dolerite are found within the North Pennines AONB. Minerals and waste development should preserve the openness of the Green Belt.</p>
Heritage	<p>County Durham has high levels of heritage (e.g. 226 scheduled ancient monuments, 7,850 known archaeological sites, 3,000+ listed buildings, 93 conservation areas, 17 registered parks and</p>	<p>Potential for minerals and/or waste development to impact directly or indirectly on</p>

Topic	Trend	Relevance to Minerals and Waste
	<p>gardens, 1 historic battlefield and 1 world heritage site) due in part to its importance as an ecclesiastical centre in the Middle Ages and mining, farming and railway heritage.</p> <p>County Durham's heritage assets will continue to play a significant role in attracting tourists and will continue to be of intrinsic value to 'sense of place' and cultural identity.</p> <p>The condition of heritage assets across the County will vary, with some falling into disrepair due to lack of management/resources and others improving as solutions that have been agreed are implemented. However, the number of overall assets listed on Historic England's Heritage at Risk Register has remained fairly static between 2015 and 2021, reducing from 60 entries in 2015 to 53 entries in 2021.¹⁴ There is uncertainty, whether further assets will be added to the register as a result of changes to funding availability for heritage conservation works and occupation of heritage assets.</p> <p>The impact of climate change could further increase the rate of decay of the fabric of heritage assets.</p>	<p>heritage assets, including undiscovered archaeological features through:</p> <ul style="list-style-type: none"> • The development footprint areas itself • Change to historic building fabric • Ancillary works such as haul roads • Vibration damage and noise • Mitigation planting of trees • Reduction in landscape legibility • Dewatering of surrounding landscape • Subsidence • Dust and air-borne pollution • Movements of heavy traffic • Long term effects on setting and character <p>There are however, opportunities to increase understanding of heritage as a result of development e.g. interpretation regarding discovery of buried remains / artefacts. The quarrying of certain materials and reopening of relic quarries can also contribute to the conservation and restoration of heritage and maintenances of local distinctiveness. The restoration of designated and non-designated heritage assets contributes to waste reduction</p>

¹⁴ Source: Historic England (2021) [Heritage at Risk - North East & Yorkshire Register](#)

Topic	Trend	Relevance to Minerals and Waste
		and the protection of mineral resources where buildings are brought back into active use.
Resource Use	<p>Energy:</p> <p>Between 2005 and 2019 County Durham's total electricity consumption reduced by 38%. Average industrial and commercial consumption reduced the most by 39% with domestic consumption reducing by 17%. Total electricity consumption in County Durham in 2019 was 19% lower than the NE average. There is uncertainty as to whether consumption will continue to decrease as whilst levels of energy efficiency, smart metering and renewable energy increase, the transition to electric vehicles and alternative, low carbon heating will increase demand. (Source: BEIS: Regional and Local Authority Electricity Consumption Statistics)</p> <p>Between 2005 and 2019 County Durham's gas consumption increased by 6%. This is due to an increase in industrial and commercial gas consumption as domestic consumption decreased by 35%. County Durham's total average gas consumption represents a significant 29% of the NE average total. It is anticipated that gas consumption will decrease in future years and particularly more so in the domestic sector as the UK transitions away from natural gas to alternative low carbon heating technologies such as solar thermal and air source heat pumps. (Source: BEIS: Regional and Local Authority Gas Consumption Statistics)</p> <p>Between 2014 and 2019, installed renewable electricity capacity increased by 14% and totalled 227.3MW in 2019. This is equal to 67% of the whole county's household electricity requirements. Of</p>	<p>In relation to energy resources and as highlighted against the climate change column within this table, minerals and waste policies should have regard to the UK's and local climate change commitments and support the transition to a low carbon future as far as is possible and where environmentally acceptable.</p> <p>Whilst waste should be viewed as a resource, with disposal only being considered as a last resort, the recovery of energy from waste disposal should be encouraged. Waste development can also play an important part in ensuring that landfilling is phased out as far as is possible in favour of other treatment, recovery and composting options. Minerals and waste development should also seek to reduce energy and conserve water / limit abstraction during operation.</p> <p>Whilst County Durham has a wealth of mineral resources, they are finite and it is important to protect and conserve them. Recycled and secondary aggregates can make an important contribution to minimising levels of primary extraction.</p>

Topic	Trend	Relevance to Minerals and Waste
	<p>this, wind energy contributes 56%, followed by solar PV at 23%. Other sources include hydro, anaerobic digestion, sewage gas, landfill gas (6%) and Biomass. (Source: BEIS: Renewable Electricity by Local Authority 2014-19) It is anticipated that installed renewable energy capacity will increase over the next decade, in response to the UK' net zero commitments and British Energy Security Strategy.</p> <p>Water: A warming climate and increasing population is likely to place pressure on water resources. The average national consumption is 141 litres of water per day which if continues could see significant water deficits by 2050. See: Government consultation on reducing personal water usage However, Northumbrian Water Ltd are committing, in conjunction with smart metering to deliver a programme of water efficiency activities which reduce personal consumption from 138 litres per day in 2019/20 to 130.4 by 2024/25. Source: Northumbrian Water Ltd, Final Water Resources Management Plan (2019)</p> <p>Minerals: (The following information is summarised from the 2021 Joint Local Aggregate Assessment which is jointly prepared by the eight mineral planning authorities in County Durham, Northumberland and Tyne and Wear. It is updated on an annual basis and the current version, reports on sales and reserves data from the end of 2018.)</p> <p>County Durham was the major producer of aggregates in the North East of England in 2018 with 122,259 thousand tonnes of</p>	

Topic	Trend	Relevance to Minerals and Waste
	<p>permitted crushed rock reserves and 6,474 thousand tonnes of permitted sand and gravel reserves. County Durham's future potential to produce both crushed rock and sand and gravel is also significant. The crushed rock reserves are comprised as follows:</p> <p>County Durham is one of the major centres of limestone production in Great Britain. Two types of limestone are extracted: permian magnesian limestone and carboniferous limestone. Estimated/actual permitted reserves remaining at the end of 2018 were approx 92 million tonnes.</p> <p>Carboniferous limestones exist in parts of West Durham where they occur in mixed sequences of limestone, mudstone and sandstone beds. Estimated/actual permitted reserves remaining at the end of 2018 were approx 10 million tonnes.</p> <p>There is only one quarry producing igneous rock (Dolerite) in the County. Permitted reserves within the area of the quarry which is currently operating were estimated at approximately 18 million tonnes in 2018.</p> <p>Non aggregates are also extracted in County Durham including Brick Making Raw Materials and Natural Building and Roofing Stone.</p> <p>Other resources such as coal and vein minerals exist within County Durham but are not currently extracted. Please note that the Council has been approached by a mineral operator who wishes to prospect for Lithium from groundwater within the Weardale</p>	

Topic	Trend	Relevance to Minerals and Waste
	<p>granite. There is no clear indication as to whether County Durham or the North East of England as a whole, does or does not contain commercially viable deposits of conventional and unconventional hydrocarbons.</p> <p>Waste: According to Environment Agency Data, the total volume of waste received (County Durham Waste Only) in 2020 was 763,334 tonnes which is a decrease of 7% compared to 2019 data. However, the volume of waste received at waste management facilities in County Durham (All waste) was 2,004,892 tonnes in 2020. This is a 7% increase in the overall quantity of waste which was reported as being received in 2019. Source: Environment Agency Waste Data Interrogator 2020 and 2021</p> <p>It is likely that the proportion of household waste, reused, recycled and composted will remain stable at around 42% over the next couple of years until weekly food waste collections are introduced. The Government has proposed to introduce free, weekly food waste collections to households by 2023.</p> <p>The proportion of household waste sent to landfill is likely to remain low due to existing contracts in place to send the majority of County Durham's non-recyclable/ compostable waste to an energy from waste plant in Teesside.</p>	

Identifying Key Sustainability Issues (Task A3)

2.1.11 Following the identification of objectives from relevant plans and programmes (task A1) and collection and analysis of social, economic and environmental data (task A2) it was possible to identify key sustainability issues pertaining to County Durham. This fed into the development of the SA objectives and Framework which is used to focus the assessment. The sustainability issues that have the most relevance to minerals and waste development and management are identified as follows.

1. Continued high levels of deprivation with economic, health and education disparities between the county and national averages.
2. Persistent social, economic and physical disparities between parts of the county including particular concentrations of poor-quality housing, degraded environments, poor health and unemployment.
3. Increasing and ageing population which will increase demand for additional infrastructure, housing, services etc to meet needs.
4. Narrow economic base with high dependency on public sector employment and need for rural diversification.
5. The demographic profile of the County could lead to a shrinking workforce and loss of associated skills and experience from the workplace.
6. Dispersed settlement pattern and rurality creates challenges in respect of access and sustainable travel in some parts of the county.
7. Meeting net zero targets by 2050 to avoid the most damaging impacts of climate change will be challenging and requires fundamental changes in the way society and business operate.
8. Increased frequency and severity of floods and other extreme weather events because of 'locked in' climate change affecting settlements, water systems, economy, transport, habitats and built heritage.
9. Good air quality Countywide but with poor quality hotspots in Durham City and Chester-le-Street.
10. Improvements in water quality from implementing River Basin Management Plans, but attaining 'good status' of water bodies remains a challenge
11. Increased demand for water and need for wastewater treatment from new households and development.
12. Significant areas of contaminated land in County Durham remain due to its mining and industrial heritage.
13. Nature recovery along with a continued need to protect and enhance biodiversity and aid adaptation of habitats and species to climate change is required to reverse decline.
14. Continued need to protect and enhance the distinctive character and quality of County Durham's landscape.
15. Continued need to protect and enhance heritage assets, recognising that the County's heritage assets are an irreplaceable resource that should be enjoyed and conserved in a manner appropriate to their significance.

16. Increased production of renewable energy and greater transition towards uptake, particularly in the domestic sector in next decade, albeit uncertainty in growth in onshore wind development as part of the energy mix.
17. Richness of minerals resources and the impact of minerals development on communities and the environment.
18. Consistent but high levels of household waste (kg per household) and stabilising reuse, recycling and composting activity.

Developing the SA Framework (Task A4)

2.1.12 The SA Framework is central to the SA process and is used to assess the effects of the Plan (M&WDPD) and any alternatives against. The framework consists of SA objectives and more detailed decision-making criteria. In formulating the objectives regard was given to the outputs of tasks A1-A3, namely:

- Key messages identified following the (context) review of relevant plans, policies and programmes.
- Social, economic and environmental trends derived from baseline data; and
- Identification of County Durham’s key sustainability issues

2.1.13 The following table presents the SA Framework and its relevance to minerals and waste development. Please note that when assessing effects, the more detailed decision-making criteria against each SA objective, is used as a prompt to the assessor of the type of issues that could be considered rather than a definitive list of questions which require individual comment against. Please also note that following consultation on the draft M&WDPD and its SA, minor revisions have been made to SA objectives 9, 12 and 13 to take account of comments from Historic England and the Environment Agency. These are indicated in bold text.

Table 4: SA Framework and Relevant Considerations

Sustainability Appraisal Objectives	Will the Plan...	Relevant Considerations
1. To provide everybody with the opportunity to live in a decent and affordable home	<ul style="list-style-type: none"> • Ensure the requirement for affordable housing is met across a range of tenures? • Decrease the number of vacant properties and properties that don’t meet the decent homes standard? • Site new housing in deliverable locations linked to identified need? 	<ul style="list-style-type: none"> • Supply of minerals required to build new homes including affordable homes. • Management of construction and demolition waste linked to new housing provision • Management of household waste linked to new housing • Safeguarding of resources, sites, facilities and infrastructure

Sustainability Appraisal Objectives	Will the Plan...	Relevant Considerations
	<ul style="list-style-type: none"> • Ensure that a mix of housing type and size is available in the county? • Improve energy efficiency and reduce fuel poverty? 	<p>relative to housing location/demand.</p>
<p>2. To promote strong, secure communities</p>	<ul style="list-style-type: none"> • Enhance a sense of safety and security? • Deter / prevent crime? • Reduce the adverse impacts of traffic (including HGV's) on communities? • Encourage a sense of community or wider engagement in community activities or local democracy? • Promote mutual understanding of different ethnic and cultural groups? • Help cater for the needs of an ageing population? • Increase cultural awareness through enhancing and promoting the local historic environment? 	<ul style="list-style-type: none"> • Safety and security of sites and infrastructure • Avoiding/minimising haulage impacts of minerals/waste • Accessibility and location of waste facilities to reduce fly tipping incidents • Opportunities for community engagement and involvement in minerals and waste decision making • Community benefits derived as a result of minerals and waste development • Supporting community led waste management schemes • Understanding and responding to the waste management requirements of an ageing population
<p>3. To improve education, training and life-long learning, and maintain a healthy labour market</p>	<ul style="list-style-type: none"> • Increase the quantity or quality of education, training opportunities or facilities • Improve access to education or training opportunities? • Promote lifelong learning? • Raise educational and employment aspirations? 	<ul style="list-style-type: none"> • Qualification, training and volunteer opportunities as a result of minerals and waste development and management • Awareness raising and behavioural change in relation to resource management and the waste hierarchy

Sustainability Appraisal Objectives	Will the Plan...	Relevant Considerations
		<ul style="list-style-type: none"> • Impacts of minerals and waste development on educational facilities
4. To reduce health inequalities and promote healthy lifestyles	<ul style="list-style-type: none"> • Contribute to promotion of healthier lifestyles and healthy leisure opportunities? (e.g. cycling and walking) • Improve access to public open space / multi-functional green infrastructure? • Reduce health inequalities? • Improve access to healthcare? 	<ul style="list-style-type: none"> • Avoiding/minimising the impact of nuisances associated with minerals and waste development such as noise pollution, odour and dust • Impact of sites and facilities on existing green infrastructure and rights of way • Opportunities for the creation of new or enhanced access to recreation and leisure through restoration and afteruses.
5. To reduce the need to travel and promote use of sustainable transport options	<ul style="list-style-type: none"> • Reduce the need for travel/ transport (e.g. by ensuring local needs are met locally or by telecommunication)? • Help people to access jobs, services and facilities easily? • Protect / increase the range of shops, services, amenities and employment opportunities in town and village centres? • Promote / widen opportunities for 'greener' modes of travel (walking, cycling public or shared transport)? • Ensure development is served by an appropriate level of transport infrastructure including public and sustainable transport networks? 	<ul style="list-style-type: none"> • Encouraging proximity between minerals and waste sites and processing facilities/markets/sources • Provision an improvement of public access to facilities enabling sustainable waste management • Encouraging more sustainable forms of minerals and waste transportation • Resources which support the transition to Electric Vehicles

Sustainability Appraisal Objectives	Will the Plan...	Relevant Considerations
	<ul style="list-style-type: none"> • Move freight from road to rail / sea? 	
6. To alleviate deprivation and poverty	<ul style="list-style-type: none"> • Help those on lower incomes? • Contribute towards local regeneration initiatives, or benefit areas suffering from economic deprivation? • Improve economic, social and environmental conditions in the most deprived areas and for the most deprived groups? • Improve physical access to jobs? • Help reduce unemployment? • Encourage higher incomes? 	<ul style="list-style-type: none"> • Potential impacts of minerals and waste development on social, economic and environmental conditions in deprived areas • Potential opportunities for restoration of sites to contribute towards addressing legacy issues and/or regeneration initiatives • The safeguarding or creation of jobs in deprived areas
7. To develop a sustainable and diverse economy with high levels of employment	<ul style="list-style-type: none"> • Safeguard employment or create new employment opportunities? • Promote business expansion / development? • Promote growth in key economic sectors? • Encourage clean technologies to locate in the area? • Reduce road congestion and help reduce journey times to key employment sites? • Encourage young people to stay in the area? • Encourage the use of local labour, goods and services? 	<ul style="list-style-type: none"> • Safeguarding and creation of direct and indirect jobs in the minerals and waste sector • Contribution to a green, economic recovery from the Covid 19 pandemic • Contribution that the provision of a steady and adequate supply of mineral resources makes to the local, regional and national economy • Ensuring that County Durham’s mineral resources are not needlessly sterilised and that they are conserved and used appropriately • Capturing value from waste streams by

Sustainability Appraisal Objectives	Will the Plan...	Relevant Considerations
	<ul style="list-style-type: none"> • Improve the diversity /resilience of the economy? • Help realise the economic potential of the County's natural and historic assets in a sustainable way? 	<p>creating saleable products from them</p> <ul style="list-style-type: none"> • Innovation and competitiveness within minerals and waste industry • Long term investment requirements for minerals and waste infrastructure • Rural diversification • Impact of development on key visitor locations • Potential for mineral site restoration to create new visitor attractions
8. To reduce the causes of climate change	<ul style="list-style-type: none"> • Reduce the demand for energy or increase energy efficiency of buildings, transport or industry? • Minimise greenhouse gas emissions from waste management? • Contribute to the development / wider use of renewable energy sources • Contribute to the absorption of carbon dioxide? 	<ul style="list-style-type: none"> • Reducing emissions from minerals and waste development through use of energy efficient and low and zero carbon design and adoption of efficient plant, fleet and processes. • Reducing haulage associated emissions (see SA objective 5) • Development which supports the transition to a low carbon future • Locations for development which avoid carbon sinks e.g. peatland • Opportunities through restoration to increase carbon sequestration • Encouraging the recovery of energy from waste • Enabling increased levels of waste recovery, recycling and composting • Preventing the loss of embodied energy by

Sustainability Appraisal Objectives	Will the Plan...	Relevant Considerations
		<p>promoting the use of recycled, recyclable and secondary resources</p>
<p>9. To respond and enable adaptation to the inevitable impacts of climate change</p>	<ul style="list-style-type: none"> • Reduce and minimise the risk of / from flooding or coastal erosion, including in areas at risk from rising mine water? • Discourage inappropriate development in areas at risk from flooding? • Ensure that new development does not give rise to flood risk elsewhere? • Help to cope with climate extremes, e.g. design of buildings and urban areas • Allow for habitats or species of biodiversity importance to adapt to climate change? 	<ul style="list-style-type: none"> • Impact of minerals and waste development on increasing or potentially alleviating flood risk • Ensuring that minerals and waste developments are not susceptible to the effects of climate change and do not exacerbate these.
<p>10. To protect and enhance biodiversity and geodiversity</p>	<ul style="list-style-type: none"> • Protect or enhance internationally designated wildlife / geological sites? • Protect or enhance nationally designated wildlife / geological sites and protected species? • Protect or enhance UK and Durham Biodiversity Action Plan priority habitats and species? • Protect or enhance other areas of local importance for biodiversity or geodiversity (LNR's, CWS, CGS, semi-natural ancient woodland)? 	<ul style="list-style-type: none"> • Location and effects of minerals and waste development on biodiversity/geodiversity • Potential opportunities for enhancement and net gains through restoration • Potential creation of new areas of geodiversity value through minerals working • Potential spread of invasive species through composting activity • Compatibility with nature recovery plans/projects

Sustainability Appraisal Objectives	Will the Plan...	Relevant Considerations
	<ul style="list-style-type: none"> • Prevent deterioration and fragmentation of habitat and establish and maintain sustainable habitat networks? • Improve access to or understanding of local biodiversity / geodiversity resources? • Ensure adequate and appropriate mitigation for any biodiversity loss which may occur as a result of development? • Create new areas or sites of biodiversity / geodiversity value? 	
11. To protect and enhance the quality and character of landscape and townscape	<ul style="list-style-type: none"> • Protect and enhance designated protected landscape areas (i.e. AONB, Durham Heritage Coast)? • Protect and enhance local landscape character and quality? • Protect and maintain the openness of the green belt? • Ensure that new developments reflect the distinctive character and appearance of the local area? • Encourage good quality design in new development? • Protect and enhance the vitality and viability of the county's town centres and main village centres? • Protect and improve the quality of public areas / discourage fly tipping and reduce litter? 	<ul style="list-style-type: none"> • Location and effects of minerals and waste development to landscape character and quality • Potential opportunities for landscape enhancement on restoration • Contribution that working of traditional building materials make to character • Accessibility and location of waste facilities to reduce fly tipping incidents • Preserving openness of the greenbelt • Co-location of waste facilities with complementary industrial facilities where possible to reduce visual intrusion

Sustainability Appraisal Objectives	Will the Plan...	Relevant Considerations
	<ul style="list-style-type: none"> • Help regeneration of degraded built environments? 	
12. To protect and enhance cultural heritage & the historic environment	<ul style="list-style-type: none"> • Protect and enhance the significance of designated and non-designated heritage assets, including their setting? • Reduce the number or severity of designated and non-designated heritage assets at risk? • Protect and enhance locally and regionally important designated and non-designated heritage assets? • Realise the economic and educational potential of designated and non-designated heritage assets and help make them accessible? • Recognise the contribution of conserving and enhancing existing buildings and other heritage assets to local distinctiveness, sustainable resource use and climate change mitigation • Ensure the recording and appropriate protection of undiscovered archaeological features in areas of potential development? 	<ul style="list-style-type: none"> • Location and effects of minerals and waste development on the historic environment • Industrial heritage and cultural identity of County Durham as a result of minerals working • Potential opportunities to reveal undiscovered archaeological features and improve understanding • Supply of building and roofing stone for the repair and construction of buildings and structures • Contribution the re-use and restoration of historic buildings makes to waste prevention, reuse and architectural salvage.
13. To protect and improve air, water and soil resources	<ul style="list-style-type: none"> • Protect and improve local air quality? • Protect and maintain or improve surface & groundwater quality or 	<ul style="list-style-type: none"> • Reducing emissions to air, including dust from minerals and waste development.

Sustainability Appraisal Objectives	Will the Plan...	Relevant Considerations
	<p>the physical integrity of aquifers?</p> <ul style="list-style-type: none"> • Reduce the amount of water used? • Keep water consumption / emission within local carrying capacity limits? • Improve areas of historic land contamination and prevent contamination to new areas? • Encourage the location of development on previously developed land (while taking account of biodiversity value that may be present?) • Minimise the loss of better quality agricultural land to development? • Promote good soil management and health and avoid exacerbating dryness associated with drought. 	<ul style="list-style-type: none"> • Avoiding pollution of surface and groundwater sources • Addressing legacy issues of mine water pollution • Quantitative status of groundwater and impacts of abstraction/dewatering • Protecting the best and most versatile agricultural land / land restoration proposals • Conserving and enhancing soil resources • Avoiding contamination and opportunities to reduce the amount of derelict, contaminated and degraded land
<p>14. To reduce waste and encourage the sustainable and efficient use of materials</p>	<ul style="list-style-type: none"> • Encourage an increase in the reduction, re-use, recycling and recovery of energy from waste (progress away from landfill and up the “waste hierarchy”) • Encourage the use of recycled / reused materials? • Minimise the use of new non-renewable resources? • Reduce the adverse impacts of waste management facilities to acceptable levels? 	<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"> • Encourage the community to take responsibility for reducing its own waste • Promote the maintenance, sensitive adaptation and re-use of buildings? 	
<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"> • Help meet an identified need for minerals? • Reduce the adverse impacts of minerals processing and extraction to acceptable levels? • Reduce the energy used in minerals extraction, processing and transport? • Ensure the efficient use of minerals resources? • Avoid the sterilisation of economically important mineral resources? • Promote good practice in land reclamation having regard to sustainable after-use appropriate to the locality? 	<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>

2.2 Approach to Stage B (Assessment)

2.2.1 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 its associated sustainability objectives and decision-making criteria. A description of the component tasks of Stage B and how they have been undertaken is set out as follows:

Testing the M&WDPD Objectives against the SA Framework (Task B1)

2.2.2 The purpose of B1 is to assess the compatibility of the Plan's objectives with the SA Framework objectives. This process identifies any areas of potential conflict and measures to either avoid or minimise conflict. As a result of undertaking B1 a couple of conflicting non-strategic M&WDPD objectives were identified. The SA recommended measures to mitigate them through the development of the DPD and reword them as necessary. The SA also identified a potential gap in the coverage of the Plan objectives and a new objective was included as a result. Due to changes made to the wording of the objectives and the deletion of one objective between the Draft and Publication Draft stages of DPD development, the compatibility assessment was repeated to inform this stage of Plan development. Please see section 3 for more detail.

Developing the M&WDPD Options (Task B2)

2.2.3 There may be different ways for a Plan to meet its objectives, these are known as options or reasonable alternatives. Whilst there is no prescribed definition of what constitutes a reasonable alternative, it is understood that to be 'reasonable' any potential alternative must be realistic, taking account of the objectives of the Plan and its geographical scope. Part of the role of SA is to consider whether there are reasonable alternatives to the action being proposed which, in addition to being realistic and relevant to the scope of the Plan, may also contribute further towards achieving sustainable development.

2.2.4 In relation to minerals and waste development in County Durham, the strategic options such as where to locate new working of some mineral types or how much waste management provision should be made were considered by the County Durham Plan and its SA. The SA of the M&WDPD and consideration of reasonable alternatives related to whether there were different approaches that could be taken to relevant development management issues such as noise and to the different site proposals that had been submitted to the Council for allocation and how they would address identified needs. The SA considered whether there were reasonable alternatives based upon for example:

- The local and national context to any given issue and associated evidence;
- Requirements within the National Planning Policy Framework (NPPF) and National Planning Policy for Waste (NPPW) which the M&WPD needs to be consistent with;
- Planning Practice Guidance and associated limits, thresholds and standards;
- The strategic approach adopted by the County Durham Plan; and

- The existing 'business as usual' approach outlined within saved policies of the Minerals Local Plan and Waste Local Plan; and
- The types of proposals submitted to the Council and how they could address identified needs for minerals and waste disposal provision.

2.2.5 The process of considering whether there were reasonable alternatives was supported by discussion with the spatial planning officers developing the M&WDPD and with officers across different specialisms within the Council as necessary e.g. ecology, landscape, climate change etc. Consultation responses to the Draft M&WDPD were also taken into account to help inform further options development for the Publication Draft version of the M&WDPD. The development of M&WDPD options is presented in section 4 alongside each policy appraisal under the heading of 'Reasonable Alternatives and within section 5 of this report.

Predicting and Evaluating the Effects of the M&WDPD (Task B3)

2.2.6 The purpose of impact prediction is to identify the M&WDPD'S likely future impacts. The aim of impact evaluation is to translate the predicted impacts into statements of importance or significance. This gives information to those developing the M&WDPD about the significance of individual or cumulative impacts and subsequently who 'wins' and 'loses' based on the impacts.

2.2.7 Task B3 was undertaken using a recording sheet, known as SA matrices. The SA matrices require assessors to consider and record:

- Whether there are any effects against each SA objective and if there are, whether these are positive or negative for example;
- If the effects predicted are short, medium or long term. For example, in some cases predicted impacts could be negative in the short term but have longer term positive effects;
- How likely the effects predicted will occur i.e.
 - Certain - If the option / policy is implemented the predicted effect will occur e.g. The site will incur the loss of agricultural land
 - Probable - If the option / policy is implemented there is a high likelihood that the predicted effect will occur
 - Possible - If the option/policy is implemented the predicted effect may occur
 - Uncertain - It is uncertain what effect will occur in the first instance.
- On what geographic scale effects will occur e.g. settlement scale, ward/parish level, countywide or wider North East region;
- If the effects predicted are direct or indirect and whether they are 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.

2.2.8 In order to help visually display the prediction and evaluation of effects, the following key was devised:

Table 5: 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	✓/×

2.2.9 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.

2.2.10 In addition to the information collected at the Stage A (Scoping Stage) and supporting assessments several other information sources and tools 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 this 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.

2.2.11 In all cases, effects were predicted and evaluated based on available information and professional judgement. Where there were uncertainties or limitations in the information underlying predictions these have been stated. Where assumptions and estimates have been made these have also been stated. Where potential negative effects could not be discounted due to incomplete data for example, the SA has adopted the 'precautionary principle' and has assumed that mitigation will be necessary. Where a precautionary approach to the prediction and evaluation of effects has been necessary, this has also been stated within the SA.

2.2.12 SA is not Environment Impact Assessment (EIA) and it is understood that in some cases, information needed to inform effects more precisely will not be available until it is made available to support planning applications. The SA has however, helped to highlight what those information and further assessment requirements are.

2.2.13 The detailed SA Matrices are contained within the Appendix to this report. An overview of the key social, economic and environmental effects, recommendations and mitigation measures are provided within the main body of this report.

2.2.14 The changes made to each policy (if any) between the Draft and Publication Draft stages of M&WDPD development were also reviewed and are outlined throughout this report under the heading of 'Appraising Significant Changes.' Where the amendments were considered 'significant' i.e., if they changed the original emphasis of the policy or introduced substantial new criteria they were subject to reassessment. The policies reassessed at this stage of M&WDPD development include:

- 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

2.2.15 The SA at this stage of Plan development, has also assessed two new policies and their alternatives:

- MW23: Site Specific Allocation Inert Waste Disposal at Crime Rigg Quarry
- MW24: Site Specific Allocation Inert Waste Disposal at Cold Knuckle Quarry

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

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

Considering ways to Mitigate Adverse Effects and Maximise Beneficial Effects (Task B4)

2.2.17 The purpose of this stage is to minimise any negative impacts; optimise positive ones; enhance sustainability in other ways; and ensure that the proposed mitigation measures do not themselves have negative impacts. Typical mitigation measures that have been identified to date include:

- Changes to the wording of policies or supporting text e.g.
 - The removal of components/statements that are not in line with the sustainability objectives;
 - The addition of new components/statements;
- Requirements to substitute or offset for certain types of impacts e.g. provision of biodiversity net gains, carbon offsetting
- Measures to be implemented alongside minerals or waste development e.g. landscaping measures and use of native species;
- Identification of issues that need to be considered and analysed further through distinct, specialist assessment e.g. hydrogeological surveys etc

2.2.18 Mitigation measures have been highlighted throughout this report under the heading of 'Recommendations / Mitigation.' Commentary is also included, highlighting whether they were accepted or not by officers developing the M&WDPD from the Council's Spatial Policy Team.

Monitoring Measures (Task B5)

2.2.19 The SEA Directive requires monitoring 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.

2.2.20 Significant issues are identified within text boxes throughout this report. Monitoring measures are outlined in section 7.

2.3 Preparing and Seeking Representations on the Sustainability Report (Stages C and D)

2.3.1 Stage B of the Sustainability Assessment and the preparation of a Sustainability Report commenced in 2021 to support the development of the Draft M&WDPD. This report was published alongside the Draft M&WDPD for formal consultation between September and November 2021. Representations on the SA report were received from Natural England, the Environment Agency and Historic England.

2.3.2 Natural England commented that the Sustainability Appraisal set out a clear framework for assessing the M&WDPD and comprehensively covered the key sustainability issues that fall within their remit.

2.3.3 The Environment Agency suggested some minor amendments to the decision-making criteria relating to SA objectives 8 (reducing the causes of climate change), 9 (adaptation to climate change), 13 (air, water and soil) and 15 (sustainability of mineral extraction). Revisions were subsequently made to the decision-making criteria supporting SA objective 9 and 13. The suggested inclusions to decision making criteria supporting SA objectives 8 and 15 were not made as these are considered to be adequately covered by the SA Framework and other supporting SA objectives.

2.3.4 The Environment Agency also noted and supports that the SA had highlighted the potential risks to groundwater resources posed by allocations at Thrislington Quarry and Crime Rigg Quarry, the need for detailed hydrogeological assessment of these sites and that the Environment Agency would be pivotal to determining whether risks can be successfully mitigated.

2.3.5 Historic England suggested a revision to a decision-making criterion supporting SA objective 12 (Historic Environment). This was so that the criterion more broadly and accurately encompasses the elements that contribute to the significance of a heritage asset. This revision was made in response to the suggestion.

2.3.6 Historic England also suggested changes to the way the SA had interpreted the policy meaning of 'avoiding unacceptable adverse environmental impacts' in the context of heritage assets. Historic England confirmed that in addition to 'substantial' harm as highlighted by the SA, the policy wording would help to avoid harm as much as possible including 'less than substantial harm' unless there are public benefits that outweigh it. The assessment and references to this issue have therefore been amended accordingly.

2.3.7 Furthermore, Historic England advised that they could not agree with the SA assessment outcome of neutral impacts to Shadforth Conservation Area and Ludworth Tower until a more detailed Heritage Impact Assessment is undertaken. A Heritage Impact Assessment has since been undertaken which confirms the neutral assessment outcome in the SA.

2.3.8 Please note that the minor revisions made to the decision-making criteria within the SA Framework as per Environment Agency and Historic England representations do not alter the overall emphasis of the main SA objectives. As mentioned in paragraph 2.1.13 the decision-making criteria is also used as a prompt to the assessor rather than a definitive list of questions, requiring individual comment. Previous assessments have been reviewed in light of the revisions made but did not require changes to previously predicted effects as a result.

2.3.9 Representations on the SA report for the M&WDPD Draft Plan (2021) and responses to it can be viewed in full in the Appendices document accompanying this report (at Appendix A). 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.

2.3.10 The following sections of this report provide the assessment of the M&WDPD objectives, consideration of reasonable alternatives to the M&WDPD and the assessment of M&WDPD policies.

3. DPD Assessment – Vision and Objectives

Vision

3.0.1 An overarching vision for County Durham was provided within the County Durham Plan, adopted in October 2020. The M&WDPD confirms that given its role it is neither appropriate nor necessary to alter this overarching vision. For ease of reference purposes only, the specific role of minerals and waste set out within the vision has been extracted as follows:

“County Durham will continue to play its role and remain an important source of minerals. Its quarries will continue to produce the steady and adequate supply of minerals, as required. New or extended mineral workings will be guided to environmentally acceptable locations and carried out to the highest environmental standards. County Durham's waste will be viewed as a valuable resource and waste recycling will be an integrated part of daily lives. All our planning functions will aim to drive waste up the waste hierarchy and use resources efficiently. New waste facilities will be built in the right place and at the right time, protecting human health and the environment from waste development.”

3.0.2 The SA of the Spatial Vision is documented in full within section 4.1.1 of the [SA Report: County Durham Plan - Pre-Submission Draft \(2019\) \(Ref C13\)](#)

3.0.3 The SA predicted that the wording of the Vision had positive effects in relation to reducing waste and encouraging the sustainable and efficient use of materials. Waste is considered a valuable resource and recycling is fundamental to people's daily lives. The Vision was also predicted to have very positive effects in relation to improving the sustainability of minerals extraction and use and reducing adverse impacts on communities and the environment.

Objectives

3.0.4 Strategic objectives for the Supply of Minerals and Waste Management in County Durham were also provided within the County Durham Plan. Similarly, the M&WDPD confirms that given its role it is neither appropriate nor necessary for it to alter these existing strategic objectives. The strategic objectives of the County Durham Plan are derived from its Vision and focus on the key issues which the County Durham Plan needed to address. Strategic objective 21 and 22 relate specifically to minerals and waste although other county Durham Plan objectives are also considered to be relevant.

3.0.5 The SA of the County Durham Plan objectives is documented in full within section 4.1.2 of the [SA Report: County Durham Plan - Pre-Submission Draft \(2019\) \(Ref C13\)](#)

3.0.6 The M&WDPD includes a number of non-strategic objectives in order to set the direction for the policies that it seeks to deliver and are considered complimentary to those in the County Durham plan. These have been updated since the publication of the Draft M&WDPD and the following table shows the original and revised non-strategic objectives

Table 6: M&WDPD Non-Strategic Objectives

Original Objective	Revised Objective
<p>1. High Environmental Standards - To ensure that County Durham’s minerals and waste sites operate to high environmental standards by avoiding, reducing, or mitigating as far as possible adverse impacts while also protecting the environment, the amenity and health of local communities.</p>	<p>1. Protecting the environment and amenity and health of local communities - To ensure that County Durham’s minerals and waste sites operate to high environmental standards by avoiding, reducing, or mitigating as far as possible adverse impacts while also protecting the environment, the amenity and health of local communities.</p>
<p>2. Sustainable Transport - To encourage and facilitate sustainable transport of minerals and waste and seek to minimise the adverse impact of the traffic and transport implications of minerals and waste development.</p>	<p>2. Minimising adverse impacts and ensuring the Sustainable Transport of Minerals and Waste - To encourage and facilitate sustainable transport of minerals and waste and seek to minimise the adverse impact of the traffic and transport implications of minerals and waste development.</p>
<p>3. Other Minerals of Local and National Importance - To ensure that a policy framework is in place to enable the consideration of planning applications for the working of minerals resources of local and national importance which are not currently worked in County Durham today but whose future working cannot be discounted in the future and to provide certainty to the approach that will be taken to peat reflecting the provisions of the National Planning Policy Framework (NPPF).</p>	<p>3. To provide for other Minerals of Local and National Importance - To ensure that a policy framework is in place to enable the consideration of planning applications for the working of minerals resources of local and national importance which are not currently worked in County Durham today but whose future working cannot be discounted in the future and to provide certainty to the approach that will be taken to peat reflecting the provisions of the National Planning Policy Framework (NPPF).</p>
<p>4. Disposal and ‘Other Recovery’ of Inert Waste - To ensure that a policy framework is in place to enable the consideration of planning applications for the disposal and ‘other recovery’ of inert waste.</p>	<p>4. To ensure the ‘Other Recovery’ and disposal of Inert and Non-Hazardous Waste - To ensure that a policy framework is in place to enable the consideration of planning applications for the ‘other recovery’ and disposal of inert and non-hazardous waste.</p>
<p>5. Restoration - To ensure that County Durham’s minerals sites and temporary waste management sites are restored at the earliest opportunity and in ways that wherever possible enhance the environment and amenity of local communities and achieve high quality restoration and aftercare, contributes to climate change adaptation and mitigation, and maximises benefits.</p>	<p>5. High Quality Restoration of Minerals and Waste Sites - Ensuring that County Durham’s minerals sites and temporary waste management sites are restored at the earliest opportunity and in ways that, wherever possible, enhances the environment and amenity of local communities, achieves high quality restoration and aftercare, contributes to</p>

Original Objective	Revised Objective
	climate change adaptation and mitigation and maximises benefits.
<p>6. Community Involvement - To make sure that local communities have the opportunity to be involved in decisions about new minerals and waste developments by providing information, encouraging wider involvement, and targeting key groups, including hard to reach groups, or individuals where appropriate.</p>	<p>This objective has been deleted.</p>
<p>7. Allocations – To consider the allocation of non-strategic minerals and waste sites and to consider additional land for mineral working to meet the requirements of the Council’s current Local Aggregate Assessment and the identified waste capacity gap.</p>	<p>6. Meeting our future needs – Ensuring that the steady and adequate supply of minerals can be maintained and that the future capacity for the disposal of waste is provided for in line with the requirements of the Council’s current Local Aggregate Assessment and current identified waste capacity gap.</p>

Appraising Significant Changes

3.0.7 With the exception of objective 4 and the previous objective 6 (community involvement), there have been no significant changes to the objectives. The majority of changes relate to amended titles. Objective 4 has been amended to include non-hazardous waste within its provisions to address this gap and objective 6 (community involvement) has been deleted.

3.0.8 The deletion of the community involvement objective is in response to an objection made on the Draft M&WDPD which highlighted that it is superfluous as the planning system enables the community to be involved in all planning decisions, not just minerals and waste.

3.0.9 The assessment carried out to compare the DPD objectives with the sustainability objectives is designed to identify areas of compatibility and conflict. This helps to refine the objectives of the M&WDPD and where conflict has been identified, identify potential avoidance / mitigation measures at an early stage of the M&WDPD's development.

3.0.10 The ‘compatibility’ assessment of the Community Involvement objective was found to be neutral against most SA objectives except for SA objective 2 (Strong secure communities) and 15 (reducing impacts of minerals extraction) where compatibility was identified. As most effects were assessed as neutral and the positive compatibility effects would occur in any event without the objective, there are not considered to be any significant sustainability issues with the deletion of the community involvement objective.

3.0.11 The inclusion of non-hazardous waste within objective 4 expands the scope of the objective requiring a reassessment of its compatibility against SA objectives. The following tables present the compatibility assessment of the revised M&WDPD objectives.

Table 7: Key to Compatibility Assessment

Outcome	Symbol
Compatible	✓
Incompatible	✗
Compatible and Incompatible aspects	✓/✗
Neutral	0

Table 8: Compatibility Assessment

	SA 1. Decent Affordable Homes	SA 2. Strong Secure Communities	SA 3. Education, Training & Lifelong Learning	SA 4. Health: Inequalities & Lifestyles	SA 5. Need to Travel & Sustainable Transport	SA 6. Alleviate Deprivation	SA 7. Economy & Employment	SA 8. Climate Change: Mitigation	SA 9. Climate Change: Adaptation	SA 10. Biodiversity & Geodiversity	SA 11. Landscape & Townscape	SA 12. Historic Environment	SA 13. Resources: Air, Water & Soil	SA 14. Waste & Use of Materials	SA 15. Minerals Extraction & Impacts
M&W 1. Protecting Environment, Amenity and Health	0	✓	0	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
M&W 2. Sustainable Transport of Minerals and Waste	0	✓	0	✓	✓	✓	0	✓	0	✓	✓	✓	✓	✓	✓
M&W 3. Other Minerals	0	✓/✗	✓	✓/✗	✓/✗	✓	✓	✓/✗	✓/✗	✓/✗	✓/✗	✓/✗	✓/✗	0	✓/✗
M&W 4. Inert and Non Hazardous Waste	0	✓/✗	✓	✓/✗	✓/✗	0	✓	✓/✗	✓/✗	✓/✗	✓/✗	✓/✗	✓/✗	✓/✗	✓/✗
M&W 5. Restoration	0	✓	0	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
M&W 6. Meeting	✓	✗	✓	✗	✗	✓	✓	✓/✗	✓/✗	✓/✗	✓/✗	✓/✗	✗	✗	✓/✗

Future Needs															
---------------------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

3.0.12 The majority of M&WDPD objectives were assessed as having a neutral effect against SA objective 1 (homes). The exception being M&WDPD objective 6 which seeks to allocate sites where needed and justified. The allocation of sites for further sand resources could contribute positively to the construction materials needed to build new homes in County Durham and the wider region.

3.0.13 With the exception of M&WDPD objectives 3,4 and 6, no areas of potential conflict between the M&WDPD and SA objectives were identified. Objectives 3,4 and 6 are therefore discussed further as follows:

M&WDPD Objective 3: To provide for other Minerals of Local and National Importance

3.0.14 Ensuring that the M&WDPD reflects the NPPF in respect of not granting planning permission for peat will contribute towards protecting this resource in County Durham and avoid all potential environmental and community impacts associated with its working. However, the potential working of other minerals of local and national importance which are not currently worked in County Durham, whilst providing employment and training opportunities, could for example:

- Increase the adverse impacts of traffic on communities;
- Increase greenhouse gas emissions;
- Impact adversely upon sensitive habitats, landscape and heritage assets; and/or
- Impact upon air, water and soil resources.

3.0.15 The M&WDPD will therefore need to clearly explain why the future working of such minerals cannot be discounted. Whilst it would be impossible to eliminate all effects if proposals are permitted, the policies within the M&WDPD will need to include criteria which, (together with the Policies in the County Durham Plan) avoids the most significant effects and minimises or as a last resort, compensates for other adverse effects. Benefits to communities and the environment should also be sought as part of restoration/aftercare proposals.

M&WDPD Objective 4: To ensure the 'Other Recovery' and disposal of Inert and Non-Hazardous Waste

3.0.16 Waste recovery precedes disposal in the waste management hierarchy and requires waste to serve a useful purpose by replacing other materials which would have otherwise been used. Recovery of inert waste could include for example, the creation of restoration landforms at existing active mineral sites, or agricultural or ecological land improvement schemes or civil engineering operations. The areas of compatibility identified therefore relate to where recovery of waste:

- Represents the efficient use of materials and conserves primary resources;

- Helps to restore mineral sites;
- Improves agricultural land;
- Potentially substitutes materials which would have otherwise been transported from further afield; and
- Minimises the need for new disposal schemes such as landfill and their potential impacts on communities and the environment

3.0.17 However, it is also recognised that the method of recovery could also have adverse impacts upon communities and the environment and the policies within the M&WDPD will need to include measures to ensure that the optimal method is selected. For example, inert waste should not be imported to restore mineral sites where sufficient materials on site are already available e.g. excavated soils. The M&WDPD will also need to ensure that policies include criteria which safeguard communities and environmental receptors.

3.0.18 In relation to disposal, new schemes in County Durham, whilst potentially managing waste closer to source and providing employment and training opportunities could have a range of adverse impacts on communities and environmental receptors. The M&WDPD, linking to the County Durham Plan, will need to provide the background as to why such schemes are necessary. Policies within the M&WDPD will need to ensure that inert and non-hazardous waste cannot be managed at a higher level of the waste hierarchy in the first instance and ensure that policies include criteria which safeguards communities and the environment.

M&WDPD Objective 6: Meeting our future needs

3.0.19 Whilst there has been some change to the previous wording of this objective, the emphasis remains the same. Further minerals working and waste disposal operations are considered necessary to meet identified needs. Whilst compatible with SA objectives 1 (homes) in relation to provision of construction materials; 3 (education); 6 (deprivation) and 7 (economy) in relation to jobs safeguarded, created and opportunities for skills development several potential areas of conflict have been identified. Additional minerals extraction and waste disposal activity can:

- Impact on communities and health and wellbeing in terms of safety issues, adverse impacts of traffic, noise, dust, air pollution, odour, vibration, visual amenity, impacts to publicly accessible green space and Public Rights of Way etc. Where a number of quarries or landfill sites for example are operating in proximity there is also the potential for cumulative effects.
- Increase transportation requirements and trips associated with the haulage of minerals and waste
- Impact upon air, water and soil resources
- Result in too much landfill provision which may result in an excessive importation of waste from outside the County.

3.0.20 Several areas of benefit and disbenefit were also identified including:

- Minerals and waste activity can increase greenhouse gas emissions associated with transportation requirements, extraction of minerals and processing. However, it is recognised that some minerals are required to help meet net zero ambitions and transition away from our reliance on fossil fuels.
- Adverse impacts to sensitive habitats, landscape and heritage assets, although the restoration of minerals and waste sites often provide an opportunity to deliver ecological and landscape enhancements and/or better reveal heritage assets and geodiversity in the longer term
- Potential to impact specifically on the quantitative status and flows of groundwaters which may exacerbate any climate related extreme weather events. Although it is recognised that minerals working can provide benefits to flood attenuation of storm waters.

3.0.21 Ensuring that M&WDPD objectives 1, 2 and 5 are met through the drafting of relevant policies will be key to mitigating proposals that may come forward as a consequence of allocating any sites within the M&WDPD. The key will be to ensure that such policies are robust and address all relevant aspects which the SA process will help with.

3.0.22 The assessment of any reasonable alternatives in respect of the sites allocated to meet need is also likely to be required to inform the final allocation of sites based on their sustainability.

Recommendations / Mitigation - M&WDPD Objectives

3.0.23 There are no new recommendations. The SA previously recommended renaming objective 4 so that it better reflected the waste hierarchy and including an objective relating to the allocation of non-strategic sites where needed. These recommendations were accepted.

Recommendations / Mitigation - Development of the M&WDPD

- 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 to:
 - Ensure that waste cannot be managed at a higher levels 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.

Response to SA Recommendations

3.0.24 The Spatial Policy Team will seek to provide necessary context and background within the M&WDPD. In particular, the M&WDPD seeks to ensure that policies are prepared in relation to minerals of local and national importance and that adequate provision is made for waste disposal.

3.0.25 The role of the M&WDPD is signposted in the County Durham Plan. Information on minerals and waste (including information and policies on the waste hierarchy) are also set out within the Council's evidence base and within the County Durham Plan which also committed the council to preparing policies on certain matters including inert recovery and disposal.

3.0.26 M&WDPD policies will be prepared as necessary to deliver the stated objectives of the M&WDPD whilst having regard to the role of all other policies within the M&WDPD, to avoid duplication, as the M&WDPD needs to be read as a whole. In particular, policies will be prepared to provide policy criteria against which proposals can be determined and a policy on the benefits of mineral extraction will be prepared.

4. DPD Assessment - Policies

4.0.1 Prior to considering the assessment of policies within the M&WDPD it is necessary to discuss policies that have been removed from it. These include former policies:

- MW11 Storage of Minerals
- MW13 Local Liaison Groups

Former Policy MW11: Storage of Minerals

4.0.2 Policy MW11 was included within the Draft M&WDPD to replace a similar policy within the County Durham Minerals Local Plan and was intended to relate mainly to brickmaking raw materials (including fireclay) obtained from surface mined coal sites. The Council have reviewed the need for such a policy and agree with the representations made during the consultation that this policy is unnecessary as mineral stockpiling considerations should be included under the main minerals consent being ancillary to the main extraction and/or processing operations. In addition, the Council cannot recall of any occasion in the last ten years when the County Durham Minerals Local Plan Policy had been used.

4.0.3 If brickmaking raw materials needed to be stockpiled then that should now be done at the brick works which needed to use them (the processing site). In County Durham, there would be scope to do this at Todhills Brickworks or the Union Brickworks at Gateshead, or alternatively they could be sold by the mineral operator who extracted them to other brickworks who could use them.

4.0.4 Based on the updated context and given that the storage of minerals is an element that is routinely included as part of the main minerals consent and is highly unlikely to require a separate permission, there are not considered to be any reasonable alternatives to the deletion of the policy as it is considered superfluous. Where not considered to be permitted development by the Town and Country Planning (General Permitted Development) (England) Order 2015, the storage of minerals would be taken into account as part of determining the overall impact of mineral proposals against Policy MW1 General Criteria for Considering Minerals and Waste Development.

4.0.5 The impacts predicted previously by the SA (i.e., positive economic effect and some negative longer term social and environmental effects) are now considered unlikely to occur given that there are no opencast coal sites left in the county and may not be any/many more in the future. Stockpiling was more of an issue in the 1990s when there were a large number of opencast coal sites and it would have been important to prevent the disposal of valuable mineral resources back into the void of opencast coal sites.

Former Policy MW13: Local Liaison Groups

4.0.6 Policy MW13 was included within the Draft M&WDPD in recognition that Local Liaison Groups operate within County Durham and can help to provide a useful exchange of information about specific mineral sites between the mineral operator, the Council and where appropriate other organisations such as the Environment Agency, Town and Parish

Councils and interested residents. The policy required the establishment of these groups where the Council deemed it necessary and appropriate.

4.0.7 However, in response to representations made on the policy, through the consultation of the Draft Plan, the Council acknowledge that it would not be possible to require the establishment of the groups through either planning conditions or legal agreements. The Council can only encourage the formation of such groups. The policy has therefore been deleted although the supporting text that explains the value of the groups and operator expectations where groups have been established has been retained. As the Council is unable to enforce the establishment of Local Liaison Groups there are not considered to be any reasonable alternatives to the deletion of the Policy and its associated requirement.

4.0.8 Whilst the policy has been deleted, it is anticipated that Local Liaison Groups will continue to be established in County Durham as per business-as-usual activity. The positive effects predicted against SA objective 2 (Communities) and 15 (minerals sustainability) are considered likely to occur, although not as a direct result of the M&WDPD. Where established, the SA identified that Local Liaison Groups can assist with reducing any adverse impacts of minerals working on communities throughout the lifetime of the development.

4.1 Policy MW1: General Criteria for Considering Minerals and Waste Development

4.1.1 Minerals and waste development can have a variety of social, economic and environmental impacts which will need to be taken into account when determining proposals. Policy MW1 identifies which receptors will commonly be taken into account when considering such proposals and requires the consideration of individual and cumulative impacts. By doing so, the policy acts as a useful tool for development managers and applicants to ensure that all relevant effects of proposals have been taken into account and should ensure that proposals permitted in accordance with the policy (along with others in the M&WDPD and County Durham Plan) will not result in unacceptable adverse impacts on specified issues. All minerals and waste related development proposals will be assessed against this policy.

4.1.2 Ensuring that all potential impacts of minerals and waste development are taken into account is relevant to M&WDPD objectives 1 and is complimentary to County Durham Plan objectives 9 (Natural Environment), 10 (Built and Historic Environment), 14 (Quality of Life), 17 (Low Carbon), 18 (Sustainable Transport), 19 (Natural Resources), 20 (Supply of minerals) and 21 (Waste Management).

Reasonable Alternatives

4.1.3 The National Planning Policy Framework (NPPF), National Planning Policy for Waste (NPPW) and Planning Practice Guidance (PPG) collectively set out the type of impacts that should be taken into account when considering minerals and waste proposals. For example, the PPG Minerals section (Paragraph 0.13) includes a list of the principal environmental issues that mineral planning authorities should address. There are not considered to be any reasonable alternatives to ensuring that the general criteria that the Council will take into account when determining proposals, also reflects that within national policy and guidance. Ensuring that the cumulative impacts of proposals are taken into account also maintains the business as usual approach as both the existing Minerals Local Plan and Waste Local Plan required this consideration.

4.1.4 One of the methods in which residents and other sensitive receptors could be protected from some of the impacts of minerals and waste development is through the use of stand off distances. In determining suitable stand off distances the PPG advises that 'any proposed separation distance should be established on a site-specific basis and should be effective, properly justified, and reasonable'¹⁵ The use of pre-determined, fixed stand off distances which apply as standard to all minerals and waste sites is therefore not considered to be a reasonable approach to adopt within the M&WDPD and policy MW1.

4.1.5 Please note that no reasons to deviate from the approach outlined (e.g. representations made to the contrary, substantial changes to planning guidance or evidence etc) have been forthcoming between the Draft and Publication Draft stages of M&WDPD

¹⁵ Planning Practice Guidance - Paragraph: 018 Reference ID: 27-018-20140306

development. There are therefore no new reasonable alternatives to consider in relation to the general criteria for considering minerals and waste development.

Appraising Significant Changes

4.1.6 Since its previous assessment, the policy has been revised to:

- Ensure that it is more positively worded toward minerals and waste development;
- Reflect a wider range of potential sources of impact to health and wellbeing
- Provide more information on potential areas where cumulative impacts could occur and expectations in relation to the assessment of this.
- Remove the requirement to consider the efficient use of resources and their conservation
- Remove the requirement to consider potential impacts of minerals and waste working on existing businesses
- Remove the specific reference to County Durham's ability to transition to a 'net zero' carbon future. Although the policy still intends to consider the impacts of minerals and waste proposals on climate change.

4.1.7 Collectively, it is considered that the changes made to the policy require its re-assessment.

4.1.8 Please note, that a table which identifies which issues should be considered in accordance with which County Durham Plan and M&WDPD policy has been removed. However, the supporting text to the policy highlights the relevant County Durham Plan policy against each issue.

Policy Assessment Outcome

4.1.9 The following table shows the assessment outcome when the policy was first assessed in 2021 and the new predicted outcomes following the significant changes made to it. Please also see the supporting SA matrix in Appendix C which shows further detail, including the predicted breakdown of short, medium and long term effects. The commentary below relates to the new, 2022 assessment outcome.

Table 9 Summary Assessment: Policy MW1

	1. Decent Affordable Homes	2. Strong Secure Communities	3. Education, Training & Lifelong Learning	4. Health: Inequalities & Lifestyles	5. Need to Travel & Sustainable Transport	6. Alleviate Deprivation	7. Economy & Employment	8. Climate Change: Mitigation	9. Climate Change: Adaptation	10. Biodiversity & Geodiversity	11. Landscape & Townscape	12. Historic Environment	13. Resources: Air, Water & Soil	14. Waste & Use of Materials	15. Minerals Extraction & Impacts
2021 Assessment Outcome	0	✓	0	✓	0	0	✓	✓	0	✓	✓	0	0	✓	✓
2022 Assessment Outcome	0	✓	0	✓	✓	0	✗	✓/✗	✓/✗	✓	✓	✓	✓	✗	✓/✗
Final 2022 Assessment Outcome	0	✓	0	✓	✓	0	✓	✓	✓	✓	✓	✓	✓	0	✓

4.1.10 The SA predicted positive social effects, negative economic effects and a mixture of both positive and negative environmental effects. These are summarised as follows.

Social Effects

4.1.11 Whilst there is no clear direct link between this policy and decent affordable homes. There is potential for the policy to safeguard decent homes by seeking to minimise individual and cumulative impacts on local amenities and communities, including impacts on housing. Policy wording states: ‘Where appropriate, separation distances will be required between minerals and waste developments and occupied residential properties and other sensitive receptors.’ This would safeguard local homes. Minor positive effects were therefore predicted against SA objective 1 (Homes).

4.1.12 Ensuring that the cumulative impact of proposals, in addition to individual impacts will be taken into account and assessed will be key to ensuring strong, secure communities, particular where a number of quarries are operating within proximity to each other, such as in parts of the East Durham Limestone Plateau and along the A66 in southwest Durham.

4.1.13 In addition, ensuring that proposals will not result in individual or cumulative unacceptable adverse impacts on the local and strategic road network may contribute towards reducing the adverse impacts of traffic (including HGV’s) on communities and ensuring that road networks are safe to use and cross. By protecting the amenity of local

communities from unacceptable adverse impacts, the policy may also contribute towards safeguarding the continued use of community facilities and services, such as schools.

4.1.14 Ensuring that proposals will not result in individual or cumulative unacceptable adverse impacts on human health is directly compatible with SA objective 4 (health). The supporting text to the policy identifies a range of potential sources of impact to health that would require consideration including visual impacts, light pollution, air pollution, noise, vibration, odour, vermin and birds, litter. Loss of recreational amenity through for example the loss of publicly accessible greenspace and impacts to public rights of way can also adversely impact on health and this issue could also be signposted within the supporting text, along with the benefits that could potentially be achieved on restoration of sites for this purpose.

4.1.15 Criterion which aim to ensure no unacceptable adverse impacts to the wider environment, public rights of way and climate change mitigation and adaptation also contribute positively to health and wellbeing.

Economic Effects

4.1.16 Previously, the SA sought to clarify whether businesses would be considered as a sensitive receptor under the provision of the policy and therefore whether they would be safeguarded from minerals and waste working which could in some cases prejudice their operation through noise, access issues etc. This could include agricultural businesses in addition to existing employment on industrial estates for example. The removal of criteria relating to the operation of existing businesses may therefore result in a policy gap and the potential for negative economic effects are therefore predicted.

Environmental Effects

4.1.17 Ensuring that proposals will not result in individual or cumulative unacceptable adverse impacts on the local and strategic road network may contribute towards reducing the travel requirements associated with proposals and indirectly encourage use of sustainable modes. This would also contribute towards the reduction of greenhouse gas emissions linked to proposals. The policy could be strengthened however by setting out the expectation that applicants should consider the use of sustainable modes of transport wherever possible.

4.1.18 The policy requires minerals and waste proposals to 'demonstrate that they will not result in individual or cumulative unacceptable adverse impacts on County Durham's ability to adapt and mitigate to meet the challenge of climate change.'

4.1.19 Whilst this wording could ensure that proposals for example do not prejudice the use of land that has been permitted to mitigate climate change, through for example woodland creation or renewable energy generation projects it is not clear that there is an expectation that minerals and waste proposals will need to include climate mitigation measures, and possibly offsetting measures as part of their applications from this wording.

4.1.20 It is also not considered clear from the wording what the challenge is in respect of the locally declared climate emergency and national net zero targets or that certain applications should be supported by an assessment of greenhouse gas emissions and an evaluation of their significance against net zero targets. Whilst the supporting text provides further information on the requirements it is considered that this expectation should be made clearer up front in the policy text. In doing so this will help to further emphasise and support the commitment the Council and partners have taken to tackling climate change within County Durham and the need for everyone to play their part. Wording similar to that previously recommended through the SA process could be used. The supporting text could also be strengthened to:

- Reflect local net zero targets;
- Ensure that land used or planned for mitigation and adaptation purposes is not prejudiced by minerals and waste development; and
- Provide further flexibility in relation to where further information or assessments regarding greenhouse gas emissions are required.

4.1.21 In relation to SA objective 9 (adaptation), the policy criteria aims to ensure that minerals and waste proposals will not cause unacceptable adverse impacts, individually or cumulatively on flood risk or the ability to adapt to climate change. The consideration and protection of landscape, biodiversity, trees and hedges also contributes positively to objective 9. However as mentioned against SA objective 8 (climate change), further information could be added to the supporting text to make it clear that proposal should also not prejudice the existing or planned use of land for climate adaptation purposes.

4.1.22 Positive effects were predicted against SA objectives 10 (biodiversity), 11 (landscape), 12 (heritage) and 13 (air, water and soil resources) discussed as follows

4.1.23 In determining whether proposals will have either individual or cumulative unacceptable adverse effects, the policy requires the consideration of biodiversity and geodiversity including nationally and local protected sites, protected and priority species and habitats, and trees woodlands and hedges. The supporting text states that applicants will be required to demonstrate that their proposal will deliver a net gain for biodiversity. This is directly compatible with the SA objective. Ensuring consideration is given to water resources will also contribute positively to the biodiversity objective.

4.1.24 Furthermore, the policy requires separation distances between minerals and waste development and sensitive receptors where appropriate. This could include for example separation distances to ensure that air pollutants are not dispersed to sensitive habitats. As currently worded, this element is couched within human health and the amenity of local communities and it would be preferable if it were a standalone requirement, potentially placed at the end of the policy so that readers understand that it could be applied more widely.

4.1.25 In determining whether proposals will have either individual or cumulative unacceptable adverse effects, the policy requires the consideration of protected landscapes and upon landscape character and quality. This is directly compatible with the landscape

character and quality SA objective. Ensuring that such consideration is also given to biodiversity and geodiversity and the best and most versatile agricultural land will also contribute positively to the protection and enhancement of landscape character and quality. The supporting text also advises on several considerations such as avoiding harm to mature landscape and topographic features, creating visually prominent extraction areas and minimising the visibility of plant.

4.1.26 In determining whether proposals will have either individual or cumulative unacceptable adverse effects, the policy requires the consideration of the county's historic environment. This is directly compatible with the historic environment SA objective. Furthermore, the policy requires separation distances between minerals and waste development and sensitive receptors where appropriate. This could include for example separation distances to ensure that vibration does not impact on sensitive heritage assets. As currently worded, this element is couched within human health and the amenity of local communities and it would be preferable if it were a standalone requirement, potentially placed at the end of the policy so that readers understand that it could be applied more widely.

4.1.27 Negative effects were predicted against SA objective 14 (waste and resources). Previously, the policy included a criterion to ensure proposals consider their impact towards the efficient use of resources. This was considered to help draw attention towards the need to ensure that minerals are a finite resource and should be extracted only where needed and used in the most appropriate manner. They should also not be sterilised. The criterion was also useful in recognising that waste should be viewed as a resource and the need to drive waste management up the waste hierarchy and only dispose of it as a last resort. The removal of the criterion may therefore result in a policy gap and the potential for negative economic effects are therefore predicted.

4.1.28 Both positive and negative effects were predicted overall against SA objective 15 (minerals). Whilst the policy will ensure that minerals working will not have unacceptable individual or cumulative impacts on several social and environmental receptors, as mentioned within this SA it could be strengthened further in relation to impacts to the business community, climate change and the efficient use of resources and their conservation. The requirement regarding standoff distances should also not be couched solely within the protection of human health and the amenity of local communities and should apply more widely to environmental receptors.

Significant Issues
None identified

Recommendations / Mitigation

4.1.29 Please note that the references used below relate to the specific social (SOC), economic (ECO) and environmental (ENV) mitigation measure proposed in the detailed matrix for this policy as presented in Appendix C.

- SOC1 – Whilst Public Rights of Way (PROW) are referred to in the supporting text it may be useful to reference that the loss of recreational amenity through the loss of green infrastructure and impacts to PROW are an issue for consideration under human health and the amenity of local communities.
- ENV1 – The supporting text relating to traffic should include the expectation that applicants should consider the use of sustainable modes of transport wherever possible
- ECON1 - Suggest reinstatement of criteria that takes into account the potential individual and cumulative impact of proposals on existing business
- ENV2 and ENV3 - amend policy text as follows or similar: ‘Proposals for minerals and waste development will be permitted where it can be demonstrated that the proposal will not result in individual or cumulative unacceptable adverse impacts upon: County Durham’s ability **to transition to a net zero carbon future, and to effectively** mitigate and adapt to climate change.’
 - The supporting text should include reference to the climate emergency targets for the county i.e. to be carbon neutral by 2045
 - The supporting text could give recognition to the need for minerals and waste proposals to ensure they do not prejudice existing or planned uses of land for climate mitigation and adaptation purposes e.g. wind farms, solar farms, woodland creation, flood abatement etc
 - Wording in the supporting text could be amended from ‘Accordingly all future decision-making will need to consider how development can mitigate, adapt, avoid vulnerability and increase resilience to climate change.’ To: ‘Accordingly, **to inform decision making, all proposals** will need to consider and identify how they can mitigate greenhouse gas emissions, adapt, avoid vulnerability and increase resilience to the impacts of climate change.’
 - Add: ‘**in certain circumstances, the council may request an evaluation of the significance of greenhouse gas emissions to be undertaken where the proposal is not EIA development.**’ This will give the Council greater flexibility over ensuring that further information is provided with proposals that may give rise to concern in respect of their impact on climate change.
- ENV4 and ENV5- Reconsider position of policy wording relating to separation distances so that it is understood that this could benefit human health and the wider environment.
- ENV6 - Reinstatement of the criterion relating to the efficient use of resources and their conservation and associated supporting text

Residual Impacts

- None identified

Response to SA Recommendations

- (SOC1) (Public Rights of Way). Agreed - An amendment has been made to the first sentence of paragraph 4.30 to reference recreational amenity. Sentence amended to

read, “Due to the nature and location of mineral working and some types of waste development which can be located within the open countryside, such proposals have a potential to adversely impact on the County's Public Rights of Way (PROW) network which will also impact on recreational amenity.”

- (ENV1) (Sustainable Modes) Agreed - The following text has been added to paragraph 4.29, “Amongst its provisions Policy MW7 requires applicants to consider and seek to maximise the use of sustainable forms of transport where practical and economic and requires safe and suitable access for all employees and visitors which optimises where practicable the use of public transport, walking and cycling”.
- (ECON1) (Existing Businesses) Not agreed - The removal of this wording was made following discussions with the Councils planning development management staff. It is considered that is sufficient to address this under Human Health and the Amenity of Local Communities. Sentence 1 of paragraph 4.13 has been amended to read, “Minerals and waste development can be a concern for local communities as a result of the potential disturbance or adverse effects that proposals can potentially have on human health and upon the amenity of local communities including both their living and working environments.” Development management staff considered it was not clear what was expected through the consideration of impact of proposals on existing businesses. Including this under human health and local communities will allow consideration of the issues specified in paragraph 4.13.
- (ENV2 and ENV3) (Climate Change). Partially agreed – Following discussions with the SA Team further work has been undertaken on the climate change criterion to strengthen it and make it clear what is expected of proposals for minerals and waste development. The criterion has been amended to: “County Durham’s ability to meet the challenge of climate change and transition to a low carbon future. Proposals for minerals and waste must demonstrate how they will minimise greenhouse gas emissions and how they have incorporated measures to adapt, mitigate, reduce vulnerability and increase resilience to the future impacts of climate change;”. In addition, the supporting text has been amended and amongst the revisions it now includes reference to the Climate Change Act 2008, the UK’s sixth Carbon Budget and the Councils updated (June 2022) Climate Emergency Response Plan (CERP2) and its key themes. Reference to ‘transition to a net zero carbon future’ has not been reinstated. It is not necessary to do so. It is considered that the amended policy criterion is consistent with requirements of the both the National Planning Policy Framework and Planning Practice Guide (Climate Change). The planning system and the minerals and waste industry will all need to work to the targets provided by Government for net zero by 2050.
- It is not necessary for the “supporting text to give recognition to the need for minerals and waste proposals to ensure they do not prejudice existing or planned uses of land for climate mitigation and adaptation purposes e.g., wind farms, solar farms, woodland creation, flood abatement etc”. Minerals can only be worked where they naturally occur. Large parts of the County are safeguarded under County Durham Plan Policy 56 (Safeguarding Mineral Resources) as mineral safeguarding

areas. There are provisions within County Durham Plan Policy 56 to allow temporary development such as windfarms and solar farms. In relation to woodland, it is a private matter if an owner wishes to plant commercial woodland and then in the future consider the possibility of an alternative land use for which planning permission is required.

- The request for “in certain circumstances, the council may request an evaluation of the significance of greenhouse gas emissions to be undertaken where the proposal is not EIA development” is not agreed. This type of information can only be obtained through the preparation of an Environmental Impact Assessment. No further explanation has been provided upon what these certain circumstances might relate to.
- (ENV4 and ENV5) (Separation Distances) Not Agreed - It is not accepted that the requirement for separation distances should be expanded to the wider environment. The approach adopted by MW1 is based upon provisions which require separation distances between the boundary of the minerals extraction area and occupied residential property. This has been extended to other similar receptors in order to safeguard living environments. Extending this requirement further to the wider environment and wider environmental receptors is not necessary and would result in this element of Policy MW1 being found to be inconsistent with the provisions within Planning Practice Guidance.
- (ENV6) (Efficient uses of Resources) Not Agreed - The text which is referred to was reviewed as part of work to prepare the Publication Draft plan and was found to be not necessary. It is not considered that removal of this policy criterion would result in a policy gap. The content which was included within the Draft Plan added limited value to what was already addressed in the County Durham Plan and provided content upon matters such as mineral safeguarding and prior extraction which is not relevant to considering proposals for minerals development.

Conclusion and Outstanding Issues

4.1.30 The SA identified several areas where the policy could be strengthened, namely by:

- 1) Recognising the potential loss of recreational amenity / green infrastructure as a health issue and opportunities for minerals and waste restoration to contribute positively to this.
- 2) Ensuring stronger references are made to the use of sustainable transport.
- 3) Ensuring that the potential impact of minerals and waste proposals on existing businesses are considered.
- 4) Reinstating reference in the policy to the need to transition to a net zero carbon future.
- 5) Ensuring the supporting text recognises that proposals should not prejudice land that is being used or is planned to be used for climate change mitigation and adaptation purposes.
- 6) Making it clear that applicants will need to submit measures with their proposals that demonstrate how they will reduce greenhouse gas emissions.

- 7) Providing greater flexibility over the types of applications where further evaluation and assessment of greenhouse gas emissions is required.
- 8) Including reference to County Durham's local climate emergency targets
- 9) Re positioning wording on separation distances to make it clear that these can also benefit environmental receptors.
- 10) Reinstating criterion relating to the efficient use of resources and their conservation.

4.1.31 The acceptance of 1 and 2 above help to strengthen the policy further against SA objectives 4 (health) and 5 (transport) but are not considered to improve upon the already, positive assessment outcome.

4.1.32 In relation to point 3, the amendments made to the supporting text to clarify that impacts to businesses will be considered under the policy provisions relating to human health and local communities enables the previous negative assessment outcome against SA objective 7 (economy) to be revised to positive.

4.1.33 In relation to the recommendations on climate change (points 4 – 8), the justification provided for not accepting those relating to prejudicing land for climate change / adaptation purposes and for not providing greater flexibility over greenhouse gas emission assessments is accepted. Proposals requiring Environmental Impact Assessment (EIA) are those that could have a significant effect on the environment and on further consideration of the criteria used to screen for EIA (for schedule 2 development) it is anticipated that such proposals are more likely to be 'big emitters' and/or increase the risk of accidents or disasters caused by climate change than non-EIA development. The previous assessment result against SA objective 9 (adaptation) can be revised to positive, following the justification.

4.1.34 In response to SA recommendations, the inclusion of wording: 'Proposals for minerals and waste must demonstrate how they will minimise greenhouse gas emissions and how they have incorporated measures to adapt, mitigate, reduce vulnerability and increase resilience to the future impacts of climate change' within the policy text clarifies that this is not optional.

4.1.35 The decision not to re-instate transition to a 'net zero' carbon future and instead add 'low carbon' future reflects current wording within the National Planning Policy Framework. 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 does state that the Council will determine the likely significant effects of the proposal on climate change over the life of its development, both positively and negatively in accordance with EIA regulations.

4.1.36 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) in order 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.¹⁶ The best practice approach, 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.

4.1.37 In addition, the policy also now includes reference to County Durham's local climate emergency targets (to be a net zero county by 2045) which will help applicants to understand what the local challenge and ambition is in respect of 'County Durham's ability to meet the challenge of climate change.'

4.1.38 The changes made to the policy in response to SA recommendations along with the understanding that impacts on net zero are likely to be assessed as part of EIA and taken into account by the Council mean that more positive effects can be predicted against SA objective 8 (climate change). 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.

4.1.39 In relation to the separation distances recommendation, the SA considered (and as referenced by Policy MW5) that mitigation measures within air quality assessments could include maintaining adequate separation distances between sources of pollution and sensitive receptors. This could directly or indirectly benefit habitats and species sensitive to dust and nitrogen deposition. Likewise, to ensure development can keep to noise limits, this may also require the consideration of separation distances which could directly or indirectly help to reduce disturbance levels to species. Even though the recommendation to reposition the wording on separation distances has not been accepted, the positive effects predicted are still considered likely to occur.

4.1.40 The justification for not reinstating criterion relating to the efficient use of resources and their conservation is accepted. This issue is sufficiently addressed by the County Durham Plan. The previous negative assessment outcome against SA objective 14 (resources) has been revised to neutral.

4.1.41 For the final predicted sustainability scores against Policy MW1, please see the final 2022 Assessment outcome column in table 9.

¹⁶ [IEMA Guide \(Feb 2022\) Assessing Greenhouse Gas Emissions and Evaluating their Significance \(2nd Edition\)](#)

4.2 Policy MW2: Mineral Exploration

4.2.1 Mineral exploration includes a range of activities to help determine if there are minerals under the ground. Whilst the basic geology of County Durham is generally known, exploration is required to determine whether it is commercially viable to extract mineral resources based upon their extent and quality. If the exploration process identifies that minerals can be commercially extracted, the Council may receive planning applications for its working. The three main methods of mineral exploration include:

- Geophysical surveys such as seismic surveys are a low impact, non-invasive method of gathering information about the location and characteristics of geological structures beneath the Earth's surface. Seismic surveys generate an acoustic sound signal that is transmitted into the earth's surface which then reflects off the various geological layers creating a map of structures.
- Trial pits and shallow boreholes are quick methods of surface mineral exploration which are usually dug to a depth between 1 and 4 metres. The pits are backfilled and reinstated after the information is collected
- Boreholes are narrow, deep holes in the ground which can be drilled either vertically or horizontally. They may be used to explore the presence of oil, gas or lithium and require a drilling rig and associated equipment to conduct the exploration activity.

4.2.2 M&WDPD objectives 1 and 3 are considered relevant to mineral exploration and complimentary to County Durham Plan objective 20: Supply of Minerals.

Reasonable Alternatives

4.2.3 The National Planning Policy Framework (NPPF) states that planning policies should provide for the extraction of mineral resources of local and national importance (Para 204a). Mineral exploration is considered a fundamental activity towards future mineral extraction and can be permitted development where it meets the conditions set out in the General Permitted Development Order.¹⁷

4.2.4 The Planning Practice Guidance relating to minerals development includes some guidance on mineral exploration although this relates solely to hydrocarbons which are considered by Policy MW12 (Oil and Gas Exploration, Appraisal and Production). There are therefore not considered to be any reasonable alternatives to the inclusion of a policy within the M&WDPD which establishes the local planning framework for mineral exploration where it does not constitute permitted development and is required for resources other than hydrocarbons. The existing Minerals Local Plan includes a mineral exploration policy so the inclusion of a policy which establishes the requirements within the M&WDPD maintains the business as usual approach.

4.2.5 Please note that no reasons to deviate from the approach outlined (e.g. representations made to the contrary, substantial changes to planning guidance or evidence

¹⁷ [The Town and Country Planning \(General Permitted Development\) \(England\) Order 2015 - Class J - temporary use of land etc for mineral exploration](#)

etc) have been forthcoming between the Draft and Publication Draft stages of M&WDPD development. There are therefore no new reasonable alternatives to consider in relation to the approach to future mineral exploration.

Appraising Significant Changes

4.2.6 Since its previous assessment, minor revisions have been made to the policy text to improve clarity. These revisions do not alter the emphasis of the policy and therefore, no changes to the previous SA assessment have been made. This is repeated as follows, including previous recommendations and mitigation measures.

Policy Assessment Outcome

4.2.7 The following table illustrates the effects the implementation of the policy is predicted to have against each SA objective. Textual changes to the policy draft were recommended through the SA but the reasons for not accepting these were justified. Please also see the supporting SA matrix in Appendix C which shows further detail, including the predicted breakdown of short, medium and long term effects.

Table 10 Summary Assessment: Policy MW2

	1. Decent Affordable Homes	2. Strong Secure Communities	3. Education, Training & Lifelong Learning	4. Health: Inequalities & Lifestyles	5. Need to Travel & Sustainable Transport	6. Alleviate Deprivation	7. Economy & Employment	8. Climate Change: Mitigation	9. Climate Change: Adaptation	10. Biodiversity & Geodiversity	11. Landscape & Townscape	12. Historic Environment	13. Resources: Air, Water & Soil	14. Waste & Use of Materials	15. Minerals Extraction & Impacts
Assessment Outcome	0	✓	✓	✓	✗	0	✓	✗	0	✗	✗	✗	✗	0	✓/✗

4.2.8 The SA predominantly predicted positive short term social and economic effects. Negative, short term environmental effects were predicted with possible medium and longer term positive effects. The effects predicted are summarised as follows:

Social Effects

4.2.9 Mineral exploration proposals which do not constitute permitted development and would therefore be considered against the M&WDPD policy (and all other relevant Plan

policies) could include those where the exploration would be carried out within 50 metres of any part of an occupied residential building or a building occupied as a hospital or school.

4.2.10 As drafted the policy requires proposals to be in accordance with other relevant Plan policies and ensure that there will be no unacceptable adverse impacts on the environment, human health or the amenity of local communities. This is likely to ensure that issues such as the following are taken into account and either avoided or mitigated:

- Traffic and transport impacts
- Any effects to nearby residential areas or community facilities
- Potentially noisy and disruptive activities to local schools and educational facilities
- Noise, dust and vibration levels and impacts to health and wellbeing and sensitive receptors like hospitals where patient recovery is paramount - safeguards may include for example, ensuring that no minerals exploration is carried out overnight
- Pollution of the environment which could have longer term effects on health if for example, public drinking water is polluted.

4.2.11 The supporting text also recognises for deep borehole proposals that it will be necessary that drilling rigs, well sites and all other associated facilities and infrastructure associated with exploration and appraisal are sited in the least sensitive location from which the target reservoir can be accessed, that exploration and appraisal operations are agreed for a temporary period and that a comprehensive restoration strategy is agreed, together with a scheme of after-use and aftercare. However, it is recommended that this wording is moved into the policy as specific policy requirements. This may serve to further safeguard communities, health and education in the event that boreholes are required for minerals other than oil and gas e.g. lithium proposals.

4.2.12 In addition, to help prevent public injury, criteria could be included within the policy relating to the restoration of land to its original condition following the cessation of exploration with trial pits and shallow boreholes.

Economic Effects

4.2.13 Short term, positive economic effects were predicted. As the policy is concerned with the consideration of the exploratory activity itself, rather than on the merits of any future proposal to extract minerals the effects predicted by the SA also relate to the short term direct and indirect employment opportunities which may be linked to mineral exploration.

Environmental Effects

4.2.14 Negative short term effects were predicted against SA objective 5 (Travel) as activities associated with mineral exploration are likely to increase the need to travel for a temporary period of time. Effects could be minimised to some extent by ensuring that onsite material is used to restore trial pits and boreholes. Similarly, the short term activities relating to mineral exploration e.g. transportation of people and equipment, use of drilling equipment etc is likely to increase greenhouse gas emissions. Medium term effects are also predicted to be negative due to the length of time that carbon emissions remain in the

atmosphere. The potential removal of trees could also impact upon carbon sequestration although in accordance with County Durham Plan Policy 40, suitable replacement planting should be provided. Longer term effects against SA objective 8 (climate change) could be positive or negative depending on the afteruse of deep borehole sites e.g. if areas of woodland are created.

4.2.15 In relation to climate change adaptation, depending on how close the water table is to the surface, both shallow and deep boreholes may result in physical disturbance of aquifers and groundwater resources. There is uncertainty as to whether exploration could artificially lower or raise groundwater levels which could potentially exacerbate any future drought or flooding conditions. However, any effects are predicted to be minor and temporary. The policy requires there to be no unacceptable adverse impacts on the environment so it is assumed that proposals will be accompanied by appropriate hydrogeological surveys and mitigation as necessary.

4.2.16 In relation to SA objectives 10-13 the SA recognised that mineral exploration proposals which do not constitute permitted development and would therefore be considered against the M&WDPD policy (and all other relevant Plan policies) could include any operation carried out:

- Within a site of special scientific interest (SSSI) which could also have dual designation as a National Nature Reserve, Special Area of Conservation (SAC) or Special Protection Area (SPA);
- Within the North Pennines Area of Outstanding Natural Beauty (AONB) and where any structure would exceed 12 metres in height;
- Within a site of archaeological interest and may also reasonably apply to Historic Battlefields, Conservation Areas, World Heritage Sites and where operations would be carried out within proximity to listed buildings or scheduled monuments; and
- Where excavations would exceed 10 metres in depth or 12 square metres in surface area or more than 10 excavations are required.

4.2.17 The policy requirement to ensure conformity with other Plan policies and that there will be no unacceptable adverse impact on the environment should ensure that exploration activity is not permitted where it:

- Could have an adverse effect on the integrity of internationally designated wildlife sites, result in the loss of irreplaceable habitat and outweighing benefits are not demonstrated;
- Is individually or cumulatively harmful to the special qualities of the North Pennines AONB or if the exploratory activity constitutes a major development it will only be permitted in exceptional circumstances and where it can be demonstrated to be in the public interest; and
- Would lead to substantial harm to, or total loss of the significance of a heritage assets unless it can be demonstrated that it is necessary to achieve substantial public benefit that outweighs that harm or loss. Less than substantial harm to a heritage asset should also be prevent where after weighing the public benefit of the proposal

and undertaking any balancing exercise of the benefits of minerals exploration, a proposal is deemed unacceptable.

4.2.18 Most effects are likely to be temporary but could be minimised by ensuring that equipment associated with deep boreholes are located in the least sensitive location and that sites are comprehensively restored following cessation. It is recommended that the wording from the supporting text relating to drilling rigs etc could further safeguard biodiversity and geodiversity, landscape, heritage and air, waste and soil resources if it was included within the main policy wording as specific requirements. In addition, criteria could be included within the policy relating to the restoration of land following the cessation of exploration with trial pits and shallow boreholes.

4.2.19 Positive medium to longer term effects were predicted to be possible due to the need to conform with other policies which require the achievement of Biodiversity Net Gains and to enhance landscape quality and character wherever possible. Whilst mineral exploration may have an adverse effect on archaeology it was also recognised that it also provides the opportunity to record archaeology and increase public understanding of County Durham's heritage and culture in the medium and longer term.

4.2.20 There is uncertainty as to whether there would be much potential to enhance soil or water quality beyond its original condition following the cessation of working so medium and longer term effects are currently predicted to be negligible.

4.2.21 As drafted there was no clear link between the policy and SA objective 14 (waste). However, positive effects could be predicted if the policy refers to making use of onsite materials in restoration.

Significant Issues

None identified

Recommendations / Mitigation

4.2.22 Please note that the references used below relate to the specific social (SOC), economic (ECO) and environmental (ENV) mitigation measure proposed in the detailed matrix for this policy as presented in Appendix C. The SA previously recommended the inclusion of the following criteria:

4.2.23 Trial Pits and Shallow Boreholes¹⁸

- Excavations should be progressively filled with material from the site, levelled and restored, so far as is practicable to its original or better condition within an agreed period of time. (SOC4, ENV1, ENV2, ENV4, ENV6, ENV8, ENV10, ENV11)

4.2.24 Deep Boreholes (SOC1, SOC2, SOC3, ENV3, ENV5, ENV7, ENV9)

¹⁸ the difference between a shallow and deep borehole may need to be clarified

- Drilling rigs, well sites and all other associated facilities and infrastructure associated with exploration and appraisal are sited in the least sensitive location from which the target reservoir can be accessed
- A comprehensive restoration strategy is agreed, together with a scheme of after-use and aftercare.

Residual Effects

4.2.25 Short term, temporary effects to the environment e.g. vehicular emissions, noise, landscape and visual impacts, habitat removal etc

Response to SA Recommendations

- Deep boreholes text - Disagree - This is not necessary, the supporting text adequately addresses the issues and provides the explanation/detail to the policy wording 'satisfactory safeguards to ensure that there will be no unacceptable adverse impacts on the environment, human health or the amenity of local communities.
- Trial pits and shallow boreholes text - Disagree - The supporting text states "The pits and shallow boreholes are backfilled and reinstated after the information is collected". 'Reinstatement' is sufficient as we are talking about a small number of trial pits and boreholes drilled with small drilling rigs. The word "reinstated" would give the Council sufficient control and the approach would always be to apply conditions commensurate with that required by the Town and Country Planning (General Permitted Development) (England) Order 2015 for permitted development.

Conclusion and Outstanding Issues

4.2.26 Overall, the policy aims to ensure that there will be no unacceptable adverse social or environmental impacts when minerals exploratory activity is undertaken. However, the SA has identified that there is likely to be some inevitable adverse impacts to the environment from minerals exploration albeit, such effects will mostly be short term and temporary in nature.

4.2.27 The SA recommended that the policy could be strengthened by ensuring that it makes specific requirements in relation to restoration which are not covered elsewhere in the Plan and set out the expectations relating to deep boreholes. Whilst the SA recommendations were not accepted, they have been justified. There are no outstanding issues.

4.3 Policy MW3: Benefits of Minerals Extraction

4.3.1 In addition to the supply of minerals to provide the infrastructure, buildings and goods that the county need, the extraction of minerals can have a number of other benefits, including but not limited to:

- Jobs creation;
- Revealing geology of special interest;
- Revealing undiscovered archaeological features;
- Landscape and biodiversity enhancement following restoration;
- Opportunities to mitigate pre-existing and potential future flood risk; and
- Community benefits through for example the funding of local projects in areas affected by minerals working.

4.3.2 Such benefits can be important elements of the justification underlying minerals extraction proposals. DPD objectives 1 and 6 are relevant to considering the benefits of minerals extraction proposals and is complimentary to County Durham Plan objectives 1(Economic Ambition), 6 (Rural Economy), 9 (Natural Environment), 10 (Built and Historic Environment), 14 (Quality of Life), 16 (Adaptation to Climate Change) and 20 (Supply of Minerals).

Reasonable Alternatives

4.3.3 Paragraph 205 of the National Planning Policy Framework (NPPF) is clear that when determining planning applications, great weight should be given to the benefits of minerals extraction, including to the economy.¹⁹ There are therefore not considered to be any reasonable alternatives to the inclusion of a policy within the DPD which clarifies the types of extraction proposals benefits will be considered against, applicant requirements and the types of benefits that will be taken into account.

4.3.4 Please note that no reasons to deviate from the approach outlined (e.g. representations made to the contrary, substantial changes to planning guidance or evidence etc) have been forthcoming between the Draft and Publication Draft stages of M&WDPD development. There are therefore no new reasonable alternatives to consider in relation to the benefits of minerals extraction.

Appraising Significant Changes

4.3.5 Since its previous assessment, additional wording has been added to the supporting text to highlight the Council's Climate Emergency declaration in 2019 and more recent 2022 Ecological Emergency declaration. These revisions do not alter the emphasis of the policy or its previous assessment outcomes. However, a couple of new recommendations have been made to take account of representations made on the policy by the Environment Agency regarding implementing the most environmentally beneficial option and to specifically emphasise the potential for afteruses to include renewable energy generation projects. The previous SA has been updated to reflect this.

¹⁹ Except where the proposal applies to surface mined coal working

Policy Assessment Outcome

4.3.6 The following table illustrates the effects the implementation of the policy is predicted to have against each SA objective. Whilst textual changes to the policy were previously recommended and partially accepted these were not considered likely to alter the predicted effects. This is also the case for the newly recommended changes to the policy. Please also see the supporting SA matrix in Appendix C which shows further detail, including the predicted breakdown of short, medium and long term effects.

Table 11 Summary Assessment: Policy MW3

	1. Decent Affordable Homes	2. Strong Secure Communities	3. Education, Training & Lifelong Learning	4. Health: Inequalities & Lifestyles	5. Need to Travel & Sustainable Transport	6. Alleviate Deprivation	7. Economy & Employment	8. Climate Change: Mitigation	9. Climate Change: Adaptation	10. Biodiversity & Geodiversity	11. Landscape & Townscape	12. Historic Environment	13. Resources: Air, Water & Soil	14. Waste & Use of Materials	15. Minerals Extraction & Impacts
Assessment Outcome	0	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	✓

4.3.6 The SA predicted possible positive effects against the majority of social, economic and environmental SA objectives. There were no clear links between the policy and housing or waste SA objectives. The effects predicted are summarised as follows:

Social Effects

4.3.7 Ensuring that the community benefits of minerals extraction proposals are taken into account when determining planning applications could lead to the delivery of local community projects such as the provision of new or enhanced facilities or improvements to community green spaces and recreation areas for example. The types of community benefits are wide ranging and the delivery of local projects or provision/enhancement of facilities and services could have knock on benefits to opportunities for education and life-long learning, fitness, health and wellbeing, reducing the need to travel through meeting needs locally or enhancing sustainable travel opportunities e.g. through enhancement of the local public rights of way networks for example.

4.3.8 Effective consultation and engagement with communities is likely to be required to ensure that suitable benefits are proposed.

Economic Effects

4.3.9 Ensuring that the economic benefits of minerals extraction proposals are taken into account when determining planning applications could create new employment opportunities and associated education and training opportunities.

Environmental Effects

4.3.10 Ensuring that the environmental benefits of minerals extraction are taken into account when determining planning applications could lead to positive effects where benefits provide or include:

- Projects which help to absorb carbon such as woodland creation are considered;
- Afteruses that contribute to County Durham's generation of renewable energy;
- Opportunities to mitigate flood risk through the creation of flood storage areas;
- Net gains to biodiversity, contribute to priority habitat creation, help deliver local nature recovery networks and create geodiversity features;
- Improvements to landscape character and help deliver the requirements of the County Durham Landscape Strategy;
- Potential opportunities to reveal undiscovered archaeological features and improve understanding / access to these; and
- Opportunities to address legacy issues of mine water pollution or improve areas of degraded land or agricultural land quality.

4.3.11 Overall, ensuring that social, economic and environmental benefits of minerals extraction are taken into account when determining planning proposals and the inclusion of the policy within the DPD to this effect will encourage applicants to contribute towards addressing relevant sustainability issues within County Durham. However, whilst it is likely that many of the environmental benefits will largely relate to the restoration and after use of sites there may be opportunity for these to be provided throughout other, earlier phases of minerals working and extraction. Therefore, it may be useful to clarify in the supporting text that environmental benefits relating to the proposal in its entirety will be taken into account and not just those relating to restoration and after-uses.

4.3.12 In addition, whilst particular value will be placed on benefits which address climate change and aid nature recovery it will still be important to ensure that the most environmentally beneficial option is proposed for the site and surrounding area.

4.3.13 Whilst no clear links between the policy and SA objective 14 (waste) were identified, further clarification in relation to whether or how benefits are considered in relation to waste proposals could be included within the DPD.

Significant Issues

None identified

Recommendations / Mitigation

4.3.14 Please note that the references used below relate to the specific social (SOC), economic (ECO) and environmental (ENV) mitigation measure proposed in the detailed matrix for this policy as presented in Appendix C.

- SOC1 - Evidence of consultation with communities should be provided as part of that needed to enable the Council to assess the nature and significance of the benefits. This may be useful to stipulate in the supporting text to the policy.
- ENV1 & ENV4 - Clarify the supporting text to highlight that environmental benefits relating to the entire proposal will be taken into account and not just those relating to restoration and after-use.
- ENV2 – Include specific reference to renewable energy generation projects as a potential afteruse to help highlight this to applicants
- ENV3 - Include text which requires applicants to demonstrate that the most environmentally beneficial option is proposed for the site/area.
- ENV5 - Further clarification in relation to whether or how benefits are considered in relation to waste proposals could be included within the DPD.

Residual Effects

4.3.15 None Identified.

Response to SA Recommendations

- SOC1 - Agreed. The following text has been added to the supporting text - "The Mineral Planning Authority encourages applicants to engage with the council and undertake pre-application community engagement prior to the submission of planning applications. Through these processes an applicant will be able to discuss the nature and significance of the potential benefits which their proposal could provide and how these benefits could be maximised. Applicants are also encouraged to outline the benefits of their proposal within their planning application."
- ENV1 & ENV4 - Agreed. The following text has been added to the supporting text to address this: "Environmental benefits of minerals extraction are wide ranging and will include but are not limited to such matters as the benefits that will be realised to the environment of the County through the restoration and after-use of a mineral sites"
- ENV2 – Agreed – additional bullet added “Renewable energy generation projects. Some former mineral sites and waste sites may also be suitable locations for renewable energy generation which may help offset the climate change impacts of mineral working.”
- ENV3 - Not agreed– Policy MW22 addresses the restoration and after use of mineral, landfill and landraise sites and its provisions will apply. The supporting text to this Policy already explains, “Once sites have fulfilled their primary purpose their restoration should seek to enhance the wider environment through the delivery of beneficial after-uses. The Council considers that the development of such beneficial after-uses may also help to mitigate, in some degree, the adverse impacts of the use of the site during its operational life”; and “In preparing proposals for restoration,

after-use and aftercare applicants should consider the characteristics of the site and the surrounding land uses and have regard to the requirements of all relevant plans and strategies including but not limited to the County Durham Plan, the County Durham Landscape Strategy, the Council's Climate Change Emergency Response Action Plan, the County Durham Local Nature Recovery Strategy (once prepared), the County Durham Geodiversity Plan and if located within the North Pennines AONB, the AONB Management Plan and North Pennines AONB Planning Guidelines".

- ENV5 - Disagree. The NPPF does not state that "great weight should be given to the benefits of" waste development and neither does the National Planning Policy for waste. So in essence any benefits which could ensue would not have great weight, only normal weight.

Conclusion and Outstanding Issues

4.3.12 In response to the SA the clarity of the policy has been improved in relation to:

- The need for effective engagement with communities
- Consideration of environmental benefit is not limited to the restoration and after-use elements of minerals extraction proposals.
- Specifically identify renewable energy generation projects as potential afteruses

4.3.13 The justification for not outlining how benefits are considered in relation to waste development in the DPD is accepted as is the justification relating to the most environmentally beneficial options. Please note that the improvements to policy clarity do not alter the effects originally predicted by the SA. The policy is assessed as contributing positively to County Durham's sustainability and there are no outstanding issues.

4.4 Policy MW4: Noise

4.4.1 Minerals and waste sites are recognised to be noise generating developments which have the potential to have an adverse impact on both the environment and the amenity of local communities. The National Planning Policy Framework (NPPF) makes it clear that planning policies should be prepared to address both noise limits and noisy short-term activities which, whilst they may otherwise be regarded as unacceptable, they are unavoidable to facilitate minerals extraction.

4.4.2 Similarly, the National Planning Policy for Waste makes it clear that in determining planning applications that the operation of large waste management facilities in particular can produce noise affecting both the inside and outside of buildings, including noise and vibration from goods vehicle traffic movement to and from a site. Intermittent and sustained operating noise may be a problem if not properly managed particularly if night-time working is involved.

4.4.3 M&WDPD objective 1 (protecting the environment and health of local communities) is relevant to this issue and is complimentary to County Durham Plan objective 9.

Reasonable Alternatives

4.4.4 There are not considered to be any reasonable alternative to the inclusion of a policy within the M&WDPD that ensures that both minerals and waste development will minimise and keep noise pollution to acceptable levels. This is required by both the NPPF and National Planning Policy for Waste. As both the existing Minerals Local Plan and Waste Local Plan include noise related policies, ensuring that a policy is included within the M&WDPD maintains the business-as-usual approach.

4.4.5 In relation to the noise standards and criteria that should be set by the policy, there are not considered to be any reasonable alternatives to ensuring that these reflect those established in Planning Practice Guidance. This includes specific guidance on noise for minerals operations, although the PPG advises that care should be taken to avoid values being implemented as fixed thresholds as specific circumstances may justify some small variation being allowed.²⁰

4.4.6 For waste development and ancillary minerals development that does not form an integral part of a mineral working operation, there are not considered to be any reasonable alternatives to ensuring proposals meet British Standard BS4142 – Methods for rating and assessing industrial and commercial sound.

4.4.7 Representations were received during the consultation on the Draft M&WDPD, querying the inclusion of the following text in the policy ‘Where tonal noise and/or peak and impulsive noise would contribute significantly to total site noise, separate limits may be required independent of background noise levels.’ However, its inclusion within the policy is considered consistent with the PPG which advises ‘Where the site noise has a significant tonal element, it may be appropriate to set specific limits to control this aspect. Peak or

²⁰ Please refer to paragraphs 021 Reference ID: 27-021-20140306 and 022 Reference ID: 27-022-20140306

impulsive noise, which may include some reversing beepers, may also require separate limits that are independent of background noise (e.g. Lmax in specific octave or third-octave frequency bands – and that should not be allowed to occur regularly at night).’²¹ There are therefore not considered to be any reasonable alternatives to this approach taken.

4.4.8 Please note that whilst other comments made related to the clarity of the policy, no other reasons to deviate from the overall approach to noise management (e.g. representations made to the contrary, substantial changes to planning guidance or evidence etc) have been forthcoming between the Draft and Publication Draft stages of M&WDPD development. There are therefore no new reasonable alternatives to consider in relation to this issue.

4.4.9 The SA has consequently focused on whether the drafts of the policy presented are robust, cover all necessary aspects and include appropriate safeguards.

Appraising Significant Changes

4.4.10 Since its previous assessment, text has been added to the policy to further clarify that it applies to waste development and to establish criterion for waste development and ancillary minerals development that does not form part of a mineral working operation. For ancillary minerals development, this could include operations located on industrial estates. The addition of the new criterion requires a reassessment of the policy.

Policy Assessment Outcome

4.4.11 The following table shows the assessment outcome when the policy was first assessed in 2021 and the new predicted outcomes following the significant changes made to it. Please also see the supporting SA matrix in Appendix C which shows further detail, including the predicted breakdown of short, medium and long term effects. The commentary below relates to the new, 2022 assessment outcome.

²¹ Please see PPG Paragraph: 021 Reference ID: 27-021-20140306

Table 12 Summary Assessment: Policy MW4

	1. Decent Affordable Homes	2. Strong Secure Communities	3. Education, Training & Lifelong Learning	4. Health: Inequalities & Lifestyles	5. Need to Travel & Sustainable Transport	6. Alleviate Deprivation	7. Economy & Employment	8. Climate Change: Mitigation	9. Climate Change: Adaptation	10. Biodiversity & Geodiversity	11. Landscape & Townscape	12. Historic Environment	13. Resources: Air, Water & Soil	14. Waste & Use of Materials	15. Minerals Extraction & Impacts
2021 Assessment Outcome	0	✓	0	✓	0	✓	0	✓/x	✓/x	✓	x	0	✓/x	0	✓
2022 Assessment Outcome	0	✓	0	✓	✓/x	✓	✓	✓/x	0	✓	✓/x	✓/x	✓/x	0	✓

4.4.12 The SA predicted positive social and economic effects and a mixture of both positive and negative environmental effects.

Social Effects

4.4.13 The policy criterion sets out clear limits as to what is regarded as acceptable levels of noise, in line with Planning Practice Guidance (PPG), recognising that only small variations may be justified, and British Standard (BS) 4142. This will contribute to safeguarding communities by minimising adverse impacts from the noise created by minerals extraction and waste management and disposal operations. The policy is considered directly compatible with health objectives and will help to protect the health and wellbeing of employees working at minerals and waste sites and occupiers of noise sensitive properties. This could include homes and facilities providing healthcare services.

4.4.14 Minor positive effects were predicted against SA objective 3 (education) as mitigating noise associated with minerals and waste development could help to safeguard educational facilities from noise levels that could disturb and disrupt learning.

4.4.15 Indirect positive effects were predicted against SA objective 6 (deprivation) as the policy has the potential to mitigate against deprivation and poverty related issues such as deprived areas being more likely to have higher noise pollution levels or be close to areas of high noise pollution levels.

4.4.16 The supporting text mentions the need for a noise impact assessment. The policy could have a further positive social (and environmental) effect by requiring operators to carry out a noise impact assessment as a pre-requisite in the policy criterion.

Economic Effects

4.4.17 Positive economic effects were predicted. Where ancillary minerals related development and waste development is located on employment land such as industrial estates, ensuring that noise levels are acceptable could help to safeguard other businesses from disruption and possible impacts on productivity.

Environmental Effects

4.4.18 Positive overall effects were predicted against SA objective 15 (minerals) as whilst it is acknowledged that noise is a complex and technical issue and that some noise is inevitable this policy sets out PPG and BS 4142 aligned acceptable noise limits according to the time of operation. This will contribute to sustainability of mineral extraction by reducing the adverse impact of noise pollution on communities and the environment.

4.4.19 Positive effects were also predicted against SA objective 10 (biodiversity) as the policy will safeguard biodiversity of the area through its requirements regarding acceptable noise levels which will minimise and mitigate against noise pollution that can disturb and disrupt local wildlife. The noise impact assessment will be required to specify locations that may be affected which could include noise sensitive environmental receptors such as nesting birds for example. The SA recommends inclusion of reference to the noise assessment as a specific policy prerequisite.

4.4.20 For other environmental SA objectives, the SA predicted both a mixture of positive and negative effects. This is due to the mitigating measures that may be required to achieve acceptable levels of noise from minerals and waste development. This is summarised as follows:

4.4.21 Reducing the need to travel - The policy states the acceptable noise level limits permitted. This could have an indirect positive effect on reducing the need to travel if traffic movements from the site would need to be minimised to reduce noise levels from goods vehicles. However, the creation of noise attenuation barriers which may be required to mitigate noise levels could increase travel requirement associated with the initial establishment of minerals and waste operations. Whilst not a requirement of the policy, noise barriers could be identified in the noise impact assessment or opted for by the operators to minimise the impact of the noise.

4.4.22 Climate change - The policy states the acceptable noise level limits permitted. This could have an indirect positive effect on climate change if the use of less noisy equipment to stay within the permitted noise levels creates lower emissions consequently. However, this policy could have an indirect negative effect on climate change through the creation of noise attenuation mounds such as baffle mounds which may require more vehicle movements and emissions for example to create.

4.4.23 Landscape - Permitting proposals in accordance with the policy will help to protect the tranquillity and peace associated with rural landscape character and quality within County Durham and particular areas perceived to be 'wild' such as the North Pennines Area of Outstanding Natural Beauty (AONB). Measures to mitigate noise levels to acceptable levels where necessary, such as the creation of noise barriers may also help to play a part in screening and minimising the visual impact of minerals and waste development. However, such measures could also add to any adverse impacts of the developments and ancillary facilities to landscape character and quality. This would need to be considered as part of a landscape assessment of proposals.

4.4.24 Heritage - Noise pollution can be harmful to heritage assets and therefore permitting proposals in accordance with the policy could help to protect heritage and especially any assets that may be specifically identified as noise sensitive through a noise assessment. Measures to mitigate noise levels to acceptable levels where necessary, such as the creation of noise barriers may also help to play a part in screening and minimising the impact that minerals and waste development may have on the setting of heritage assets. However, such measures could also directly and indirectly harm heritage

4.4.25 Air/Water/Soil - The policy criteria require operators to work within acceptable noise levels where possible which could have a positive effect on air, water and soil resources if lower noise levels also create lower emissions. There is potential for indirect negative effect on air, water and soil resources in the short-term if noise reduction measures such as the erection of baffle mounds create higher emissions and disrupt soil. Soil resources will need to be managed with a soil handling strategy to conserve the soil resources so they can be used in restoration.

Significant Issues

None identified

Recommendations / Mitigation

4.4.26 Please note that the references used below relate to the specific social (SOC), economic (ECO) and environmental (ENV) mitigation measure proposed in the detailed matrix for this policy as presented in Appendix C.

- SOC1, SOC2 and ENV1 – The supporting texts states that a noise impact assessment is a requirement. Consider moving this supporting text as a requirement in the policy wording as follows, or similar to further safeguard social and environmental receptors:
'To protect the environment and the amenity of local communities and minimise future complaints, the Council will require operators to **submit a noise impact assessment and noise action plan** to demonstrate how they propose to minimise, mitigate and whenever possible remove noise emissions at source.'
- ENV2 – landform / barrier type measures to minimise noise to acceptable levels should be subject to a landscape assessment and heritage impact assessment as part

of minerals and waste proposals to ensure that unacceptable adverse landscape and visual impacts and impacts to the historic environment can be avoided.

Residual Effects

- Possible increased travel and greenhouse gas emissions as a result of delivering Noise mitigation measures

Response to SA Recommendations

- SOC1, SOC2 and ENV1 – Agreed text added
- ENV2 – Noted all necessary assessments will be undertaken. Policy MW1 ((General criteria for considering minerals and waste development) seeks to ensure that proposals will not have an unacceptable individual or cumulative impact on 2a “Protected landscapes and upon landscape character and quality” and 2c “The County’s Historic environment;”. The supporting text to Policy MW1 (General criteria for considering minerals and waste development) refers to the requirement for a range of assessments including 1) a Landscape and Visual Impact Assessment or a Visual Impact Assessment and 2) a heritage statement which will be required for all proposals s whose scale or nature could impact on heritage assets. Supporting text in paragraph 4.17 of the Publication Draft amended from “Screening and storage mounds should have naturalistic profiles and blend with the surrounding topography” to “Screening, **noise attenuation** and storage mounds should have naturalistic profiles and blend with the surrounding topography”.

Conclusion and Outstanding Issues

4.6.27 The SA has identified that the policy seeks to minimise the social, economic and environmental impact of noise from minerals and waste operations by setting noise level limits and time periods that these limits are generally in place. Although it is noted that measures to mitigate noise to acceptable levels could have some adverse environmental effects and would need to be subject to assessment as part of the consideration of planning proposals. The provisions within policy MW1 would consider this.

4.6.28 The SA identified that it would be beneficial to require a noise impact assessment as part of the policy criteria. Whilst this may help to further safeguard communities and the environment it is not considered to alter the effects predicted in the 2022 assessment.

4.5 Policy MW5: Air Quality and Dust

4.5.1 In addition to having direct effects to public health, habitats and biodiversity, air pollutants such particulate matter (PM₁₀ and PM_{2.5}), nitrogen dioxide (NO₂), ammonia (NH₃) and sulphur dioxide (SO₂), can combine in the atmosphere to form ozone, a harmful air pollutant (and potent greenhouse gas) which can be transported great distances by weather systems. Dust can also be a planning concern, for example, because of the effect on local amenity.

4.5.2 In addition to dust and particulates (PM₁₀ and PM_{2.5}) from the mineral and waste processing operations there is a potential for emissions of a number of air quality pollutants from exhaust emissions from the movement of Heavy Goods Vehicles (HGVs) to and from sites together with plant and machinery operated on sites.

4.5.3 Ensuring that minerals and waste development avoid and minimise levels of air pollution is a key issue for the M&WDPD to address and is relevant to the achievement of M&WDPD objective 1 and complimentary to County Durham Plan objective 9.

Reasonable Alternatives

4.5.4 Since its previous assessment, the scope of policy MW5 has been extended to include all types of air pollutant. Previously, the policy focused solely on dust. This was considered to be a policy gap and there are therefore not considered to be any reasonable alternatives to ensuring that the provisions of the policy can apply to all types of air pollutants.

4.5.5 This is considered to be consistent with the National Planning Policy Framework (NPPF) which requires planning policies to enhance the natural and local environment by preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability (Paragraph 170 e).

4.5.6 Planning practice guidance sets out the specific issues that need to be considered when assessing air quality impacts and sets out specific expectations for minerals development in relation to minimising dust emissions. There are therefore not considered to be any reasonable alternatives to ensuring that the approach outlined in the air quality and dust policy reflect this guidance.

4.5.7 Representations were received during the consultation on the Draft M&WDPD, querying the inclusion of the following distance threshold in the policy 'If the development is expected to produce PM₁₀ dust, additional measures may need to be put in place if the actual source of emission is within 1000m of any residential property or other sensitive receptor/location (this distance may be revised due to local circumstances).' The 1000m distance threshold is referred to in the Dust Site Assessment flow chart in the Planning Practice Guidance (Paragraph: 032 Reference ID: 27-032-201403060) and there are therefore not considered to be any reasonable alternatives to the threshold or its inclusion within the policy.

4.5.8 No other reasons to deviate from the approach to dust (or air quality) management (e.g. representations made to the contrary, substantial changes to planning guidance or

evidence etc) have been forthcoming between the Draft and Publication Draft stages of M&WDPD development. There are therefore no new reasonable alternatives to consider in relation to this issue. As both the existing Minerals Local Plan and Waste Local Plan include objectives and criteria within policies that seek to limit air quality and dust emissions, ensuring that this issue is included within a policy of the M&WDPD maintains the business-as-usual approach.

Appraising Significant Changes

4.5.9 As discussed above, the scope of the policy has since been extended to ensure that it can apply to all types of air pollutant. This is a significant change and requires a re-assessment of the policy.

Policy Assessment Outcome

4.5.10 The following table shows the assessment outcome when the policy was first assessed in 2021 and the new predicted outcomes following the significant changes made to it. Please also see the supporting SA matrix in Appendix C which shows further detail, including the predicted breakdown of short, medium and long term effects. The commentary below relates to the new, 2022 assessment outcome.

Table 13 Summary Assessment: Policy MW5

	1. Decent Affordable Homes	2. Strong Secure Communities	3. Education, Training & Lifelong Learning	4. Health: Inequalities & Lifestyles	5. Need to Travel & Sustainable Transport	6. Alleviate Deprivation	7. Economy & Employment	8. Climate Change: Mitigation	9. Climate Change: Adaptation	10. Biodiversity & Geodiversity	11. Landscape & Townscape	12. Historic Environment	13. Resources: Air, Water & Soil	14. Waste & Use of Materials	15. Minerals Extraction & Impacts
2021 Assessment Outcome	0	✓	0	✓	0	✓	0	✓/x	✓/x	✓	✓	✓	✓/x	✓/x	✓/x
2022 Assessment Outcome	0	✓	0	✓✓	✓	✓	✓	✓	0	✓	✓	✓	✓/x	0	✓

4.5.11 The SA predominantly predicted positive social, economic and environmental effects. Extending the scope of the policy to include all types of air pollutant has improved effects predicted against health, travel, economic and climate change SA objectives.

Social Effects

4.5.12 Ensuring that air pollutants and dust emissions from minerals and waste proposals are either avoided or limited to acceptable levels from minerals and waste development is directly compatible with health objectives. Extending the scope of the policy to include all types of air pollutants ensures that very positive effects can be predicted against SA objective 4 (Health). Sensitive receptors such as residents near to minerals and waste developments and proposals within Air Quality Management Areas will receive particular attention through air quality assessments. The policy will also benefit the health of employees working in minerals and waste operations within the county.

4.5.13 The alleviation of deprivation and poverty is not a direct aim of this policy. However, it has the potential to mitigate against deprivation and poverty related issues such as deprived areas being more likely to have higher pollution levels or be close to areas of high pollution levels. For example, some wards falling within Durham City's Air Quality Management Area are within the top 20-30% of national deprivation.

4.5.14 In addition, the policy could indirectly benefit communities as proposals complying with the policy may need to reduce their associated traffic levels in order to minimise vehicle emissions and associated air pollutants.

Economic Effects

4.5.15 Research undertaken by the Confederation of British Industry (CBI) in 2020 found that work absences related to poor air are costing Britain about £600m annually.²² Therefore, the policy which aims to avoid and minimise the contribution of County Durham's minerals and waste development to air pollution could help to minimise work absences and lessen days an individual attends work ill.

Environmental Effects

4.5.16 Positive effects are predicted against SA objective 5 (reducing the need to travel) and 8 (climate change). Extending the scope of the policy to all air pollutants enables positive effects to be predicted as many of the air pollutants will also be greenhouse gases that contribute towards climate change. Limiting these from minerals and waste development will therefore help to reduce the causes of climate change. Mitigation measures such as the use of trees and other green infrastructure used to act as barrier between sources of air pollution and receptors will also help to absorb greenhouse gases. Reducing travel requirements and use of low or zero emissions vehicles and plant will also contribute positively to both reducing air pollution and greenhouse gas emissions. Whilst some mitigation measures such as filtration and ventilation may increase energy requirements, positive effects are predicted overall

4.5.17 Positive effects are also predicted against SA objective 10 (biodiversity), 11 (landscape) and 12 (heritage). The policy will safeguard wildlife and habitats from air

²² CBI Economics (2020) Breathing life into the UK economy: Qualifying the economic benefits of cleaner air (Commissioned by Clean Air Fund)

pollution and dust created from minerals and waste operations. This will benefit all habitats but particularly those sensitive to nitrogen deposition and dust such as Special Areas of Conservation within upper Teesdale and Weardale. Some of the mitigation measures to minimise air pollution to acceptable levels can also benefit biodiversity and potentially contribute towards local nature recovery e.g. the creation of green infrastructure and tree planting. However, acceptability will need to be assessed as part of the planning process as trees planted in the wrong place for example, can also harm biodiversity.

4.5.18 The policy will safeguard and protect the quality and character of landscape and townscape from dust emissions that could otherwise pollute and cover the area. Air pollution and dust can also affect the physical fabric of heritage assets. Therefore, the policy will contribute towards protecting the historic environment.

4.5.19 A mixture of both positive and negative effects were predicted against SA objective 13 (air, water and soil). Whilst the policy is directly compatible with protecting air quality, mitigation measures such as the use of sprays and mobile water bowsers can increase water usage and could cause subsequent soil and water contamination. Therefore, it would be for the operators to demonstrate that dust and air quality emission reduction measures do not have other unintended negative impacts.

4.5.20 Overall, positive effects were predicted against SA objective 15 (minerals) as the policy will contribute to the sustainability of mineral extraction by reducing the adverse impacts of air pollution to communities and the environment.

Significant Issues

None identified

Recommendations / Mitigation

4.5.21 Please note that the references used below relate to the specific social (SOC), economic (ECO) and environmental (ENV) mitigation measure proposed in the detailed matrix for this policy as presented in Appendix C.

- ENV1 – If mitigation measures such as the use of filtration and ventilation systems increase energy requirements, operators should be encouraged to utilise low carbon and renewable energy sources to power these. This will also be of further benefit to air quality.
- ENV2 and ENV3 - The appropriateness of any air quality and dust mitigation measures to nature conservation, water and soil resources will need to be assessed as part of the planning process.

Residual Effects

4.5.22 None identified

Response to SA Recommendations

- ENV1 – Noted. Policy MW1 (General criteria for considering minerals and waste development) seeks to ensure that proposals will not result in individual or cumulative unacceptable adverse impacts upon: 4) County Durham’s ability to adapt and mitigate to meet the challenge of climate change. Supporting text is provided at paragraphs 4.31 to 4.35. In particular, paragraph 4.34 refers to CDP Policy 29 (Sustainable Design) which will be applicable to all buildings and which requires at c) minimise greenhouse gas emissions, by seeking to achieve zero carbon buildings and providing renewable and low carbon energy generation.
- ENV2 and ENV3 - Noted. However, it is not intended that this policy should seek to set any new specific requirements for the assessment methodology for either air quality assessments or dust assessment studies and action plans. The case officer who considers any submitted air quality or dust assessment and action plan will need to be satisfied by their adequacy.

Conclusion and Outstanding Issues

4.5.23 The SA has identified that the policy is compatible with sustainable development objectives and will have a number of cross cutting benefits. Although it is noted that measures to mitigate air pollution and dust emissions to acceptable levels could have some adverse environmental effects and would need to be subject to assessment as part of the consideration of planning proposals. The provisions within policy MW1 would consider this.

4.6 Policy MW6: Blasting

4.6.1 This policy seeks to protect the environment, built environment and amenity of local communities. The policy acknowledges that minerals extraction that uses quarry blasting can result in several effects which include ground vibration, air overpressure and projected rock particles with impacts being dependent on a variety of factors including the scale of charge, geology and faulting, surrounding topography, atmospheric conditions and the distance to nearby sensitive receptors.

4.6.2 To safeguard communities, and the environment and minimise complaints, the policy requires proposals for mineral working to demonstrate that, where blasting is required, that the ground vibration resulting from blasting will not have an unacceptable adverse impact on buildings and structures, and people within buildings and will not exceed peak particle velocities of 6mm/second.

4.6.3 M&WDPD objective 1 is relevant to this issue and is complimentary to County Durham Plan objective 9.

Reasonable Alternatives

4.6.4 The NPPF states that when considering proposals for minerals extraction operations, minerals planning authorities should ensure that any unavoidable particle emissions and any blasting vibrations are controlled, mitigated, or removed at source, (paragraph 205c).

4.6.5 The British Standards Institution has produced two standards that relate to blast-induced vibration, one relates to the impact on buildings and structures, and the other to the impact on people within buildings. With respect to people within buildings, the standard sets out a 'satisfactory magnitude' of 6 to 10mm/second peak particle velocity; for buildings and structures, a peak particle velocity for low frequency vibrations is given as 15 to 20 mm/second.

4.6.6 The limits on the majority of existing planning permissions where blasting occurs in County Durham is set at 6mm/second i.e., as low as possible to reduce vibration impacts. When determining limits, there are not considered to be any reasonable alternatives to a policy approach which aims for lower limits to best protect people in line with the British Standards Institution, whilst also taking account of local geological or geographical circumstance. For example, some rock such as Magnesian Limestone is softer and easier to blast than harder rock types such as Carboniferous Limestone. Some quarries are also situated within areas which are more populated than others or there is more than one quarry within an area where blasting activity takes place.

4.6.7 Ensuring that the effects of blasting are reduced to a minimum, taking account of local circumstances and conditions, maintains the business-as-usual approach. Please note that separation distances to avoid unacceptable adverse impacts from vibration (and other sources of harm) are considered against Policy MW1.

4.6.8 Please also note that no reasons to deviate from the approach outlined (e.g. representations made to the contrary, substantial changes to planning guidance or evidence etc) have been forthcoming between the Draft and Publication Draft stages of M&WDPD development. There are therefore no new reasonable alternatives to consider in relation to the approach to blasting.

Appraising Significant Changes

4.6.9 Since its previous assessment, text has been added to the policy to clarify that where blasting is required, proposals will be permitted where there are no unacceptable, individual or cumulative impacts on the environment. Previously, the policy stated that proposals will be permitted where there are no adverse effects on the environment. This revision improves the accuracy of the policy as the supporting text acknowledged and continues to acknowledge that blasting can result in several (environmental) effects.

4.6.10 The effects predicted by the previous SA assessment took into account that blasting could have social and environmental impacts, but the policy aimed to mitigate these to acceptable levels. As this remains the case, no changes to the previous SA assessment have been made. This is repeated as follows, including previous recommendations and mitigation measures.

Policy Assessment Outcome

4.6.11 The following table illustrates the effects the implementation of the policy is predicted to have against each SA objective. Whilst changes to the policy text were previously recommended through the SA and accepted these were not considered likely to

alter the predicted effects. Please also see the supporting SA matrix in Appendix C which shows further detail, including the predicted breakdown of short, medium and long term effects.

Table 14 Summary Assessment: Policy MW6

	1. Decent Affordable Homes	2. Strong Secure Communities	3. Education, Training & Lifelong Learning	4. Health: Inequalities & Lifestyles	5. Need to Travel & Sustainable Transport	6. Alleviate Deprivation	7. Economy & Employment	8. Climate Change: Mitigation	9. Climate Change: Adaptation	10. Biodiversity & Geodiversity	11. Landscape & Townscape	12. Historic Environment	13. Resources: Air, Water & Soil	14. Waste & Use of Materials	15. Minerals Extraction & Impacts
Assessment Outcome	0	✓	0	✓	0	✓	0	0	0	✓	✓	✓	✓	✓	✓

4.6.12 Where clear links were identified, the SA predicted positive social and environmental effects. No clear economic effects were predicted.

Social Effects

4.6.13 No clear link with SA objective 3 (Education) and 5 (Sustainable travel) were determined. Positive effects were predicted with SA Objectives 2 (Strong Secure Communities), SA Objective 4 (Health Inequalities and lifestyles) and SA Objective 6 (Alleviating Poverty). A minor positive link was predicted for SA objective 1 (Housing).

4.6.14 The policy wording will contribute positively towards safeguarding communities, health inequalities and lifestyles and contribute to alleviating poverty. These include:

4.6.15 Policy wording states that operators must demonstrate that, where blasting is required, that the ground vibration resulting from blasting will not have an unacceptable adverse impact on buildings and structures, and people within buildings and will not exceed peak particle velocities of 6mm/second when measured at sensitive properties.

4.6.16 This will safeguard communities, as it will minimise the impact of vibrations on buildings and structures. It will safeguard health and wellbeing through minimising the nuisance and harm from vibrations and particle emissions resulting from blasting. This includes release of particles into the air and air over-pressure, which in extreme circumstances can be fatal.

Economic Effects

4.6.17 No clear link with economic objectives identified

Environmental Effects

4.6.18 The SA predicts positive effects against SA objectives 10 (Biodiversity), 11 (Landscape), 12 (Historic Environment), 13 (Resources), 14 (Waste and use of materials) and 15 (Minerals)

4.6.19 The policy wording will safeguard wildlife and habitats from adverse impacts resulting from blasting. It requires operators to demonstrate that, where blasting is required, that the ground vibration resulting from blasting will not have an unacceptable adverse impact on buildings and structures, and people within buildings and will not exceed peak particle velocities of 6mm/second. The SA predicts that this will minimise the impact that vibrations, noise, air over-pressure and particles in the air will have on wildlife and habitats through disturbing wildlife, damaging, or destroying habitats, wildlife fatalities.

4.6.20 The SA predicts this policy will have a positive effect by safeguarding the landscapes, townscapes and historic environment that may be local to the mineral extraction operations. Policy wording requires operators to demonstrate that adverse impact on buildings, from blasting, will not be unacceptable and limits peak particle velocity to 6mm, in line with the British Standards Institution. This will safeguard buildings and so have a positive effect on the townscape and historic environment.

4.6.21 The SA recognises that there could be a positive effect on SA objective 13 by protecting air, water and soil resources. Policy wording requires operators to demonstrate that adverse impact on buildings from blasting, will not be unacceptable and limits peak particle velocity to 6mm, in line with the British Standards Institution. This will minimise the impact blasting related vibrations have on the ground and soil and will limit the peak particle velocity as a result of blasting that is released into the air.

4.6.22 The policy will have a positive effect on objectives 14 (Waste and use of materials) and 15 (Minerals). The policy wording requires operators to demonstrate that adverse impact on buildings and people in buildings will not be unacceptable and limits the peak particle velocity to 6mm, in line with the British institution Standards. This will encourage sustainable and efficient extraction through minimising the impact on surrounding communities, buildings, and environments.

Significant Issues
None identified

Recommendations / Mitigation

4.6.23 Please note that the references used below relate to the specific social (SOC), economic (ECO) and environmental (ENV) mitigation measure proposed in the detailed matrix for this policy as presented in Appendix C.

- The supporting text states that, where applicable, applications for mineral working should be accompanied by a blasting and vibration monitoring scheme which will identify the mitigation measures to be implemented during blasting operations, the details of the proposed monitoring frequency and a plan showing the monitoring locations. Consider moving this requirement into the policy wording to further safeguard social and environmental receptors. (SOC2, SOC4, SOC6, ENV10, ENV11, ENV 2, ENV13, ENV14, ENV15)

Residual Effects

4.6.24 None identified

Response to SA Recommendations

4.6.25 Accepted. The requirement for mineral working to be accompanied by a blasting and vibration monitoring scheme has been added to the policy text.

Conclusion and Outstanding Issues

4.6.26 The SA has identified that the policy seeks to minimise the social and environmental impact of blasting through minerals extraction operations through requiring operators to demonstrate that, where blasting is required, that the ground vibration resulting from blasting will not have an unacceptable adverse impact on buildings and structures, and people within buildings and will not normally exceed peak particle velocities of 6mm/second.

4.6.27 However the SA pointed out that the policy could more robustly safeguard the social and environmental impact by including the requirement for a vibration monitoring scheme in the policy wording.

4.6.28 As a result of including the vibration monitoring scheme as part of policy criteria, policy MW6 Blasting has been strengthened to better protect the environment and local communities and human health in the long-term. However, the changes made to the policy as a result of SA do not alter the effects originally predicted. There are no outstanding issues.

4.7 Policy MW7: Traffic and Transport

4.7.1 Sustainable transport is an important element to supporting economic growth, but it is imperative to support the mobility of development in a way that causes the least damage. Transport is one of the main environmental considerations which will need to be carefully assessed when determining minerals and waste proposals. This is due to Heavy Goods Vehicle (HGV) traffic associated with minerals and waste developments which can cause adverse impacts. HGV's associated with mineral working and waste development can also impact upon the Strategic and Local Road network in terms of its capacity and upon levels of congestion. In addition, lorries used to transport minerals and waste produce carbon emissions that contribute to global warming. The sustainable transportation of minerals and waste is therefore an important consideration.

4.7.2 Policy MW7 seeks to encourage and facilitate sustainable transport of minerals and waste where practicable and ensure that the traffic and transportation implications of all proposed minerals or waste development are acceptable and avoid, reduce, or mitigate adverse impacts.

4.7.3 M&WDPD objective 2 is relevant to this issue and is complimentary to County Durham Plan objective 9. This policy is to be applied alongside County Durham Plan policy 21 (Delivering Sustainable Transport).

Reasonable Alternatives

4.7.4 The NPPF states the need to promote sustainable transport and issues from the earliest stages of plan-making and development proposals, so the potential impacts of development on transport networks can be addressed; opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised; and opportunities to promote walking, cycling and public transport use are identified and pursued the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account (paragraph 102).

4.7.5 The NPPF also stresses the need for Local Authorities to ensure that planning policies should be prepared with the active involvement of local highways authorities, other transport infrastructure providers and operators and neighbouring councils, so that strategies and investments for supporting sustainable transport and development patterns are aligned (paragraphs 103).

4.7.6 To ensure the delivery of sustainable transport and the transport implications of new development relating to Minerals and Waste are addressed at the planning application stage, it is considered that there are no reasonable alternatives to developing a policy in accordance with the National Planning Policy Framework (NPPF). It is considered that the policy broadly maintains the 'business as usual' approach as represented by the saved transport policies of the existing Minerals Local Plan and Waste Local Plan. The SA has consequently focused on whether the drafts of the policy presented are robust, cover all necessary aspects and include appropriate safeguards.

4.7.7 Please also note that no reasons to deviate from the approach outlined (e.g. representations made to the contrary, substantial changes to planning guidance or evidence etc) have been forthcoming between the Draft and Publication Draft stages of M&WDPD development. There are therefore no new reasonable alternatives to consider in relation to the approach to minerals and waste related traffic and transport.

Appraising Significant Changes

4.7.8 Since its previous assessment, several revisions have been made to the policy. The most significant revisions include:

- Removing the requirement for developers to demonstrate that the use of sustainable transport isn't viable

- Introduction of caveats ‘where practicable’ around the use of sustainable transport modes
- Inclusion of need to consider the number of lorry movements
- Inclusion of transport assessment expectations for smaller schemes
- Introduction of a Lorry Route Network Map to replace the obsolete County Durham Freight Map

4.7.9 These collective changes are considered to change the previous emphasis of the policy, thereby requiring a re-assessment.

Policy Assessment Outcome

4.7.10 The following table shows the assessment outcome when the policy was first assessed in 2021 and the new predicted outcomes following the significant changes made to it. Please also see the supporting SA matrix in Appendix C which shows further detail, including the predicted breakdown of short, medium and long term effects. The commentary below relates to the new, 2022 assessment outcome.

Table 15 Summary Assessment: Policy MW7

	1. Decent Affordable Homes	2. Strong Secure Communities	3. Education, Training & Lifelong Learning	4. Health: Inequalities & Lifestyles	5. Need to Travel & Sustainable Transport	6. Alleviate Deprivation	7. Economy & Employment	8. Climate Change: Mitigation	9. Climate Change: Adaptation	10. Biodiversity & Geodiversity	11. Landscape & Townscape	12. Historic Environment	13. Resources: Air, Water & Soil	14. Waste & Use of Materials	15. Minerals Extraction & Impacts
2021 Assessment Outcome	0	✓	0	✓	✓	✓	✓	✓	0	0	0	0	✓	✓	✓
2022 Assessment Outcome	0	✓/x	0	✓/x	✓/x	0	✓/x	✓/x	0	0	0	0	✓/x	✓/x	✓/x
Final Assessment Outcome	0	✓	0	✓	✓	0	✓	✓	0	0	0	0	✓	✓	✓

4.7.11 The change from positive effects to positive/negative predicted effects in the most recent assessment reflects the change in emphasis to the policy from requiring to

considering the use of sustainable modes of transport for the movement of minerals and waste.

Social Effects

4.7.12 There are several aspects of the policy that contribute positively to ensuring strong, secure communities and protecting health and wellbeing. These include:

- Only permitting proposals that ensure safe and suitable access to sites and that do not have unacceptable adverse impacts on highways safety will contribute towards avoiding and minimising accidents and injury.
- Encourages the use of public transport, walking and cycling to sites where practicable.
- Minimising the use of rural roads for the transportation of minerals and waste through routing and use of the Lorry Route Network Map, thereby protects the recreational amenity use of rural roads for walking, cycling, horse riding etc
- Imposing planning conditions, where necessary to minimise the amenity impact of traffic on local communities e.g. through numbers of lorry movements, operating hours and routing of traffic. This could help to minimise noise and other forms of pollution and nuisance which can affect health and wellbeing.

4.7.13 The policy also, primarily aims to encourage the use of sustainable and low/zero emission modes of transport that can help to minimise numbers of and ensure the use of less polluting vehicles on the road. However, the change in emphasis of the policy from requiring transportation of minerals and waste to be by sustainable modes (unless demonstrated to be not possible or unviable) to considering their use where practical and economic weakens this element and potential opportunities to reduce vehicle movements linked to proposals in the future. Changes to the policy wording are suggested to address this.

4.7.14 Furthermore, whilst the policy intends to ensure that the most suitable routes are identified as part of any planning permission, minor rural roads are avoided and that the defined lorry route network is utilised as soon as practicable (includes all roads classified as an A Road or above), it may be useful to stipulate that the use of B roads will generally be preferred in order to access the lorry route network, helping to reduce the use of smaller, unsuitable roads further.

4.7.15 Finally, the policy would also benefit from the inclusion of criterion that considers the broader impact of traffic and transport on health (and the environment) as this is currently missing. To be permitted, the policy only requires that proposals can be safely accessed and that they do not have unacceptable adverse impacts on the highways network. Inclusion of a further, broader criterion could help to ensure issues such as impacts of minerals and waste traffic on health in Air Quality Management Areas etc are taken into account.

Economic Effects

4.7.16 The policy seeks to achieve a balance of encouraging the use of sustainable transport without affecting the viability of minerals and waste businesses in the county. Encouraging

the use of sustainable modes of transport, including rail can help to minimise congestion that can adversely impact on the productivity of all types of business. The expansion and contribution of rail freight to County Durham's and the region's economy can also be supported. Where road transportation is required, ensuring routes minimise the use of rural roads will also help to support the rural economy and their use for recreational purposes. However, it is considered that the policy could be strengthened further in relation to the use of sustainable modes of transport and their contribution to the economy, whilst still taking minerals and waste business viability into account. Changes to the policy wording are suggested to address this.

Environmental Effects

4.7.17 The policy seeks to minimise pollution and greenhouse gases caused by minerals and waste proposals by encouraging sustainable modes of transport (including rail), low/zero emissions vehicles and avoiding the creation of congestion. However, the change in emphasis from requiring use of sustainable modes (unless it can be demonstrated not to be possible or unviable) to only considering and seeking their use where practical and economic, lowers the test applicants need to meet in this regard and with it, potential opportunities to reduce vehicle movements linked to proposals in the future. Whilst opportunities for non-road based transportation of minerals and waste may be considered limited at present, there are opportunities and these can and will need to increase as the UK moves towards net zero. The revisions made to the policy are not considered to align as well with the ambition and commitment to be a carbon neutral county by 2045. Changes to the policy wording are suggested to address this. The suggested changes take into account that the use of sustainable modes of transport should not significantly increase total travel distances which could be counter-productive to the aim of minimising greenhouse gas emissions.

4.7.18 As part of this policy, the Lorry Route Network Map shows the road network that drivers of HGV's are expected to use to access destinations within the County i.e. A roads. However, as sites can be remote from these roads it may be useful to stipulate that a greater use of B roads to access the network will be preferred. The use of such 'faster' roads as opposed to smaller, rural roads should contribute to fuel efficiency and reduced emissions. The Fuel Efficient Truck Drivers' Handbook advises that the more you have to change gear, brake or accelerate the more fuel will be used. Slow, arduous routes will drag down the fuel performance of even the best vehicle.²³

4.7.19 Minor, positive effects were predicted in relation to the protection of biodiversity as encouraging the use of sustainable modes of transport, low/zero emission vehicles and routing away from rural roads as much as possible can help to minimise levels of traffic related noise and disturbance to biodiversity along with road fatalities. Some habitats within 200 metres of roads, including component habitats of Sites of Special Scientific Interest (SSSI) and Special Areas of Conservation (SAC) are sensitive to nitrogen deposition from exhaust emissions. As drafted the scope of the policy would not consider this potential

²³ [Department for Transport - The Fuel Efficient Truck Drivers Handbook](#)

transport impact and the inclusion of a broader environmental criterion would help to cover this and other types of transport and traffic impacts.

4.7.20 The SA also recognised that avoiding congestion as part of the requirements of criterion b and minimising the use of rural roads can have minor positive effects on the experience and enjoyment of local, urban and rural landscapes, tranquillity and can contribute towards protecting the character of Conservation Areas.

Significant Issues

None identified. However, the wording of the policy could align better with ambitions and commitment to be a carbon neutral county by 2045

Recommendations / Mitigation

4.7.21 Please note that the references used below relate to the specific social (SOC), economic (ECO) and environmental (ENV) mitigation measure proposed in the detailed matrix for this policy as presented in Appendix C.

- Amend policy wording from: ‘Minerals and waste proposals should always consider and seek to maximise the use of sustainable forms of transport such as by rail, and/or by low or zero emission vehicles, where practical and economic’
To:
‘Minerals and waste proposals should utilise and maximise sustainable modes of transport such as by rail and/or by low or zero emission vehicles, unless it can be demonstrated that this is unfeasible, unviable or could significantly increase total travel distances.’ (SOC1, SOC4, SOC5, ECON1, ENV1, ENV3, ENV4, ENV5)
- Include the following (or similar) wording in the supporting text: ‘The Council will therefore seek to ensure that the most suitable route is identified as part of any planning permission and will seek to ensure that vehicles transporting minerals and waste, avoid or minimise minor rural roads and utilise as soon as practicable the defined lorry route network of roads within the County. **Where sites are remote from the lorry route network, the use of B roads for the greater part of the journey to the network will generally be preferred.**’ (SOC2, ECON1, ENV1, ENV5)
- Add the following criterion to the policy: In determining planning applications, proposals will be permitted where it can be demonstrated that:
c) The impacts of traffic and transport do not have unacceptable adverse impacts either individually or cumulatively on the environment, local amenity or health.’ (SOC3, ENV2, ENV5)
- Amend wording from ‘Where the movement of minerals by rail is feasible as part of new or extended minerals workings, applicants will be required to consider such movements from both existing and new rail handling facilities’
To:
‘Where the movement of minerals by rail is feasible, viable and will not significantly increase total travel distances as part of new or extended minerals workings,

applicants will be required to **utilise** existing and new rail handling facilities' (SOC6, ENV1, ENV3, ENV4, ENV5)

Residual Effects

4.7.22 None identified

Response to SA Recommendations

4.7.23 (SOC1, SOC4, SOC5, ECON1, ENV1, ENV3, ENV4, ENV5) Amend policy wording from: 'Minerals and waste proposals should always consider and seek to maximise the use of sustainable forms of transport such as by rail, and/or by low or zero emission vehicles, where practical and economic' to 'Minerals and waste proposals should utilise and maximise sustainable modes of transport such as by rail and/or by low or zero emission vehicles, unless it can be demonstrated that this is unfeasible, unviable or could significantly increase total travel distances.' Not accepted. The proposed SA wording which refers to "unfeasible, unviable" is not necessary and would provide a difficult test to meet and does not reflect Section 9 of the NPPF (Promoting sustainable transport).

4.7.24 In terms of the rail network, there are limited opportunities for rail transport compared to the middle of the last century and mineral rail handling facilities are also currently very limited in number. Experience has also shown that rail transport is only economic where minerals are transported longer distances and at higher volumes. In terms of movements by road the overwhelming majority of minerals and all waste transported within the County and to locations outside of the County in the North East are by road reflecting the widely dispersed nature of construction sites where minerals are used. A similar situation applies to waste which is generated across the County and North East and managed at a widely dispersed network of waste management sites. The UK is on a pathway to the decarbonisation of transport and low emission and zero emission HGVs will gradually replace existing HGVs as technology develops to meet Government targets and plans to phase out new, non-zero emission heavy goods vehicles weighing 26 tonnes and under by 2035, with all new HGVs sold in the UK to be zero emission by 2040. Following discussions with the SA team the wording has been amended to "Minerals and waste proposals should always seek to maximise the use of sustainable forms of transport where opportunities exist and are practical and economic." Supporting text has also been amended from "While limited there may be opportunities for more sustainable non-road-based transport of minerals and waste now" to "While currently limited there may be opportunities for more sustainable non-road-based transport of minerals and waste now and in the future."

4.7.25 The approach taken by MW7 (Traffic and Transport) is to encourage and to require consideration of sustainable transport measures which can be undertaken through work to prepare any Transport Assessment or Statement and to consider as a benefit under Policy MW3 (Benefits of Minerals Extraction). Policy MW8 provides a framework for new rail handling facilities to come forward, but it is considered that operators will only invest and transport mineral by rail if they gain consent for significant levels of new permitted reserves and the quarry is located near to an existing operational rail line which has capacity to take mineral traffic. Developing new railheads would require significant investment and it is likely

that only a large site with a long timescale, supplying more than a local market, would be able to justify the level of investment required.

4.7.26 (SOC2, ECON1, ENV1, ENV5) Include the following (or similar) wording in the supporting text: 'Where sites are remote from the lorry route network, the use of B roads for the greater part of the journey to the network will generally be preferred.' Accepted. This wording is a useful addition.

4.7.27 (SOC3, ENV2, ENV5) Add the following criterion to the policy: In determining planning applications, proposals will be permitted where it can be demonstrated that: c) The impacts of traffic and transport do not have unacceptable adverse impacts either individually or cumulatively on the environment, local amenity or health.' Not accepted. The focus of Policy MW7 (Traffic and Transport) is on traffic and transport. Policy MW1 (General criteria for considering minerals and waste development) provides the overarching policy which relates to the environment and amenity of local communities and is supported by other policies including MW5 (Air Quality and Dust) which considers matters such as air quality and particulates from Heavy Good's vehicles.

4.7.28 (SOC6, ENV1, ENV3, ENV4, ENV5) Amend wording from 'Where the movement of minerals by rail is feasible as part of new or extended minerals workings, applicants will be required to consider such movements from both existing and new rail handling facilities' to: 'Where the movement of minerals by rail is feasible, viable and will not significantly increase total travel distances as part of new or extended minerals workings, applicants will be required to utilise existing and new rail handling facilities' (SOC6, ENV1, ENV3, ENV4, ENV5). Not accepted. Following discussions with the SA team the policy has been amended to require that "Minerals and waste proposals should always seek to maximise the use of sustainable forms of transport where opportunities exist and are practical and economic". It also advises that, "Proposals for the establishment of new mineral rail handling facilities will be considered in accordance with Policy MW8 (Mineral Rail Handling Facilities)." Further information is provided within the supporting text which states, "Information on how the use of the rail network could be maximised will be a requirement in considering certain mineral planning applications. However, it is recognised that this will not be relevant to all proposals and will most readily apply where proposals for new large or extended mineral workings are proposed near to or adjacent to an existing or protected rail route or alignment. In addition, it is also recognised that the transport by rail of relatively small quantities of minerals to local, dispersed points may not be economic and could lead to a poorer environment due to increased total travel distance and the need for final delivery by road. In assessing the feasibility of rail use regard will be had to both practical and economic implications, to ensure that the level of additional costs incurred are reasonable when compared with the local and wider environmental benefits that would accrue."

Conclusion and Outstanding Issues

4.7.29 The SA identified the need to strengthen and more positively word the policy in respect to the use of sustainable modes to transport minerals and waste. Whilst the specific

wording suggested by the SA has not been accepted the overall emphasis of the policy has been revised in line with the SA recommendations.

4.7.30 The reasons for not including the suggested criterion c as per SOC3, ENV2 and ENV5 are accepted. The acceptance of the recommendation regarding the use of B roads to access the lorry route network may contribute further towards minimising the use of smaller, unsuitable rural roads.

4.7.31 Changes made to the policy in response to SA recommendations enable a positive assessment outcome to be predicted against 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). Please see the final assessment outcome in table 15.

4.8 Policy MW8: Mineral Rail Handling Facilities

4.8.1 Policy MW8 is created with the aim to support and establish opportunities for new rail handling facilities for mineral transportation. Opportunities for new facilities may also help to secure the future of existing rail lines and infrastructure. The shift from road to rail transportation of minerals can play a large part in mitigating climate change and contribute to a sustainable economy.

4.8.2 In May 2021, the government announced its plans for the biggest reform to the railway in three decades. The Government's Plans for rail include a commitment to develop a sector-wide, long term strategy for rail: the Whole Industry Strategic Plan. As part of the governments call for evidence, several strategic objectives were proposed, including meeting the needs of freight customers and encouraging modal shift by increasing the attractiveness of rail. The importance of rail freight to the economy and environment is highlighted, along with the need to develop and include growth targets for freight in the Strategic Plan. In the 2022 consultation response, the expansion of the role of freight was supported.²⁴

4.8.3 M&WDPD objective 2 is relevant to this issue and is complimentary to County Durham Plan objective 9. This policy is to be applied alongside County Durham Plan policy 24: Provision of Transport Infrastructure.

Reasonable Alternatives

4.8.4 The NPPF states the need to promote sustainable transport and issues from the earliest stages of plan-making and development proposals, so the potential impacts of development on transport networks can be addressed; opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised; and the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account (paragraph 102).

4.8.5 The NPPF also states that policies should provide for any large scale transport facilities that need to be located in the area, and the infrastructure and wider development required

²⁴ [Whole Industry Strategic Plan - Call for Evidence Response Report Summary \(June 2022\)](#)

to support their operation, expansion and contribution to the wider economy (paragraph 104).

4.8.6 To support the establishment of mineral rail handling facilities and ensure implications of new development relating to minerals and waste are addressed at the planning application stage, it is considered that there are no reasonable alternatives to developing a policy in accordance with the National Planning Policy Framework (NPPF). It is considered that the policy broadly maintains the 'business as usual' approach as represented by the saved transport policies of the existing Minerals Local Plan.

4.8.7 It is considered that there were no reasonable alternatives to the inclusion of a policy and application of this policy alongside policy 24 of the County Durham Plan. With no reasonable alternatives to assess the SA has consequently focused on whether the drafts of the policy presented are robust, cover all necessary aspects and include appropriate safeguards.

4.8.8 Please also note that no reasons to deviate from the approach outlined (e.g. representations made to the contrary, substantial changes to planning guidance or evidence etc) have been forthcoming between the Draft and Publication Draft stages of M&WDPD development. There are therefore no new reasonable alternatives to consider in relation to the approach to mineral rail handling facilities.

Appraising Significant Changes

4.8.9 No further changes have been made to the policy text between the Draft and Publication Draft stages of M&WDPD development. Therefore, no changes to the previous SA assessment have been made and this is repeated as follows, including previous recommendations and mitigation measures.

Policy Assessment Outcomes

4.8.10 The following table illustrates the effects the implementation of the policy is predicted to have against each SA objective. Textual changes to the policy draft were recommended through the SA but the reasons for not accepting these were justified. Please also see the supporting SA matrix in Appendix C which shows further detail, including the predicted breakdown of short, medium and long term effects.

Table 16 Summary Assessment: Policy MW8

	1. Decent Affordable Homes	2. Strong Secure Communities	3. Education, Training & Lifelong Learning	4. Health: Inequalities & Lifestyles	5. Need to Travel & Sustainable Transport	6. Alleviate Deprivation	7. Economy & Employment	8. Climate Change: Mitigation	9. Climate Change: Adaptation	10. Biodiversity & Geodiversity	11. Landscape & Townscape	12. Historic Environment	13. Resources: Air, Water & Soil	14. Waste & Use of Materials	15. Minerals Extraction & Impacts
Assessment Outcome	0	✓	0	✓	0	0	0	✓	✓	✓	✓/x	0	✓	✓	✓

4.8.11 The SA predicted that overall, this policy will have a positive or minor positive effect in the long-term. In the short-term the SA identified a possible negative effect for environmental objectives 8, 10, 13, and 15 but it is predicted that the policy will have a positive effect on these objectives in the medium to long term. It is predicted that the policy could have both positive and negative effects on objective 11 (Landscape) depending on implementation.

Social Effects

4.8.12 The SA predicted positive effects against SA objectives 2 (Strong and secure communities), 4 (Health), a minor positive effect against SA objectives 1(Decent homes), 6 (Alleviate deprivation) and a positive effect on objective 5 (Sustainable transport) in the long-term. The policy sets out criteria that will contribute positively towards safeguarding decent homes, communities, health inequalities and lifestyles, sustainable transport, and contribute to alleviating poverty.

4.8.13 The policy wording states: 'The establishment of facilities which enable the transfer of minerals from road to rail will be permitted provided that it can be demonstrated that there will be no unacceptable adverse impacts on the environment, human health or the amenity of local communities.'

4.8.14 The SA predicted that this policy enables potential for a positive social effect on communities (SOC2) as the policy requires impact on local amenity in relation to transport and traffic to be acceptable. It also provides the opportunity to safeguard health and wellbeing (SOC4) through providing the opportunity to transfer movement of minerals to rail rather than road where possible, which will reduce carbon emissions. The policy

specifies that this transfer should have an acceptable impact on traffic, local amenity, and other environmental effects, which will enable healthy lifestyles.

4.8.15 The SA predicts a minor potential positive short-term effect and possible positive long-term effect on sustainable transport (SOC5) as facilities, networks, and technological advancements in transport (including rail freight) are developed. The policy provides potential to reduce the need to transport minerals and waste via road where possible.

4.8.16 Whilst there is no clear direct link between this policy and objective 1 (decent affordable homes) or 6 (alleviating poverty), there is potential for this policy to safeguard decent homes by seeking to minimise impacts on local amenities such as local roads near housing and poverty related issues such as deprived areas being more likely have high pollution levels or be close to areas of high pollution levels.

Economic Effects

4.8.17 No clear link

Environmental Effects

4.8.18 The SA predicts that although this policy may have a negative impact in the short term, regarding some environmental objectives such as climate change, biodiversity, resources and Minerals sustainability, due to the current limitations in infrastructure and transport, it is probable that it will have a positive effect in the long term.

4.8.19 The SA predicts that whilst this policy may have a minor negative effect on climate change (SA objective 8) via the building of the rail facilities it will have a positive effect in the long-term as road-based transport is a cause of climate change. Furthermore, emissions will be reduced through the promotion of sustainable transport and encouragement of use of low/zero emissions vehicles. This includes allowing the establishment of rail transportation of minerals where impact is acceptable.

4.8.20 Permitting the establishment of facilities to enable the transfer of minerals by rail where the impact is acceptable may have a negative impact in the short term on biodiversity (ENV 10) as these facilities are incepted however the SA predicts a positive medium and long-term impact in enhancing biodiversity and geodiversity by moving minerals related traffic off the road and onto rail-based transportation that is low/zero emissions.

4.8.21 The policy allows the establishment of facilities that enable a move towards lower emissions via a move to rail transportation, provided the impact of the development is acceptable upon the local amenity and other environmental issues.

4.8.22 The SA acknowledges that there may be a negative effect on resources (SA objective 13) and minerals extraction (SA objective 15) whilst the facilities are being built, but once established the rail facilities will have a positive effect on resources and the process of mineral extraction will be more sustainable. The policy supporting text states that the ideal location of rail loading will be at point of extraction, which will improve the sustainability of

minerals extraction. This reduction of road transportation will also minimise the adverse impact on air water and soil resources, communities and including roadside communities.

4.8.23 The SA identifies that this policy could have a positive or negative environmental effect on the landscape (SA objective 11) depending on how the policy is implemented. The policy will enable the transition of minerals transportation of road and onto rail. This will have a positive effect by reducing traffic and congestion. The policy supporting text also states that there should be consideration to local amenity (including housing) and environmental effects.

4.8.24 This policy could have a negative effect on the quality and location of the landscape where these facilities are built. Although the supporting text does state that the location of any new rail handling facilities will need to be carefully assessed so that any unacceptable adverse impacts are minimised, there is still the possibility of a negative effect as a result.

Significant Issues

None identified

Recommendations / Mitigation

4.8.25 Please note that the references used below relate to the specific social (SOC), economic (ECO) and environmental (ENV) mitigation measure proposed in the detailed matrix for this policy as presented in Appendix C.

4.8.26 The policy criteria states: 'The establishment of facilities which enable the transfer of minerals from road to rail will be permitted provided that it can be demonstrated that there will be no unacceptable adverse impacts on the environment, human health or the amenity of local communities.' Consider including definition of what is considered as unacceptable adverse impact. This would reduce any policy ambiguity.

Residual Effects

4.8.27 None Identified

Response to SA Recommendations

4.8.28 Not accepted - a definition is not required as the acceptability of proposals is determined as part of the planning balance and along with the application of relevant policies within the County Durham Plan.

Conclusion and Outstanding Issues

4.8.29 The SA has identified that the policy seeks to safeguard the communities and the environment through enabling rail handling facilities, provided it can be demonstrated that there will be no unacceptable adverse impacts on the environment, human health or the amenity of local communities. This is because, once established, rail handling facilities could reduce vehicle miles and associated emissions including, CO₂, and assist in reducing the impacts on the amenity of roadside communities.

4.8.30 Whilst the SA recommendations were not incorporated within the policy, the justification provided for this has been accepted. There are no outstanding issues.

4.9 Policy MW9: Borrow Pits

4.9.1 A borrow pit is a term used in construction and civil engineering and refers to an area where minerals, such as sand and gravel, is excavated for use in the construction of a nearby infrastructure project. Borrow pits can help to supply aggregates associated with infrastructure projects as well as reducing vehicle movements and the distances aggregates are transported. They can also sometimes be used for the disposal of surplus materials. However, there are a number of considerations to take into account when determining whether a borrow pit is the most suitable approach to providing the project with the minerals needed.

4.9.2 DPD objectives 1 and 2 are relevant to considering proposals for borrow pits and are complimentary to the following existing County Durham Plan objectives: 4 (Infrastructure), 19 (Natural Resources) and 20 (Supply of Minerals).

Reasonable Alternatives

4.9.3 The National Planning Policy Framework (NPPF) and minerals Planning Practice Guidance (PPG) do not set out specific requirements or guidance in relation to borrow pits. However, whilst such applications in County Durham are rare, in recent years planning permission has been granted to three borrow pits in association with the construction of estate roads in West Durham. As other proposals cannot be discounted in the future and borrow pits can contribute towards a sustainable, short term supply of minerals there are not considered to be any reasonable alternatives to the inclusion of a policy in the M&WDPD that outlines criteria proposals can be determined against. The existing Minerals Local Plan includes a policy on borrow pits so ensuring that a policy is included in the M&WDPD maintains the business as usual approach. Please note that other Minerals Plans within the region also include policies on the use of Borrow Pits.

4.9.4 Please also note that no reasons to deviate from the approach outlined (e.g. representations made to the contrary, substantial changes to planning guidance or evidence etc) have been forthcoming between the Draft and Publication Draft stages of M&WDPD development. There are therefore no new reasonable alternatives to consider in relation to the approach to the use of borrow pits.

Appraising Significant Changes

4.9.5 Since its previous assessment, additional wording has been added to the supporting policy to further clarify that Borrow Pits will be subject to the same environmental requirements as mineral sites and specifically those set out in Policies MW1, MW3, MW4, MW5, MW7 and MW22. This revision does not alter the emphasis of the policy and therefore, no changes to the previous SA assessment have been made. This is repeated as follows, including previous recommendations and mitigation measures.

Policy Assessment Outcome

4.9.6 The following table illustrates the effects the implementation of the policy was predicted to have prior to and following the partial acceptance of SA recommended changes to the policy wording. Please also see the supporting SA matrix in Appendix C which shows further detail, including the predicted breakdown of short, medium and long term effects. The commentary below relates to the initial assessment outcome.

Table 17 Summary Assessment: Policy MW9

	1. Decent Affordable Homes	2. Strong Secure Communities	3. Education, Training & Lifelong Learning	4. Health: Inequalities & Lifestyles	5. Need to Travel & Sustainable Transport	6. Alleviate Deprivation	7. Economy & Employment	8. Climate Change: Mitigation	9. Climate Change: Adaptation	10. Biodiversity & Geodiversity	11. Landscape & Townscape	12. Historic Environment	13. Resources: Air, Water & Soil	14. Waste & Use of Materials	15. Minerals Extraction & Impacts
Initial Assessment Outcome	0	✓/x	0	✓/x	✓	0	✓	✓/x	✓	✓/x	?	✓/x	✓/x	✓	✓/x
Final Assessment Outcome	0	✓	0	✓	✓	0	✓	✓	✓	✓	✓	✓	✓	✓	✓

4.9.6 The initial SA largely predicted a combination of positive and negative social and environmental effects and positive economic effects. These are summarised as follows.

Social Effects

4.9.7 There were no clear links between the policy and SA objectives 1 (Decent, affordable homes), 3 (Education) and 6 (Deprivation). In relation to communities and health objectives, positive effects were identified as the policy recognises that borrow pits may be a preferable option where the supply of minerals from an existing quarry would be detrimental to local amenity. Positive effects were also identified as criteria within the policy relating to the time limited nature of borrow pits and their restoration at the earliest opportunity will help to minimise the duration of any potential impacts or nuisance to communities. Criteria within the policy will also help to ensure that the benefits of using borrow pits in respect of lowering the levels of HGV movements on local roads compared to importing materials to site and disposing of excavated materials are achieved.

4.9.8 However, whilst impacts are likely to be of a temporary nature, the SA also identified the potential for negative effects as, as drafted the policy did not ensure that unacceptable adverse impacts to communities or health will be avoided through working and restoring the borrow pit e.g. via noise, dust, vibration etc. It was also considered that the wording of the policy could be tightened and clarified to ensure that borrow pits are only considered for certain types of construction project and will be time limited specifically to the construction phase.

Economic Effects

4.9.9 Positive economic effects were predicted as criteria within the policy relating to the time limited nature of borrow pits and the need to consider supply from existing quarries in the area first, will ensure that borrow pit proposals do not undermine existing minerals business. In addition, where borrow pits are approved in accordance with the policy, they can help to ensure that infrastructure projects which benefit the economy can be delivered with reduced risk of delay and costs arising from double handling, importation of materials and landfill disposal. However, the SA identified that in order to highlight the importance of considering existing quarries as the first step, it would be useful if the policy criteria were re-ordered so that this becomes the first criterion. In addition, in order to better determine the spatial scale positive effects relate to it would be useful if the policy further qualified what is meant by 'existing quarries in the area.' For example, would this be limited to quarries in County Durham or the wider north-east region?

Environmental Effects

4.9.10 Positive environmental effects were predicted against travel, adaptation and waste SA objectives. In relation to travel objectives, the requirement to consider supply from existing quarries in the area suggests that nearby, local quarries as opposed to quarries at a further distance, elsewhere in the country will be the first consideration when determining the respective reduced, transportation benefits of borrow pit proposals. However, it was considered useful if 'the area' is clarified further e.g. County Durham or the wider North East region? Criterion c and d will ensure that the benefits of using borrow pits in respect of reducing distances associated with the importation of minerals and disposal of excavated materials is achieved. However, the initial requirement to do so 'without the use of the public highway system' may prevent proposals which are otherwise well-related to the construction project and can be delivered without any adverse impacts to highways safety or communities.

4.9.11 In relation to the adaptation objective, the SA recognised that in some circumstances, the restoration of borrow pits may contribute towards addressing the impact of climate change by taking opportunities to mitigate pre-existing and potential future flood risk.

4.9.12 In relation to the waste and resources objective, the requirement for borrow pit proposals to demonstrate that their need for aggregates cannot be met by secondary and recycled materials will contribute towards conserving primary, natural resources. However, in order to strengthen the emphasis it was recommended that the use of suitable, secondary or recycled materials are cited prior to the supply of primary aggregates from

existing quarries in criterion b. The use of excavated materials in restoration as required by criteria d will also minimise the need for other methods of disposal.

4.9.13 In relation to the other environmental SA objectives, the potential for both positive and negative environmental effects were identified. The positive aspects are summarised as follows:

- The criteria within the policy which helps to reduce the distances that minerals and materials are transported also contributes toward reducing greenhouse gas emissions
- Recognition that there may be circumstances where a borrow pit may be preferable to obtaining supply from an existing quarry due to the environmental impact of doing so could avoid or minimise impacts to biodiversity, landscape, heritage, and water and soil resources.
- The requirement to restore borrow pits to an appropriate landform should avoid long term, adverse landscape and visual impacts
- The requirement to restore borrow pits without using imported materials is likely to ensure that soil resources are carefully managed.

4.9.14 Negative effects were however also identified against climate change, biodiversity, landscape, heritage, air water, soil objectives because the policy did not include criteria to determine whether the working (and restoration) of the borrow pit will be acceptable in respect of impacts to these receptors. Uncertainty against the landscape objective (long term) was also predicted as whilst there are social and environmental benefits from avoiding the use of imported materials in the restoration of the borrow pits, there is uncertainty as to whether this would enable a high quality restoration scheme to be achieved in all circumstances?

4.9.15 Due to the effect predicted against social and environmental SA objectives, the potential for both positive and negative effects were also predicted against SA objective 15 - to improve the sustainability of minerals extraction and use and reduce the adverse impacts on communities and the environment.

Significant Issues

None identified

Recommendations / Mitigation

4.9.16 Please note that the endnotes and references used below relate to the specific social (SOC), economic (ECO) and environmental (ENV) mitigation measure proposed in the detailed matrix for this policy as presented in Appendix C.

4.9.17 Consider amending policy wording as follows or similar:

Borrow Pits

Proposals for borrow pits must be operationally related to a specific, **major construction**²⁵ project and will be permitted where all the following criteria are met:

[Delete the following criterion] a) They are time limited to the life of the project and material is to be used only for the specified project;

a)²⁶ There is a need for a particular type of aggregate which cannot reasonably be [Delete supplied from existing quarries in the area, or cannot be] **met by the use of suitable secondary or recycled materials**,²⁷ or supplied by existing quarries [Delete in the area] **County Durham or North East?**²⁸ or where the applicant can demonstrate that the supply of the mineral from existing sources would be seriously detrimental to the local amenity and the environment of the area because of the scale, location or timing of the necessary operations;

b) They are time limited to the [Delete life] **construction phase**²⁹ of the project and material is to be used only for the specified project;

c) the site lies on or lies near to the proposed construction scheme so that the aggregate extracted from the borrow pit can be transported to the point of utilisation [Delete without the use of the public highway system;] **largely via site haul routes within the construction boundary of the project.**³⁰

d) It can be demonstrated that the working and restoration of the borrow pit will have no unacceptable adverse impact on the environment, human health, or the amenity of local communities.³¹

e) that the borrow pit can be restored to an appropriate landform and that high-quality restoration and aftercare takes place at the earliest opportunity in accordance with an agreed scheme, **largely** without³² the use of imported material, other than that generated on the adjoining construction scheme and which can be brought to the site [Delete without the use of the public highway system]. **largely via site haul routes within the construction boundary of the project.**³³

²⁵ SOC1: qualify project type further

²⁶ ECON2: reorder criterion a and b

²⁷ ENV11: emphasis on secondary / recycled resources prior to use of primary

²⁸ ENV2 & ECON1: clarify what the area is

²⁹ SOC1: to clarify time-bound, temporary nature further

³⁰ ENV1 & ENV3: to introduce flexibility to consider well related proposals which may require public highways use where can be achieved safely and without community impact

³¹ SOC2, SOC3, ENV4, ENV6, ENV9, ENV10, ENV11 Suggested to address potential policy gap

³² ENV8: introduces flexibility in the event that some imported materials are required to achieve the high quality restoration scheme desired.

³³ ENV1 & ENV3: to introduce flexibility to consider well related proposals which may require public highways use where can be achieved safely and without community impact

- Recognise within other policies of the DPD as relevant, including any restoration and aftercare policies the following issues:
 - ENV5 - opportunities to adapt to the impacts of climate change
 - ENV7 - importance of achieving Biodiversity Net Gain (BNG)
 - ENV12 - importance of good soil management and the need to protect the best and most versatile agricultural land

Residual Effects

- None Identified.

Response to SA Recommendations

4.9.18 Policy wording:

- SOC1 - agreed in part. Amended the first line of the supporting text to "Borrow Pits are temporary small-scale mineral workings on or near to a construction project such as road construction or similar civil engineering projects which are used solely to supply mineral, mainly aggregates or clay for a project." However, do not agree that a size threshold of 'major' construction should be given as they relate to specific construction or engineering projects.
- ECON2 - agreed. The criteria has been re-ordered to emphasis the importance of considering existing quarries first.
- ENV11 - disagree. It is not considered necessary to create a sequential approach i.e. suitable secondary or recycled materials then supply of primary aggregates. The criteria has however been revised as follows, "The applicant can demonstrate that the supply of material cannot be met reasonably from either existing quarries in the local area or by the use of suitable secondary or recycled materials of appropriate quality".
- ENV2 & ECON1 - agreed in part. The existing supporting text stated "local". Inserting "local" in the policy would bring it in line with the supporting text. However, while ensuring consistency would not address the county or North East geographical scale point. This needs to remain flexible as the policy is about whether a borrow pit is the most appropriate mechanism to provide the necessary material for the associated construction project.
- SOC1 - disagree. Restricting borrow pits to the construction phase of projects only would be too restrictive
- ENV1 & ENV3 - agreed. Policy wording has been changed to improve flexibility to "That the borrow pit lies on or lies near to the proposed construction project so that the mineral extracted and any other materials or suitable inert wastes from the construction project can be transported to the point of use or disposal without or with only minimal use of the local road network;"
- SOC2, SOC3, ENV4, ENV6, ENV9, ENV10, ENV11 - agreed. A new criterion d has been added relating to the social and environmental acceptability of working and restoring borrow pits

- ENV8 - agreed in part. The following wording has been added to the supporting text to clarify the restoration and importation of waste issue further - "Borrow Pits may result in proposals to import waste as fill in order to restore the site and as a result the council will seek to ensure that this does not occur by seeking low level restoration when suitable onsite material is not available unless this can be demonstrated to provide an unsatisfactory form of restoration."
- ENV1 & ENV3 - agreed. Reference to 'without the use of the public highway system' has been removed and criterion reworded in order to improve flexibility

4.9.19 Other Recommendations

- ENV5, ENV7 & ENV12 - These issues will be addressed by other policies in the DPD

Conclusion and Outstanding Issues

4.9.20 In response to SA recommendations, the redrafted version of the policy:

- Provides greater clarity around the type of project, borrow pits will be considered for;
- Places greater emphasis on the role of existing quarries to the economy through re-ordering of criteria;
- Goes some way to clarifying what spatial scale will be applied when considering existing quarries in 'the area';
- 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;
- Ensures that the social and environmental acceptability of working and restoring borrow pits is included within the decision making criteria; and
- 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.

4.9.21 The justification provided for not accepting or accepting SA recommendations in part was accepted. There are no outstanding issues and as a result of the changes made, the policy is predicted to have positive effect against social SA objectives 2 and 4 and environmental SA objectives 8-15.

4.10 Policy MW10: Ancillary Minerals Related Infrastructure

4.10.1 There are a range of activities related to mineral working which either need to be carried out, or have advantages in being carried out, in proximity to where the minerals are worked. This includes ancillary mineral related development such as buildings, plant and machinery for the treatment, processing and onwards transportation of minerals produced on the site.

4.10.2 The location of ancillary minerals related infrastructure, can help to minimise overall environmental disturbance when they are required for the minerals which are worked. This is mainly through reductions in the need to transport minerals for processing and they may

also provide the most appropriate location for industrial style plants that may be difficult to accommodate elsewhere.

4.10.3 The Town and Country Planning (General Permitted Development) (England) Order 2015 (GDPO) Part 17, as amended gives operators permitted development rights for certain ancillary minerals infrastructure at existing mineral sites without planning permission, or subject to prior approval, however, where a proposal does not fall within the provisions of the GDPO and planning permission is required a policy will be required to determine the acceptability of them. The policy could also cover proposals for permanent ancillary mineral related development that has the potential to be satisfactorily located upon suitable employment land.

4.10.4 DPD objectives 1 and 2 are relevant to considering the effects of processing plant and are complimentary to County Durham Plan objective 20 (Supply of Minerals)

Reasonable Alternatives

4.10.5 The Town and Country Planning (General Permitted Development) (England) Order 2015 (GDPO) Part 17, as amended allows, subject to prior approval for certain types of ancillary development to be located within minerals workings without planning permission. However, where they are not covered by the Order, details of the plant, machinery or other ancillary development required should be an integral part of any planning application for new mineral working. There are therefore not considered to be any reasonable alternatives to the inclusion of a policy within the M&WDPD which addresses these proposals.

4.10.6 Furthermore, ancillary minerals related development can also be and are currently located as permanent development on employment sites within County Durham as an appropriate employment use. Six concreting plants are located on employment land within the county. There are therefore not considered to be any reasonable alternatives to the consideration of proposals for ancillary minerals related development on employment sites.

4.10.7 Ensuring that proposals for ancillary related minerals development, falling outwith GDPO on mineral sites and at employment sites are addressed by policy, maintains the business as usual approach.

4.10.8 Whilst representations were received on the scope of policy as presented in the Draft M&WDPD there are not considered to be new reasonable alternatives to consider in relation to ancillary minerals related infrastructure. The key issues for the SA to consider are whether the revised version of the policy covers all necessary aspects and will contribute towards sustainable development in County Durham.

Appraising Significant Changes

4.10.9 Significant changes have been made to the policy between the Draft and Publication Draft stages of M&WDPD development following representations made. The role and purpose of Policy MW10 has been reconsidered and the policy and supporting text has been rewritten. The draft version of the policy was titled 'Onsite Mineral Processing' and related only to processing infrastructure and where this was located onsite only. The draft policy did

not address all types of ancillary minerals related infrastructure or the potential for its permanent location on suitable employment sites (as occurs currently) or the benefits that could be attained by utilising infrastructure on other mineral sites.

4.10.10 As the policy scope has been extended and rewritten to cover these aspects it requires re-assessment.

Policy Assessment Outcome

4.10.11 The following table shows the assessment outcome for the 2021 policy assessment and the new predicted outcomes following the significant changes made to it. Please also see the supporting SA matrix in Appendix C which shows further detail, including the predicted breakdown of short, medium and long term effects. The commentary below relates to the initial 2022 assessment outcome.

Table 18 Summary Assessment: Policy MW10

	1. Decent Affordable Homes	2. Strong Secure Communities	3. Education, Training & Lifelong Learning	4. Health: Inequalities & Lifestyles	5. Need to Travel & Sustainable Transport	6. Alleviate Deprivation	7. Economy & Employment	8. Climate Change: Mitigation	9. Climate Change: Adaptation	10. Biodiversity & Geodiversity	11. Landscape & Townscape	12. Historic Environment	13. Resources: Air, Water & Soil	14. Waste & Use of Materials	15. Minerals Extraction & Impacts
2021 Assessment Outcome	0	✓	0	✓	✓✓	0	✓	✓	0	0	0	0	✓	0	✓
Initial 2022 Assessment Outcome	0	✓	0	✓/x	✓✓	0	✓	✓	0	✓/x	✓/x	✓/x	✓/x	?	✓
Final 2022 Assessment Outcome	0	✓	0	✓/x	✓✓	0	✓	✓	0	✓/x	✓/x	✓/x	✓/x	?	✓

4.10.12 The change from positive or neutral effects to positive/negative predicted effects in the most recent assessment reflects the revisions made to the policy and new elements incorporated. These are summarised as follows:

Social Effects

4.10.13 The co-location of ancillary minerals related infrastructure at active mineral sites will help to minimise the impacts of mineral related traffic to communities. Positive effects

are therefore predicted against SA objective 2. The location of permanent ancillary related infrastructure on employment land should also contribute towards protecting communities as industrial estates etc are usually located in areas which would not significantly affect residential amenity. The policy also requires that the proposed ancillary minerals related infrastructure would not have an unacceptable adverse impact on the environment, human health or the amenity of local communities. However, to enhance positive effects further, the policy could require the need for a permanent facility to be demonstrated as transportation to employment sites could increase trips and the impacts of minerals traffic on communities compared to the use of a temporary ancillary facility at an active mineral site.

4.10.14 In relation to impacts on health and wellbeing, as discussed above, the co-location of ancillary minerals related infrastructure at active mineral sites will help to minimise minerals related traffic and emissions. However, they could also increase localised, individual and cumulative levels of noise, dust and odour etc associated with working the mineral site. The policy will only permit proposals that will not have an unacceptable adverse impact on human health or the amenity of local communities, however in some circumstances, health and wellbeing may be better protected if the necessary ancillary infrastructure is available for use on a nearby mineral site. Whilst the potential benefits of ancillary minerals related development located at one site being able to serve other nearby minerals sites is recognised within the supporting text, this could be included as policy criterion.

4.10.15 In addition, whilst the potential health and wellbeing impacts of permanent ancillary development on employment sites will be taken into account, it is considered that the need for a permanent facility should be demonstrated, as the duration of the associated impacts of the development will be longer.

Economic Effects

4.10.16 Positive economic effects are predicted. Where proposals for ancillary infrastructure are permitted at active sites, in accordance with the policy it will help to reduce the transportation costs associated with minerals working and support business viability.

4.10.17 The policy also ensures that permanent proposals on employment sites will not impact on the strategic or specific employment uses identified by the County Durham Plan or have adverse impacts on other businesses located on the employment site. However, the policy could be further strengthened by ensuring that the need for permanent ancillary minerals related infrastructure is demonstrated as if not, the land could be used for other businesses.

Environmental Effects

4.10.18 Very positive and positive effects were predicted against SA objective 5 (travel) and SA objective 8 (climate change) respectively. The co-location of ancillary minerals related infrastructure at active mineral sites is likely to have a very positive effect on reducing the need to travel, by ensuring that proximity between mineral extraction and processing etc is

minimised. It is recognised that such activities should be ancillary to the main purposes of the permission and that the continued, permanent use of such equipment will be resisted as this would result in freestanding industry in the open countryside that could increase distances travelled in terms of importing raw materials to them.

4.10.19 Instead, the policy aims to ensure that permanent infrastructure is located upon suitable employment land that is well located in relation to the main centres of demand for the processed or manufactured products and the primary road network for onward transportation. However, it is considered that this requirement could be better reflected in the policy wording and that the use of rail is encouraged.

4.10.20 In addition, the policy could require the need for a permanent facility to be demonstrated as transportation from minerals sites to employment sites could increase trips compared to the use of a temporary ancillary facility at an active mineral site.

4.10.21 Reducing the need to travel is also likely to have a very positive effect on reducing transport emissions. In response to previous SA recommendations that recognised that power supply to such infrastructure could be through diesel generators if no mains electricity supply exists, the supporting text also states that consideration should always be given to how emissions can be minimised through a grid connection to the site and/or local renewable energy generation with battery storage for the running of such equipment. This could be strengthened further by switching the order, so more emphasis is first placed on renewable energy generation.

4.10.22 However, in some circumstances, the best way to reduce carbon emissions may be to utilise existing ancillary infrastructure at a nearby site, if possible, rather than developing new plant and the associated energy requirements. This could outweigh transport emissions.

4.10.23 Both positive and negative aspects were identified against SA objectives 10 (biodiversity), 11 (landscape), 12 (heritage) and 13 (air, water and soil). Proposals that are permitted in accordance with the policy will contribute towards reducing minerals related traffic and the associated impact this can have on air quality and biodiversity in terms of noise and vehicle emissions. However, whilst there are likely to be minimal impacts upon employment sites, proposals on active mineral sites could increase the associated impact of mineral working of the area to biodiversity and would need careful consideration. Criteria d aims to ensure that there will be no unacceptable adverse impacts on the environment. However, in certain circumstances, it may be of greater benefit to biodiversity to utilise existing ancillary related infrastructure on nearby mineral sites where this is possible and viable and where the use would not significantly delay restoration efforts (and the achievement of biodiversity net gain) of the host site. The potential benefit of this approach is recognised in the supporting text but could be further addressed within the policy text.

4.10.24 The policy also aims to ensure that permanent ancillary minerals related development in the open countryside is resisted and that employment sites are alternatively considered. This could contribute towards ensuring that the longer term setting of heritage assets and rural landscape character are conserved. The temporary location of ancillary

minerals related development at active mineral sites may also provide the most appropriate location for processes that could be difficult to accommodate elsewhere. For example, they can benefit through being either located within the voids created by mineral working or by the screening afforded by topography planting or noise attenuation bunds.

4.10.25 However, whilst location on employment sites may be less sensitive, temporary proposals on active mineral sites could increase impacts to the historic environment, air water and soil quality and the associated landscape and visual impact of mineral working in the area and would need careful consideration. Landscape and visual impacts will require particular consideration if development is proposed within the North Pennines AONB, Durham Heritage Coast, Areas of Higher Landscape Value or the Greenbelt. Criteria d aims to ensure that there will be no unacceptable adverse impacts on the environment.

4.10.26 However, in certain circumstances, it may be of greater benefit to landscape character, the historic environment and air water and soil resource to utilise existing ancillary related infrastructure on nearby mineral sites, rather than duplicating infrastructure, where this is possible and viable and where the use would not significantly delay restoration efforts (and the achievement of landscape or other environmental enhancements) of the host site. The potential benefit of this approach is recognised in the supporting text but could be further addressed within the policy text.

4.10.27 Uncertain effects are predicted against SA objective 14 (waste and resources) as the supporting text to the policy recognises that there may be advantages of ancillary mineral related development being located at one site being able to serve other nearby mineral sites. This would help to reduce the duplication of infrastructure and minimise the use of resources and waste. However, this is not backed up by the policy criterion.

Significant Issues

None identified

Recommendations / Mitigation

4.10.29 Please note that the references used below relate to the specific social (SOC), economic (ECO) and environmental (ENV) mitigation measure proposed in the detailed matrix for this policy as presented in Appendix C.

- Consider amending the policy as follows: 2) **'Where it can be demonstrated that permanent ancillary minerals infrastructure is required, proposals will be permitted:'** (SOC1, SOC3, ENV2, ECON1)
- Consider adding the following criterion: 1) Proposals for ancillary minerals related infrastructure will be permitted at active mineral sites where it can be demonstrated that:
 - 1) **there are no viable and more sustainable opportunities to utilise existing infrastructure at a nearby mineral or employment site** (SOC2, ENV4, ENV5, ENV6, ENV7, ENV8, ENV9) (Viability would, amongst other factors take

account of the working duration of the proposal and that of the site which hosts the infrastructure.)

- In order to recognise further that there may be viable, sustainable opportunities to utilise existing infrastructure, the flexibility of the supporting text could also be improved as follows:

‘Accordingly, any planning permission for ancillary mineral related development will also be time limited to expire on the cessation of mineral working from the associated site. **Longer periods that do not significantly delay restoration may be agreed where the infrastructure serves other active mineral sites.**’ (SOC2, ENV4, ENV5, ENV6, ENV7, ENV8, ENV9) This is considered to better reflect criterion c of the policy which currently states that ‘The duration of the proposed ancillary minerals related infrastructure is linked to the life of the mineral site and will be removed and restored as soon as extraction of minerals from the site has permanently ceased **or any longer period as agreed.**’

- Consider amending part 2 of the policy as follows ‘Where the site can be satisfactorily located on employment land **that is well related to markets and the rail or primary road network**, except where they are located on a strategic or specific use employment site as identified by County Durham Plan Policy 2 (Employment Land).’ (ENV1)
- Revise wording order: ‘To help mitigate climate change impacts from on-site processing activities consideration should always be given to how emissions can be minimised through **local renewable energy generation with battery storage for the running of such equipment** and/or a grid connection to the site.’ (ENV3)

Residual Effects

4.10.30 None identified

Response to SA Recommendations

4.10.31 (SOC2, ENV4, ENV5, ENV6, ENV7, ENV8, ENV9) “Consider adding the following criterion: 1) Proposals for ancillary minerals related infrastructure will be permitted at active mineral sites where it can be demonstrated that: a) there are no viable and more sustainable opportunities to utilise existing infrastructure at a nearby mineral or employment site”. Not accepted. The key tests are set out in 1) a-d. The Council would not seek to prevent an acceptable use because there are similar uses at a nearby mineral or employment site, which in any event may not be available due their ownership by another operator. As part of the justification for this change, reference is made to, “the best way to reduce carbon emissions may be to utilise existing ancillary infrastructure at a nearby site if possible, rather than developing new plant and the associated energy requirements.” It should be noted that at COP26 in Glasgow last year, government announced phase-out dates to ensure all new HGVs are zero emission by 2040 at the latest. It should be noted that the UK Government’s plans to HGVs will significantly reduce carbon emissions from the

minerals and waste sector of the UK economy. This response also generally relates to concerns relating to transport, carbon and vehicle emissions.

4.10.32 (SOC1, SOC3, ENV2, ECON1) Consider amending the policy as follows ' 2) Where it can be demonstrated that permanent ancillary minerals infrastructure is required, proposals will be permitted:' Partially accepted. Additional wording "where this can be demonstrated" has been introduced to ensure consistency with criterion 1, however the key policy tests are set out in 2a and 2b. The Council would not require need to be demonstrated for any other permanent employment use on either an allocated or protected employment land so this would also not be required for permanent ancillary minerals infrastructure. The use of land for permanent ancillary minerals infrastructure preventing any other uses is not an issue that needs to be considered.

4.10.33 (SOC2, ENV4, ENV5, ENV6, ENV7, ENV8, ENV9). "Accordingly, any planning permission for ancillary mineral related development will also be time limited to expire on the cessation of mineral working from the associated site. Longer periods that do not significantly delay restoration may be agreed where the infrastructure serves other active mineral sites." Not accepted. The policy and supporting text seek to avoid the establishment of free standing industry in the open countryside. The supporting text to MW22 advises that "It is essential that all land used for mineral extraction or for landfill or landraise are restored to a high standard at the earliest opportunity and wherever possible to a positive after use which provides enhancements to the environment or benefits to the local community."

4.10.34 (ENV1) "Consider amending part 2 of the policy as follows "Where the site can be satisfactorily located on employment land that is well related to markets and the rail or primary road network, except where they are located on a strategic or specific use employment site as identified by County Durham Plan Policy 2 (Employment Land)." Not accepted. The County Durham Plan Policies Map identifies the extent of allocated and protected employment land. The intent of the policy is to be permissive to the use of these sites provided that the proposed development can meet relevant criterion and other relevant policies. Allocated and protected employment land are generally (with the exception of allocated and protected employment land in settlements in the west of the County) are well related to the identified lorry route network and the main markets for the type of product that could be manufactured using minerals. It is not certain what value the additional wording could provide.

4.10.35 (ENV3) Revise wording order: 'To help mitigate climate change impacts from on-site processing activities consideration should always be given to how emissions can be minimised through local renewable energy generation with battery storage for the running of such equipment and/or a grid connection to the site.' Accepted change made. It should be noted that Environmental Assessments now commonly require a chapter on climate change. Many of the larger mineral operators are now actively seeking to reduce carbon emissions from their operations. This includes electrification of fixed plant, use of conveyors in place of dump trucks where practical and a drive to support the development and introduction of non-fossil fuel mobile plant.

Conclusion and Outstanding Issues

4.10.36 The SA found that overall, proposals that are permitted in accordance with the policy will contribute towards reducing minerals related traffic and associated emissions and impacts on communities. The policy will also protect social and environmental receptors in the countryside in the longer term by directing permanent ancillary minerals related infrastructure to suitable employment sites. The policy requires that in considering proposals that there will be no uncappable adverse impacts (either individually or cumulatively) on the environment, human health, the amenity of local communities or other businesses.

4.10.37 However, it was considered that the sustainability of the policy could be strengthened by:

- Requiring applicants to demonstrate the need for permanent ancillary minerals related infrastructure
- Ensuring that any sustainability advantages of utilising existing infrastructure on nearby sites are considered and utilised where they would minimise harm overall and reduce resource use and waste
- Ensuring the policy considers the location of employment sites and potential use of rail.

4.10.38 The reasons for not accepting these recommendations is understood from a planning practicality perspective. However, it will not be possible to improve the predicted sustainability effects of the policy as a result. This may not be a significant issue as no negative or very negative effects were predicted. The phase out of diesel HGV's, electrification of plant and use of non-fossil fuel mobile plant is also acknowledged.

4.10.39 The accepted revisions to the wording order regarding renewable energy generation vs grid connection better reflects the energy hierarchy but will not improve upon the effects predicted. The final assessment outcome is therefore the same as the 2022 initial assessment outcome.

4.11 Policy MW11: Periodic Review of Mineral Planning Permissions

4.11.1 County Durham has many active mineral planning permissions with many of the older planning permissions, including all dormant sites having planning permissions until 2042. Working at sites which are classed as dormant may resume should a scheme of modern working and restoration conditions be submitted and agreed.

4.11.2 The Environment Act 1995 introduced significant new requirements for an initial review and updating of mineral planning permissions granted between 1948 and 1982, and the periodic review of all extant mineral permissions at 15 year intervals. As amended by the Growth and Infrastructure Act 2013, the Council now has a broad discretion as to whether to subject a site to a periodic review and as to its timing. However, any periodic review must still be no earlier than 15 years after planning permissions is granted or, in the case of an old mineral planning permission 15 years from the date of the initial review.

4.11.3 The review process takes the form of a submission for consideration by the mineral planning authority of a new and updated scheme of conditions, usually incorporating a reviewed scheme of working, restoration, and aftercare, as appropriate. The determination will have the effect of imposing new conditions which ensure that mineral sites (for which planning permission has already been granted) continue to operate to high working and environmental standards.

4.11.4 During the periodic review process, the mineral operator is required to submit an application by a given date for the approval of an updated set of conditions. The application can also be accompanied by an Environmental Impact Assessment where certain thresholds are met. If no submission is received by the date stated, the mineral permission ceases to have effect, although restoration and aftercare conditions will still apply. Subject to certain legal provisions, the process is conducted in a similar way to the processing of a planning application.

4.11.5 DPD objective 1 is relevant to ensuring that minerals permissions are worked and restored to high standards and is complimentary to County Durham Plan objective 20 (Supply of Minerals).

Reasonable Alternatives

4.11.6 Planning Practice Guidance states that Mineral Planning Authorities should usually only seek a review of planning conditions when monitoring visits have revealed an issue that is not adequately regulated by planning conditions, which the operator has been made aware of and has not been able to address. As there are no known reasons to depart from this guidance or ensure compliance with the relevant provisions of the Environment Act there are no reasonable alternatives to the inclusion of a policy in the DPD which provides clarity on the process and how such applications will be determined by the Council. The existing Minerals Local Plan includes a policy relating to updating planning conditions so continuing the approach in the DPD maintains the business-as-usual approach.

4.11.7 Please note that no reasons to deviate from the approach adopted (e.g. representations made to the contrary, substantial changes to planning guidance or evidence etc) have been forthcoming between the Draft and Publication Draft stages of M&WDPD development. There are therefore no new reasonable alternatives to consider in relation to the periodic review of mineral planning permissions.

Appraising Significant Changes

4.11.8 No further changes have been made to the policy text between the Draft and Publication Draft stages of M&WDPD development. Therefore, no changes to the previous SA assessment have been made and this is repeated as follows, including previous recommendations and mitigation measures.

Policy Assessment Outcome

4.11.9 The following table illustrates the effects the implementation of the policy was predicted to have prior to and following the acceptance of SA recommended changes to the

policy wording. Please also see the supporting SA matrix in Appendix C which shows further detail, including the predicted breakdown of short, medium and long term effects. The commentary below relates to the initial assessment outcome.

Table 19 Summary Assessment: Policy MW11

	1. Decent Affordable Homes	2. Strong Secure Communities	3. Education, Training & Lifelong Learning	4. Health: Inequalities & Lifestyles	5. Need to Travel & Sustainable Transport	6. Alleviate Deprivation	7. Economy & Employment	8. Climate Change: Mitigation	9. Climate Change: Adaptation	10. Biodiversity & Geodiversity	11. Landscape & Townscape	12. Historic Environment	13. Resources: Air, Water & Soil	14. Waste & Use of Materials	15. Minerals Extraction & Impacts
Initial Assessment Outcome	0	✓	0	✓	✓	0	0	✓	✓	✓	✓	✓	✓	✓	✓
Final Assessment Outcome	0	✓	0	✓	✓	0	0	✓	✓	✓	✓	✓	✓	✓	✓✓

4.11.10 Where links between the policy and SA objectives were made the SA predicted positive social effects, minor positive economic effects and positive environmental effects. These are summarised as follows:

Social Effects

4.11.11 Possible, positive effects were predicted against social SA objectives as new or updated conditions for working and restoring minerals sites, when agreed through the periodic review process could further safeguard communities from any adverse of minerals working, including to health and wellbeing (e.g. by updating conditions relating to working hours, vehicle movements noise, dust etc) and contribute towards social benefits which also benefit health and wellbeing on restoration. For example, new recreational areas, enhanced rights of way networks etc.

4.11.12 In the event that interest in the working of dormant mineral permissions occurs over the DPD period, full modern working and restoration conditions will be required before working can resume. Ensuring that there will be no unacceptable adverse impact on human health or the amenity of local communities when considering and agreeing new schemes of modern working and restoration at dormant sites will also contribute towards safeguarding communities and health.

4.11.13 The policy could however be strengthened by ensuring it recognises the potential social benefits alongside environmental enhancement relating to restoration, after-use and aftercare schemes.

Economic Effects

4.11.14 Minor positive economic effects were predicted as by use of the wording "seek to agree new schemes of conditions" the policy recognises that mineral operators can appeal the effect of the new conditions, where they are considered to restrict working rights and economic viability. However, in only exceptional circumstances can the Mineral Planning Authority impose conditions which restrict working rights as compensation liabilities can arise if working rights are unreasonably affected.

Environmental Effects

4.11.15 Possible, positive environmental effects were predicted as new or updated conditions for working and restoring minerals sites, when agreed through the periodic review process could for example:

- Restrict vehicle movements or lead to the enhancement of the public rights of way network.
- Indirectly reduce greenhouse gas emissions or contribute to their sequestration (e.g. through conditions relating to vehicle movements, other working methods or the restoration and after-uses of sites).
- Enhance opportunities to mitigate pre-existing or potential future flood risk.
- 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.
- 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.
- Safeguard the historic environment from any adverse effects of minerals working (e.g. by updating conditions relating to archaeological assessment, for example);
- Safeguard air, water and soil resources from any adverse effects of minerals working (e.g. by updating conditions relating to dust, water abstraction, soil management etc); and
- Ensure that soil resources are managed properly so they can be recovered through the restoration of sites as opposed to disposed of elsewhere.

4.11.16 In the event that interest in the working of dormant mineral permissions occurs over the DPD period, full modern working and restoration conditions will be required before working can resume which will minimise the environmental impacts of working these sites. Ensuring that there will be no unacceptable adverse impact on the environment when considering and agreeing new schemes of modern working and restoration at dormant sites

is also likely to contribute towards safeguarding biodiversity and geodiversity and landscape character, as many of County Durham's dormant sites coincide with International and National wildlife designations and the North Pennines Area of Outstanding Natural Beauty.

4.11.17 However, please note it is expected that most of the dormant permissions in County Durham will now never be worked again as 25 years have passed since these sites were first registered.

4.11.18 Whilst the avoidance of unacceptable adverse social and environmental effects when seeking to agree new schemes of conditions is paramount, it is considered that the policy ambition could be strengthened by setting out that the key purpose of agreeing a new scheme of conditions with operators is to ensure continuously high working and environmental standards in County Durham.

Significant Issues

None identified

Recommendations / Mitigation

4.11.19 Please note that the references used below relate to the specific social (SOC), economic (ECO) and environmental (ENV) mitigation measure proposed in the detailed matrix for this policy as presented in Appendix C.

4.11.20 In order to address mitigation measures SOC1 - SOC2 and ENV1 - ENV7 consider amending the policy wording as follows or similar (see bold text):

“Through the Periodic Review of existing active mineral planning permissions and the process of considering new schemes for modern working and restoration conditions on dormant mineral sites, the Mineral Planning Authority will seek to agree new schemes of conditions with mineral operators to modern standards to ensure:

- **continuously high working and environmental standards.**
- that there will be no unacceptable adverse impact on the environment, human health or the amenity of local communities; and
- in accordance with Policy MW22 (Mineral Site Restoration, Landfill and Landraise) that restoration, after use and aftercare schemes deliver beneficial environmental **and social** enhancements through the high-quality restoration or if this is not practicable appropriate restoration schemes.”

Residual Effects

- None Identified

Response to SA Recommendations

4.11.21 The Spatial Policy Team note the recommendations and have amended the policy to incorporate the wording, "continuously high working and environmental standards". This change is consistent with the wording of the Planning Practice Guide. The word "social" has

not been added as Policy MW22 - Mineral Site Restoration, Landfill and Landraise will apply and this policy requires an "appropriate scheme for the restoration, after-use and aftercare of the site", and restoration proposals have to be "appropriate to the site and its surroundings" and where appropriate this policy seeks to "provide environmental enhancements and other benefits".

Conclusion and Outstanding Issues

4.11.22 The agreement of new schemes of conditions which ensure that unacceptable adverse social or environmental impacts are avoided is directly compatible with sustainability objectives. However, as a result of the SA, the policy ambition has been strengthened to acknowledge that agreeing new conditions goes beyond avoiding unacceptable adverse impacts and rather, should ensure continuously high working and environmental standards. The justification provided for not including 'and social enhancements' of restoration schemes was accepted. There are no outstanding issues, and the final assessment outcome shows an improvement in effects predicted against SA objective 15 (minerals sustainability) as result of policy changes.

4.12 Policy MW12: Oil and Gas Exploration, Appraisal and Production

4.12.1 Conventional oil and gas resources are those where the reservoir is sandstone or limestone, and unconventional oil and gas refers to oil and gas that comes from sources such as shale or coal seams which act as the reservoirs. Unconventional oil and gas include a range of technologies and processes some of which are relatively new or as yet uncommon in a United Kingdom context such as Shale Gas extraction (hydraulic fracturing or fracking), Coalbed Methane, Coal Mine Methane, Abandoned Mine Methane and Underground Coal Gasification.

4.12.2 In relation to the national context for the use of conventional and unconventional oil and gas resources, the Government announced that it would take a presumption against issuing any further Hydraulic Fracturing Consents in England in November 2019. The Energy White Paper recognises that transforming the oil and gas sector will be required to deliver its climate change commitments and net zero emissions targets by 2050.³⁴ The White Paper also recognises that a return to 'business as usual' is no longer an option and support provided is in the context of delivering its net-zero 2050 targets. Some of the White Paper commitments include for example:

- Supporting the UK oil and gas sector to repurpose its existing infrastructure in support of clean energy technologies; and
- Regularly seeking independent advice on how proceeding with future licencing would impact upon climate and energy goals

4.12.3 The Energy White Paper also acknowledges that maintaining a secure and resilient supply will play a critical role in maintaining the country's energy security during the

³⁴ HM Government (December 2020) The Energy White Paper – Powering our Net Zero Future

transition to net zero emissions. The more recent British Energy Security Strategy (April 2022) states that whilst gas consumption should be reduced by over 40% by 2030, in meeting net zero by 2050 we may still use a quarter of the gas we use now.³⁵ The Government intends to fully utilise the existing North Sea oil and gas fields to reduce reliance on imported fossil fuels.

4.12.4 DPD objective 3 is relevant to establishing the planning policy framework for oil and gas in County Durham and is complimentary to the following existing County Durham Plan objective: 19 (Natural Resources)

Reasonable Alternatives

4.12.5 As mentioned, the Government aims to maintain a secure and resilient supply of oil and gas as it transitions to net-zero emissions. Additionally, whilst the Government has reinstated its moratorium on fracking, this does not constitute an outright ban. The moratorium will be maintained unless there is new evidence on the risk of earthquakes from the practice. Consequently, there are not considered to be any reasonable alternatives to the inclusion of a policy in the DPD which provides a framework for determining oil and gas proposals if they are forthcoming over the Plan period.

4.12.6 Please note that no reasons to deviate from the approach adopted (e.g. representations made to the contrary, substantial changes to planning guidance or evidence etc) have been forthcoming between the Draft and Publication Draft stages of M&WDPD development. There are therefore no new reasonable alternatives to consider in relation to oil and gas.

Appraising Significant Changes

4.12.7 No changes have been made to the policy or its supporting text between the Draft and Publication Draft stages of M&WDPD development. Therefore, no changes to the previous SA assessment have been made. This is repeated as follows, including previous recommendations and mitigation measures.

Policy Assessment Outcomes

4.12.8 The following table illustrates the effects the implementation of the policy was predicted to have prior to and following the acceptance of SA recommended changes to the policy wording. Please also see the supporting SA matrix in Appendix C which shows further detail, including the predicted breakdown of short, medium and long term effects. The commentary below relates to the initial assessment outcome.

³⁵ HM Government (April 2022) British Energy Security Strategy - Secure, clean and affordable British energy for the long term.

Table 20 Summary Assessment: Policy MW12

	1. Decent Affordable Homes	2. Strong Secure Communities	3. Education, Training & Lifelong Learning	4. Health: Inequalities & Lifestyles	5. Need to Travel & Sustainable Transport	6. Alleviate Deprivation	7. Economy & Employment	8. Climate Change: Mitigation	9. Climate Change: Adaptation	10. Biodiversity & Geodiversity	11. Landscape & Townscape	12. Historic Environment	13. Resources: Air, Water & Soil	14. Waste & Use of Materials	15. Minerals Extraction & Impacts
Initial Assessment Outcome	0	✓	0	✓	✓	0	0	X	✓	✓	✓	✓	✓	✓	✓
Final Assessment Outcome	0	✓	0	✓	✓	0	0	0	✓	✓	✓	✓	✓	✓	✓

4.12.9 No short-term effects were predicted as there are currently no licenses for oil or gas exploration, appraisal or production in County Durham at present. Otherwise, the SA predicted positive social effects, no clear economic effects and positive environmental effects with the exception of SA objective 8 (Climate Change: mitigation) where negative effects were predicted. These are summarised as follows:

Social Effects

4.12.10 No clear link with SA objectives 1 (Housing) or 3 (Education) were determined. The SA acknowledged that whilst ensuring an ongoing, secure supply of oil and gas during the UK’s transition to low carbon solutions may contribute towards minimising home heating costs and associated fuel poverty and new industry may increase local training opportunities the policy does not encourage oil and gas development in County Durham. Rather its purpose is to set the framework by which proposals for exploration, appraisal and production will be determined if they are forthcoming over the DPD period.

4.12.11 In setting this framework, several criteria within the policy will contribute positively towards safeguarding communities and health and wellbeing if proposals are forthcoming. These include:

- Overarching requirement that for each stage of conventional and unconventional oil and gas development, any future proposals will be required to demonstrate that there will be no unacceptable adverse impacts upon the amenity of local communities. (this may include issues relating to noise, dust, traffic etc)
- Drilling rigs, well sites and all other associated facilities and infrastructure with the exploration and appraisal phases are sited in the least sensitive locations (this may include avoiding locations which are of importance to local communities or could be otherwise sensitive e.g. near to hospitals etc)
- Exploration and appraisal phases are for an agreed temporary time (this will limit the duration of activity and any minor impacts or nuisance to communities)
- Extraction, processing and transport facilities are located and operated to minimise both environmental and local amenity impacts and provide any necessary mitigation and enhancements (as for others listed above, this criterion could ensure that a wide range of impacts that could potentially affect communities and health and wellbeing are taken into account when considering proposals)

Economic Effects

4.12.12 No clear links with SA objectives 6 (Deprivation) or 7 (Economy) were determined. The SA acknowledged that as County Durham does not have a history of any form of conventional or unconventional oil or gas exploration or production, new industry could help to diversify County Durham's economy and create economic benefits locally through the creation of direct employment (including within deprived areas) together with indirect, supply chain jobs until resources from oil or gas production fields are exhausted.

4.12.13 However, the policy does not encourage oil or gas development in County Durham. Rather, its purpose is to set the framework by which proposals for exploration, appraisal and production will be determined if they are forthcoming over the DPD period.

Environmental Effects

4.12.14 In relation to SA objective 8 (Climate Change: mitigation) it is recognised that the burning of oil and gas are incompatible with climate change objectives. However, it is understood that the Government seeks to maintain an ongoing supply in the interests of maintaining energy security etc during the transition to net zero emissions. If licenses for oil or gas exploration in County Durham are issued these would only be following independent advice to the Government on how proceeding with licensing would impact upon UK climate and energy goals. The Council has no influence on the issuing of the licenses and the policy itself does not encourage oil or gas development in County Durham.

4.12.15 Criteria which requires extraction, processing and transport facilities to be located and operated to minimise both environmental and local amenity impacts and provide any necessary mitigation and enhancements may take into account measures which directly or indirectly minimise greenhouse gas emissions. For example, proposals which include carbon capture utilisation and storage (CCUS) or minimise emissions associated with transport. Adherence to policy criteria is also likely to take ensure that impacts on flood risk and any opportunities for flood alleviation or other climate change adaptation issues are taken into

account when proposals are considered. However, it is likely that greenhouse gas emissions will increase if proposals are approved. To obviate this, the policy could be more explicit towards climate change mitigation and require that proposals for oil and gas offset any residual emissions.

4.12.16 The SA recognises that the highly sensitive nature of the environment in large parts of the county would present a significant challenge for the oil and gas industry in bringing forth an acceptable scheme. Nevertheless, criteria within the policy will contribute towards safeguarding biodiversity and geodiversity, landscape character/quality and the historic environment in the event that oil and gas proposals are forthcoming over the DPD period. These are presented in the following table:

Table 21: Policy MW12 Environmental Effects

Policy Criterion	Biodiversity and Geodiversity	Landscape Quality and Character	Historic Environment
Overarching requirement that for each stage of conventional and unconventional oil and gas development, any future proposals will be required to demonstrated that there will be no unacceptable adverse impacts on the environment	e.g. impacts to protected species / designated sites are likely to be taken into account	e.g. impacts to the primary objectives of national landscape designations i.e. The North Pennines AONB and Durham Heritage Coast are likely to be taken into account	e.g. likely to take account of any substantial harm to or loss of heritage assets and less than substantial harm. Unless that are clear public benefits which outweigh less than substantial harm, the policy along with others others in the Plan, when read as a whole, will deem such proposals unacceptable.
Drilling rigs, well sites and all other associated facilities and infrastructure with the exploration and appraisal phases are sited in the least sensitive locations	Sensitive locations could contribute towards steering development away from designated sites or irreplaceable habitats	e.g. outside of landscape designations where possible or areas of higher landscape value	May help to direct proposals outside of conservation areas or locations which adversely affect the setting of assets

Policy Criterion	Biodiversity and Geodiversity	Landscape Quality and Character	Historic Environment
Exploration and appraisal phases are for an agreed temporary time	Limiting duration will help to limit disturbance to species	Will help to limit the duration of any associated landscape and visual impacts	Will help to limit any impacts which could affect structural viability of assets e.g. Drilling and vibration
Extraction, processing and transport facilities are located and operated to minimise both environmental and local amenity impacts and provide any necessary mitigation and enhancements	These could include measures to minimise impacts to biodiversity/geodiversity and provide net gains)	These could include measures to minimise landscape and visual impacts such as screening/bunding etc	These could include measures to ensure the recording and appropriate protection of undiscovered archaeological features for example
Existing permitted facilities are used for the development of any additional fields discovered unless it is demonstrated that this would not be technically feasible and any unacceptable adverse impacts can be mitigated	Avoiding, the development of unnecessary facilities (and infrastructure) will help to protect existing habitat and species	Avoiding, the development of unnecessary facilities (and infrastructure) will help to protect landscape character	Avoiding the development of unnecessary facilities and infrastructure will help to protect heritage assets and the historic environment
Proposals at each stage must provide for the restoration and aftercare of the site to a high standard at the earliest opportunity	Restoration proposals could provide biodiversity net gains	Restoration proposals could provide improvements to and help deliver the requirements of the County Durham Landscape Strategy	May provide opportunities for better revealing or enhancing the significance of heritage assets

4.12.17 In relation to policy criteria regarding use of existing permitted facilities, it is considered that including 'infrastructure' within the criterion will afford further protection to biodiversity, geodiversity, landscape and heritage. Ensuring that existing permitted facilities are used for the development of any additional fields discovered (where possible) will also contribute towards protecting soil resources and will indirectly contribute towards the efficient use of materials and will help to avoid and minimise waste associated with the decommissioning stages.

Significant Issues

None identified

Recommendations / Mitigation

4.12.18 Please note that the references used below relate to the specific social (SOC), economic (ECO) and environmental (ENV) mitigation measure proposed in the detailed matrix for this policy as presented in Appendix C.

- ENV1 - Include a specific reference to climate change requirements within the policy in recognition of the incompatibility of fossil fuel development and local Climate Emergency targets. The following wording or similar could be added to address: C2) Extraction, processing and transport facilities are located and operated to minimise both environmental and local amenity impacts and provide any necessary mitigation and enhancements. **As a Climate Emergency has been declared in County Durham proposals will need to demonstrate that they mitigate emissions as far as possible and offset residual emissions.**
- ENV2, ENV3, ENV4, ENV5, ENV6 - Include 'infrastructure' in criterion C3 "Existing permitted facilities and **infrastructure** are used for the development of any additional fields discovered..."

Residual Effects

4.12.19 None Identified.

Response to SA Recommendations

4.12.20 Agreed - the policy wording has been amended to reflect SA recommendations

Conclusion and Outstanding Issues

4.12.21 The SA has identified that whilst there is uncertainty whether commercially exploitable supplies of oil and gas exist in County Durham (and prospects for exploration are currently unlikely in the short term due to the absence of licences), the inclusion of the policy within the DPD and its associated criteria will help to safeguard communities and the environment in the event that proposals are forthcoming.

4.12.22 The SA has helped to ensure that the policy also considers the benefits of utilising existing permitted infrastructure in addition to facilities in the event that any additional oil

or gas fields are discovered. Furthermore, the SA has helped to ensure that the policy takes greater account of local climate emergency targets when determining proposals and the need to ensure that these are carbon neutral. This has resulted in a change to previously predicted effects. Where negative effects against SA objective 8 (Climate Change - mitigation) were predicted, these are now considered to be neutral. There are no outstanding issues.

4.13 Policy MW13: Transport of Oil and Gas

4.13.1 Should commercially exploitable supplies of oil and gas be found in County Durham and if an agreed scheme of production is likely to span a number of years and involve a substantial number of production wells, opportunities exist for minimising heavy traffic on the local and strategic highway network by transporting oil and gas by the use of specially constructed pipelines. However, the construction of pipelines can have a number of social and environmental impacts which would need careful consideration in the planning process.

4.13.2 DPD objectives 1, 2 and 3 are relevant to considering pipeline proposals and are complimentary to the following existing County Durham Plan objectives: 4 (Infrastructure), 18 (Sustainable Transport) and 20 (Supply of Minerals).

Reasonable Alternatives

4.13.3 Pipelines which are 10 miles or over require authorisation from the Secretary of State under the Pipelines Act 1962. However, pipelines which are under 10 miles require planning permission from the minerals planning authority i.e. Durham County Council. The National Planning Policy Framework (NPPF) does not set out any specific requirements for pipelines although current Planning Practice Guidance recognises that pipelines are associated infrastructure to oil and gas developments, used for its transportation to processing facilities etc. Given that the Council has a duty to assess pipeline proposals, (either separately or as part of wider oil and gas development proposals) there are not considered to be any reasonable alternatives to the inclusion of a policy within the DPD which provides criteria to determine proposals against. Such criteria should ensure that only the most sustainable method for the transportation of oil and gas is permitted.

4.13.4 Please note that no reasons to deviate from the approach adopted (e.g. representations made to the contrary, substantial changes to planning guidance or evidence etc) have been forthcoming between the Draft and Publication Draft stages of M&WDPD development. There are therefore no new reasonable alternatives to consider in relation to the transport of oil and gas.

Appraising Significant Changes

4.13.5 No further changes have been made to the policy text between the Draft and Publication Draft stages of M&WDPD development. Therefore, no changes to the previous SA assessment have been made and this is repeated as follows, including previous recommendations and mitigation measures.

Policy Assessment Outcome

4.13.6 The following table illustrates the effects the implementation of the policy was predicted to have prior to and following the acceptance of SA recommended changes to the policy wording. Please also see the supporting SA matrix in Appendix C which shows further detail, including the predicted breakdown of short, medium and long term effects. The commentary below relates to the initial assessment outcome.

Table 22 Summary Assessment: Policy MW13

	1. Decent Affordable Homes	2. Strong Secure Communities	3. Education, Training & Lifelong Learning	4. Health: Inequalities & Lifestyles	5. Need to Travel & Sustainable Transport	6. Alleviate Deprivation	7. Economy & Employment	8. Climate Change: Mitigation	9. Climate Change: Adaptation	10. Biodiversity & Geodiversity	11. Landscape & Townscape	12. Historic Environment	13. Resources: Air, Water & Soil	14. Waste & Use of Materials	15. Minerals Extraction & Impacts
Initial Assessment Outcome	0	✓	0	✓	✓✓	0	✗	✓	0	✓	✓	✓/✗	✓/✗	0	✓
Final Assessment Outcome	0	✓	0	✓	✓✓	0	✓	✓	0	✓	✓	✓/✗	✓/✗	0	✓

4.13.7 No short-term effects were predicted as prospects for oil and gas development and associated infrastructure are currently unlikely as there are currently no licenses for oil or gas exploration, appraisal or production in the County at present. For mid and longer term effects, and where links between the policy and SA objectives were made, the SA primarily predicted positive social effects, negative economic effects, and a mixture of very positive, positive and part positive / part negative environmental effects. These are summarised as follows:

Social Effects

4.13.8 The policy sets out a sequential approach to the transportation of oil and gas in order to minimise levels of heavy traffic on the local highways network. In doing so, the use of pipelines followed by rail transport will contribute towards minimising the adverse impacts of traffic on communities, health and wellbeing and lower the risk of road traffic accidents.

4.13.9 The wording of the policy which advocates pipelines, only where there will be no unacceptable adverse impacts on human health or the amenity of local communities is likely to ensure for example, that potential unacceptable impacts associated with the route of pipelines e.g. such as community displacement, loss of community facilities, pollution of drinking water etc are avoided and that they can be operated with acceptable risk to human health and safety. Please note that the Health and Safety Executive are responsible for regulating the safety of pipelines.

4.13.10 However, it was considered that the policy could further safeguard communities and health and wellbeing by requiring applicants to demonstrate that the number of pipelines represent the minimum necessary to serve the oil or gas development. It was also considered useful to clarify that routes have been optimised at the design stage to take account of social impacts etc.

4.13.11 Please note that minor negative effects were predicted against SA objective 1 (Housing) as once constructed, pipelines will place some restrictions on nearby new development which must be observed with suitable standoffs. This may limit the number of new homes which can be constructed in any given scheme but is unlikely to significantly affect the ability to meet housing need in County Durham.

Economic Effects

4.13.12 Possible negative economic effects were predicted as whilst the preference given to pipelines for the transportation of oil and gas may benefit the oil and gas industry in respect of reduced haulage costs, their construction and operation may cause disruption to livelihoods elsewhere e.g. to the working of agricultural land for example. As drafted, the policy and its supporting text did not consider the potential impact of pipeline development on other business and livelihoods in County Durham.

Environmental Effects

4.13.13 Very positive effects were predicted against SA objective 5 (need to travel) as the sequential approach to the transportation of oil or gas is directly compatible with it in seeking to reduce the need to travel first, followed by the use of rail as a sustainable transport mode and least preferably by road (and where other DPD policy conditions are met). Whilst the SA has assessed the broader climate change impacts of oil and gas development as negative against Policy MW12, the sequential approach to the transportation of oil and gas set out in this policy will help to minimise greenhouse gas emissions associated with such development and contribute towards protecting air quality.

4.13.14 In relation to SA objectives 10-13 the wording of the policy which advocates pipelines, only where there will be no unacceptable adverse impacts on the environment contributes towards safeguarding the most sensitive environmental receptors and is more likely to ensure for example that:

- Pipeline proposals which traverse designated biodiversity or geodiversity sites or harm irreplaceable habitat are avoided;

- Major proposals within the North Pennines AONB or Durham Heritage Coast are avoided, unless exceptional circumstances can be demonstrated;
- Proposals demonstrate there is a clear and convincing justification for any harm to heritage assets, and that the public benefits of exploration are weighed against this harm. Where harm to a heritage asset can be avoided this should be the case; and
- Routes which could impact on vulnerable water abstraction points etc would be avoided.

4.13.15 The SA also recognised that the use of pipelines could minimise the negative effects to environmental receptors associated with the transportation of oil and gas by road. For example, decline of habitats sensitive to vehicle emissions or vibration and structural damage to heritage assets as result of haulage vehicles passing in proximity and collisions. However, whilst the most significantly adverse effects are likely to be avoided because of the policy wording, the construction of over or underground pipelines could still have adverse effects relating to:

- The temporary or permanent displacement or loss of priority habitats and species;
- Degraded landscape character and quality depending on the receiving landscape’s capacity to accommodate change, it’s relationship with other development and the visual impact of proposals;
- Impacts on cultural heritage and the historic environment. These may be permanent if for example, historic earthworks such as rigg and furrow are disrupted or temporary if for example, over ground pipelines impact on the setting of an asset until they are decommissioned;
- Impacts upon hydrology and surface and ground water quality; and
- Loss of better quality soil, degradation, compaction and potential contamination of soil resources.

4.13.16 Further environmental information would need to be submitted with proposals along with associated mitigation activity. Planning conditions may be required to ensure mitigation measures are implemented to avoid or minimise any adverse impacts. Restoration proposals should also include measures which offer longer term landscape and biodiversity enhancement.

4.13.17 The SA considered that the policy could further safeguard environmental receptors by requiring applicants to demonstrate that the number of pipelines represent the minimum necessary to serve the oil or gas development. It was also considered useful for the policy to clarify that routes have been optimised at the design stage to take account of environmental impacts etc.

<p>Significant Issues</p> <p>None identified</p>

[Recommendations / Mitigation](#)

4.13.18 Please note that the references used below relate to the specific social (SOC), economic (ECO) and environmental (ENV) mitigation measure proposed in the detailed matrix for this policy as presented in Appendix C.

- SOC1, SOC2, ENV2, ENV4, ENV6, ENV8 - Consider amending policy wording as follows, or similar to further safeguard social and environmental receptors. Please see bold text.

“Proposals for oil and gas pipelines will only be permitted provided that:

a) There will be no unacceptable adverse impacts on the environment, human health or the amenity of local communities; and

b) It can be demonstrated that the number of pipelines represent the minimum necessary to safely, serve the development and optimal route”

- ECON1 - Amend policy or supporting text to ensure that any local economic impacts of pipeline development are considered when determining proposals.
- ENV1 - Environmental information submitted with proposals will need to ensure adequate and appropriate mitigation for any biodiversity loss which may occur because of development. Biodiversity Net Gains should also be sought as part of wider restoration proposals to achieve possible longer term positive effects.
- ENV3 - Environmental information submitted with proposals should include an assessment of the landscape’s sensitivity that the pipeline corridor will transect along with a visual impact assessment. Where possible the routes of pipelines should avoid woodland, be routed through existing gaps in hedgerows and mitigation should take account of the limitations around replanting of landscape features along the pipeline route. Restoration proposals should also include measures which enhance original landscape quality.
- ENV5 - Environmental information submitted with proposals should include an assessment of the short, mid and long term impact upon cultural and heritage assets, setting out how adverse effects could be avoided or mitigated
- ENV7 - Information on potential short, mid and long term effects to water and soil resources would need to be provided with proposals along with associated mitigating activity. Planning conditions may need to be imposed to ensure that water quality and soil resources are protected and managed properly

Residual Effects

- None Identified

Response to SA Recommendations

- SOC1, SOC2, ENV2, ENV4, ENV6, ENV8 - Agreed the following wording has been added:

“The number of pipelines represent the minimum necessary to safely, serve the oil and gas field. The routing of the pipeline or pipelines minimise adverse impacts through its

route, its construction and operational and decommissioning phases and land taken is restored to a high standard at the earliest opportunity once the pipeline is not required or as part of the decommissioning of the oil field if earlier.

The routing of the pipeline provides adequate standoff distances from local communities.

There will be no unacceptable adverse impacts on the environment, human health or the amenity of local communities.”

- ECON1 - Agreed in part. Any economic effects will be taken into account as part of the new policy wording which considers the impact of the route, its construction and operational and decommissioning phases
- ENV1, ENV3, ENV5, ENV7 - The supporting text has been amended to take into account the recommendations on environmental information provision

Conclusion and Outstanding Issues

4.13.19 The SA identified that the policy seeks to minimise the social and environmental impacts of transporting oil and gas by road by setting out a sequential approach to the use of pipelines, followed by rail and then by road (where other DPD policy requirements are met). The policy also seeks to ensure that there will be no unacceptable adverse social or environmental impacts as a result of pipeline proposals which is likely to result in the routing of them away from sensitive locations and receptors. However, the SA pointed to the need for further environmental information to be submitted with proposals.

4.13.20 As a result of the SA the policy has also been strengthened in relation to social and environmental safeguards and new wording would ensure that any adverse impacts (including economic to agriculture or other business) would be minimised through the routing of the pipeline, its construction, operational and decommissioning phases. There are no outstanding issues.

4.14 Policy MW14: Vein Minerals, Metalliferous Minerals, Lithium and Silica Sand

4.14.1 Several mineral resources are present within County Durham which have been worked in the past but are not currently worked, including Fluorspar, Barytes, Silica Sand, Ganister and metalliferous minerals, principally Zinc. In addition, there is interest in Lithium exploration due to its use in batteries and their associated role in decarbonising the transport and power sectors to meet net zero targets. Growth in its use has led to Lithium being identified by the UK as a strategic metal and it has also been identified by the EU on its fourth list of critical minerals in 2020.

4.14.2 All of these resources occur, (or in the case of Lithium, may occur) within West Durham which is environmentally sensitive with a greater area thereof, subject to multiple designations for landscape, heritage, geodiversity and/or wildlife conservation. Given uncertainties relating to the minerals resources themselves and/or whether commercial

interest will resume it is not possible to identify whether proposals for future extraction activities will occur over the Plan period.

4.14.3 M&WDPD objective 3 is relevant to considering minerals which are not currently worked but whose future working cannot be discounted in the future and compliments County Durham Plan Objective 20 (Supply of Minerals)

Reasonable Alternatives

4.14.4 The National Planning Policy Framework (NPPF) requires that with the exception of peat, planning policies should provide for the extraction of mineral resources of local and national importance (Para 204a) and Mineral Planning Authorities should plan for a steady and adequate supply of industrial minerals (Para 208). Whilst the description provided within the NPPF's glossary only cites fluorspar and silica sand, other minerals are potentially of local or national importance or could become so over the Plan period. Therefore, the inclusion of a policy in the DPD which provides a framework for determining proposals for such minerals if they are forthcoming over the Plan period is considered to be the only reasonable alternative.

4.14.5 The approach taken within the Draft M&WDPD sought to address the key vein minerals found within the North Pennines which have been subject to extraction or prospecting in the last thirty years e.g., Fluorspar, Bartyes and Zinc. In addition, it sought to address Lithium which is currently subject to exploration activities within the North Pennines and has since been included within the UK Critical Minerals Strategy.³⁶

4.14.6 Ganister was also included but following further review, it is no longer considered reasonable for the policy to address ganister. This is because ganister was extensively worked for the manufacture of silica refractories which have now ceased in Britain and this resource is now only worked for building stone. Ganister was not listed as a mineral produced in the UK in 2021 or in the world in 2020.³⁷ The mineral is also not cited as 'critical mineral' within the UK Critical Minerals Strategy.

4.14.7 In response to representations on the Draft M&WDPD, the policy has however been amended to apply more broadly to Metalliferous Minerals. The Draft Plan specifically addressed Zinc but did not specifically address lead or ironstone or silver all of which were worked in the North Pennines at the height of the ore fields period of peak activity in the mid to late 19th Century.

4.14.8 Previously, the Council regarded British Geological Survey (BGS) reports including Mineral Resource Information for Development Plans: Durham and the Tees Valley: Resources and Constraints which was published in 2000.³⁸ This report advised that "mining for metal ores as the principal product ended in the late 1930s" and advised that

³⁶ HM Government (2022) Resilience for the Future: The United Kingdom's Critical Minerals Strategy

³⁷ British Geological Survey (BGS) United Kingdom Minerals Yearbook 2021 and BGS World Mineral Production 2016-2020

³⁸ Mineral Resource Information for Development Plans: Durham and the Tees Valley: Resources and Constraints, British Geological Survey, 2000.

exploration work has assessed the likelihood of finding base-metal deposits similar to those worked economically in Ireland that, “No major discoveries of economic significance have been made, but some potential still exists for new mineral deposits.

4.14.9 The Council has given further consideration to the BGS Mineral Planning Factsheet ‘Miscellaneous’ which was published in 2004 and covers the UK.³⁹ This advises that, “The vein style mineralisation, on which most of the former base metal mining was based, is unlikely to attract commercial interest as a source of metals in the future. This is because of their relatively small size and high costs of mining of such deposits. This does not, however, preclude exploration for other styles of metallic mineralisation...” and “There continues to be interest in the metallic mineral potential of Britain and mineral local plans need to be sufficiently flexible to take this possibility into account. The planning issues associated with any new discovery would be dependent on the circumstances, principally location and whether extraction is by surface or underground methods.”

4.14.10 In addition, the Council has given further consideration to the BGS Mineral Planning Factsheet ‘Metals’ which was published in 2015.⁴⁰ and reported on the potential for large scale base metal (zinc-lead) replacement deposits of the North Pennines Orefield which have been explored by Minco Plc and is reported upon in the Minerals and Waste Policies and Allocations document. Following further consideration, the policy has been amended to include reference to Metalliferous Minerals.

4.14.11 Representations on the Draft M&WDPD also suggested that Rare Earth Elements (REE) are minerals occurring within County Durham of interest. REE are also included within the UK Critical Minerals Strategy. Whilst identified as a critical mineral, the Council considers that it is not reasonable for the policy to address REE at this point in time following a review of a document published by the British Geological Survey in May 2020 called ‘The Potential for rare earth elements in the UK’.⁴¹ In terms of UK production and resources the report advises that, “In the UK there are many documented occurrences of REE-bearing minerals;” “However, in most cases these occurrences comprise only minor low tenor REE enrichment over restricted areas. For example, many of these minerals are found as rare accessory phases in some Tertiary granites or are minor accessories to lead-zinc-fluorite mineralisation in the Northern Pennine Orefield.” Reporting upon historical work and sampling in the North Pennine Orefield, the British Geological Survey research concluded that all rare earth element values were found to be sub-economic.

4.14.12 Should future exploration activities conclude that there are accessible resources of REE which are of current or potential economic importance the Council will consider them further in a review of the Minerals and Waste Policies and Allocations Document.

4.14.13 Representations were also received requesting a separate policy relating specifically to safeguarding for lithium exploration and production. However, these veins have already

³⁹ Mineral Planning Factsheet, Miscellaneous, British Geological Survey, 2004.

⁴⁰ Metals Mineral Planning Factsheet, British Geological Survey, 2015.

⁴¹ Raw Materials for Decarbonisation, The potential for rare earth elements in the UK, British Geological Survey, May 2020.

been safeguarded in relation to Fluorspar through the provisions of County Durham Plan Policy 56 (Safeguarding Mineral Resources) and are shown on the County Durham Plan Policies Map. The Council will consider the necessity of explicitly safeguarding parts of these vein structures for Lithium through a future review of the County Durham Plan following the proving of the long-term resource potential for Lithium supply.

4.14.14 Due to the reasons outlined above, there are not considered to be any reasonable alternatives to the minerals that are now addressed by Policy MW14. With regards to Lithium, the Environment Agency advised that these types of schemes are in complex geological and hydrogeological locations and therefore a phased, risk-based approach will be required. The Council accept that there could be risks to groundwater and as Lithium extraction is a novel form of mineral extraction considers a phased, risk-based approach a reasonable one to take and reflect within policy.

4.14.15 Please note that except for silica sand, there are no national demand requirements for any of these minerals. The NPPF requires a 10 year landbank of permitted reserves of silica sand to be identified to support investment in and maintenance and improvement of new or existing plant and equipment. However, in the absence of any existing plant or proposals for new plant utilising the silica sand resources from County Durham it is not possible to meet this requirement. The resource is safeguarded by County Durham Plan Policy 56: Safeguarding Mineral Resources.

4.14.16 Please also note that the approach to protecting environmentally sensitive areas and receptors such as the North Pennines Area of Outstanding Natural Beauty (AONB) or Internationally Designated Wildlife Sites is established by respective policies within the County Durham Plan.

4.14.17 No other reasons to deviate from the overall approach to other minerals (e.g. representations made to the contrary, substantial changes to planning guidance or evidence etc) have been forthcoming between the Draft and Publication Draft stages of M&WDPD development. There are therefore no new reasonable alternatives to consider in relation to this issue.

4.14.18 The SA has consequently focused on whether the drafts of the policy presented are robust, cover all necessary aspects and include appropriate safeguards.

Appraising Significant Changes

4.14.19 As mentioned above, changes have been made to the policy in respect of the types of minerals the policy seeks to address and the introduction of provisions relating to a phased, risk-based approach to Lithium extraction.

4.14.20 Further to these amendments, new criteria have been added to help determine planning applications for other minerals and additional specific criteria have been included relating to the exploration, extraction, processing and decommission activities for lithium.

4.14.21 These changes require a reassessment of the policy. For the purposes of ease of reference the types of minerals addressed by the policy are collectively referred to as ‘other minerals’ by the SA.

Policy Assessment Outcome

4.14.22 The following table shows the assessment outcome when the policy was first assessed in 2021 and the new predicted outcomes following the significant changes made to it. Please also see the supporting SA matrix in Appendix C which shows further detail, including the predicted breakdown of short, medium and long term effects. The commentary below relates to the new, 2022 assessment outcome.

Table 23 Summary Assessment: Policy MW14

	1. Decent Affordable Homes	2. Strong Secure Communities	3. Education, Training & Lifelong Learning	4. Health: Inequalities & Lifestyles	5. Need to Travel & Sustainable Transport	6. Alleviate Deprivation	7. Economy & Employment	8. Climate Change: Mitigation	9. Climate Change: Adaptation	10. Biodiversity & Geodiversity	11. Landscape & Townscape	12. Historic Environment	13. Resources: Air, Water & Soil	14. Waste & Use of Materials	15. Minerals Extraction & Impacts
2021 Assessment Outcome	0	0	0	0	0	0	0	✓/x	0	0	0	0	0	✓	0
2022 Assessment Outcome	0	✓	✓	✓	✓	✓	✓	✓/x	✓	✓	✓	✓	✓	✓	✓

4.14.23 Previously the policy was predominantly assessed as having negligible impacts against the SA objectives. This was because it was reliant on other policies within the M&WDPD and County Durham Plan to determine the acceptability of proposals and did not include any specific criteria or requirements. The inclusion of criteria within the revised policy has enabled more positive effects to be predicted against social, economic and environmental SA objectives.

Social Effects

4.14.24 A number of criterion within the policy will contribute towards safeguarding communities and health and wellbeing in the event that proposals for ‘other minerals’ are forthcoming over the DPD period. These include:

- Overarching requirement that any future proposals will be required to demonstrate that there will be no unacceptable adverse impacts upon the amenity of local communities;
- Great weight will be given to the benefits of extraction, which may include community benefits; and
- In relation to lithium proposals, extraction, processing and transport facilities are located and operated to minimise both environmental and local amenity impacts and provide any necessary mitigation and enhancements.

4.14.25 Positive effects were also predicted against SA objective 3 (education) and 6 (deprivation). As County Durham does not have a recent history of working the minerals addressed by the policy or any history relating to lithium extraction, new industry may increase local training opportunities and jobs in the minerals, geology and engineering sectors. Lithium is currently subject to interest for exploration within Weardale in County Durham.

Economic Effects

4.14.26 As County Durham does not have a recent history of working the minerals addressed by the policy 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. As mentioned, Lithium is currently subject to interest for exploration within Weardale in County Durham. The UK's Critical Mineral Strategy (2022) also supports the further development of an industrial cluster for mining and refining lithium both in Cornwall and North East England.

Environmental Effects

4.14.27 Positive effects were predicted against all SA objectives with the exception of SA objective 8 (climate change) where a mixture of both positive and negative effects were predicted.

4.14.28 Whilst there is uncertainty over whether proposal will be forthcoming for the extraction of 'other minerals', their extraction could contribute towards meeting the UK's need for these minerals more locally as opposed to importing them from other countries, thereby reducing transportation distances. For example, lithium is currently mined in countries such as Australia, Chile and Argentina. In addition, a local supply of lithium could help meet the UK's demand for electric vehicle battery that represent a more sustainable form of transport than petrol and diesel fuelled vehicles.

4.14.29 In the event that proposals are forthcoming for 'other minerals', permitting proposals where they will not have an unacceptable adverse impact on the environment and regarding lithium where extraction, processing and transport facilities are required to be located and operated to minimise both environmental and local amenity should take account for example, of impacts on flood risk and opportunities for flood alleviation. Positive effects were therefore predicted against SA objective 9 (adapting to climate change)

4.14.30 In relation to biodiversity and geodiversity, landscape character and heritage, the SA recognises that the highly sensitive nature of the environment in West Durham and the North Pennines could present a challenge in bringing forth acceptable schemes for the minerals included within the policy. The Policy also recognises that due to their location, particular regard will be given to the consideration and acceptability of impacts upon:

- Internationally, nationally and locally protected sites and protected species
- Protected landscapes; and
- Conservation areas and other heritage assets.

4.14.31 The policy is partially reliant on other policies within the M&WDPD and County Durham Plan to ensure that proposals are environmentally acceptable. These policies should ensure proposals meet requirements in relation to:

- The hierarchy of international, national and locally designated sites and protected species and provide biodiversity net gain;
- Protecting the special qualities of the North Pennines Area of Outstanding Natural Beauty (AONB) and permitting major development only in exceptional circumstances where it can be demonstrated to be in the public interest; and
- Ensuring proposals avoid substantial harm to heritage assets and avoid less than substantial harm where public benefits do not outweigh harm.

4.14.32 The policy criteria ensuring that great weight will be given to the benefits of extraction may include opportunities for ecological and landscape enhancement, along with opportunities to better reveal heritage assets.

4.14.33 The specific criteria regarding lithium i.e., ensuring that extraction, processing and transport facilities are located and operated to minimise environmental impacts and that high standards of restoration are achieved at the earliest opportunity are also likely to contribute towards safeguarding biodiversity, geodiversity, landscape character and the historic environment and may lead to longer term positive effects including the achievement of objectives within the County Durham Landscape Strategy and forthcoming Local Nature Recovery Strategy.

4.14.34 The overarching requirement to ensure that there will be no unacceptable adverse impacts upon the environment or human health will contribute towards safeguarding air, water and soil resources from pollution.

4.14.35 The policy also recognises the complex geological and hydrogeological locations associated with Lithium extraction and need for a phased risk-based approach. Ensuring that lithium extraction, processing and transport facilities are located and operated to minimise environmental and amenity impacts will also contribute positively to protecting air, water and soil resources.

4.14.36 The potential working of 'other minerals' will be constrained by a lesser degree by agricultural land quality as much of the agricultural land quality within upper Teesdale and Weardale is classified as poor quality.

4.14.37 As per the policy text, ensuring in the first instance that proposals are required to provide for the extraction of a steady and adequate supply of industrial or other minerals to help maintain national supply or meet net zero carbon ambitions and required for the purposes for which their specific qualities are essential is likely to contribute towards the conservation and efficient use of County Durham’s mineral resources.

4.14.38 In relation to SA objective 8 (climate change) if proposals are forthcoming and permitted in accordance with the policy, greenhouse gas emissions are likely to increase as none of the minerals addressed by the policy are currently extracted in County Durham.

4.14.39 If Lithium is extracted it is recognised that this mineral plays a critical role in meeting the global demand for electric vehicle battery minerals which are crucial for decarbonising the transport sectors and meeting net zero climate targets. Whilst using secondary sources of lithium such as from recycled batteries and electronics will play its part, demand is projected to increase by between 6 and 13 times by 2040 under stated policies.⁴²

4.14.40 In addition, as mentioned, meeting a proportion of the UK’s demand for lithium locally as opposed to from countries such as Australia, China or Argentina will minimise transportation distances and associated emissions.

Significant Issues

None identified

Recommendations / Mitigation

4.14.41 Please note that the references used below relate to the specific social (SOC), economic (ECO) and environmental (ENV) mitigation measure proposed in the detailed matrix for this policy as presented in Appendix C.

- **ENV1** – Greenhouse gas emissions can be mitigated by use of low carbon/zero carbon vehicles and use of low carbon and renewable energy sources to power plant and equipment. Restoration and aftercare schemes may contribute towards offsetting carbon produced e.g. through woodland creation.

Residual Impacts

- Unless fully offset, the exploration, extraction and processing of ‘other minerals’ will generate greenhouse gas emissions

Response to SA Recommendations

- Agreed - Criterion 2 of Policy MW7 (Traffic and Transport) requires that minerals and waste proposals should always consider and seek to maximise the use of sustainable forms of transport such as by rail, and/or by low or zero emission vehicles, where practical and economic. This criterion also states that, where demonstrated,

⁴² The international Energy Agency (IEA) (2021), [The Role of Critical Minerals in Clean Energy Transitions](#)

measures which maximise the use of sustainable forms of transport and minimise greenhouse gas emissions will be considered a benefit under Policy MW3 (Benefits of Minerals Extraction). It is agreed that the use of low carbon and renewable energy sources to power plant and equipment can help reduce greenhouse gas emissions and this is recognised by Policy MW10 (Ancillary Minerals Related Infrastructure). Policy MW20 (Mineral Site Restoration, Landfill and Landraise) addresses restoration and includes a specific criterion in relation to climate change mitigation and adaptation which may also contribute towards the offsetting of emissions.

Conclusion and Outstanding Issues

4.14.42 Whilst there is uncertainty whether proposals for the extraction of and in some cases, exploration for 'other minerals' in West Durham will be forthcoming over the Plan period, the SA has identified that the policy will help to minimise social and environmental impacts and could create jobs and opportunities for skills development. The policy is broadly aligned with sustainable development objectives and there are no outstanding issues.

4.15 Policy MW15: Peat

4.15.1 Peatlands are a type of wetlands which are among the most valuable ecosystems on earth. Peat soils form when conditions do not allow plants to decompose completely, and it can take around 1,000 years for one metre depth of peat to form. Peatlands are an irreplaceable habitat and County Durham is home to 32,000 hectares of peatland. Most of this resource is found in the North Pennines Area of Outstanding Natural Beauty (AONB), where the AONB Partnership's Peatland Programme has been restoring this valuable habitat since 2006. Actions within the Council's Climate Emergency Response Plan also provide further support for the restoration of County Durham's peatlands.

4.15.2 Peatlands and their associated peat are important in County Durham because they:

- Are an internationally designated habitat for wildlife;
- Play an important role in maintaining drinking water quality;
- Have a role in flood control at some scales;
- Are our best, significant store of carbon which can be released if the peat is damaged;⁴³
- Contain a record of the historic environment since the last ice age; and
- Support local employment through farming, shooting, tourism and conservation jobs.

4.15.3 DPD objective 3 is relevant to considering peat extraction and is complimentary to the following existing County Durham Plan objectives: 9 (Natural Environment), 16 (Adaptation to Climate Change) and 19 (Natural Resources).

⁴³ approximately 57 millions tonnes of carbon are stored in County Durham's peatland.(as per comms with the North Pennines AONB Partnership, 2018)

Reasonable Alternatives

4.15.4 Commercial peat extraction in the UK occurs mainly on raised bogs to almost entirely, provide peat for gardening, either as growing media or as a soil improver. When considering the approach to peat extraction in County Durham, paragraph 204 (a) of the National Planning Policy Framework is clear that planning policies should not identify new sites or extensions to existing sites for peat extraction.

4.15.5 Further to this, the England Peat Action Plan (May 2021) recognises that the voluntary approach to ending the sale of peat in horticulture has not delivered and states that consultation will be undertaken on potential legislative measures (e.g. a sales ban). The consultation ended in March 2022 but the Government is yet to issue its response.⁴⁴

4.15.6 There are currently no commercial peat extraction sites in County Durham, and it is understood that the blanket bogs and basin peats in County Durham are commercially unattractive in respect of peat extraction when compared with the raised bogs elsewhere in the country.

4.15.7 Given that the M&WDPD should be consistent with the NPPF, there are no known reasons to depart from it and the sale of peat products are likely to be restricted further there are not considered to be any reasonable alternatives to a policy approach which prohibits commercial peat extraction. The previous policy approach to commercial peat extraction as identified in the Minerals Local Plan was to consider proposals against its general policies, taking account of previous Government guidance which sought to restrict new extraction to areas which had already been significantly damaged by recent human activity and were of limited or no current nature conservation or archaeological value. The new policy approach is therefore more restrictive but consistent with NPPF requirements.

4.15.8 Please note that no reasons to deviate from the approach adopted (e.g. representations made to the contrary, substantial changes to planning guidance or evidence etc) have been forthcoming between the Draft and Publication Draft stages of M&WDPD development. There are therefore no new reasonable alternatives to consider in relation to peat.

4.15.9 Please also note that the protection of peat, in relation to its loss or deterioration, arising from other minerals and development proposals is covered by the County Durham Plan e.g. by Policy 41 Biodiversity and Geodiversity.

Appraising Significant Changes

4.15.10 No further changes have been made to the policy text between the Draft and Publication Draft stages of M&WDPD development. Therefore, no changes to the previous SA assessment have been made and this is repeated as follows, including previous recommendations and mitigation measures.

Policy Assessment Outcome

⁴⁴ Government Consultation: [Ending the Retail Sale of Peat in Horticulture](#)

4.15.11 The following table illustrates the effects the implementation of the policy is predicted to have against each SA objective. As all effects were either minor or none, colour coding has been used to help differentiate them. Minor positive effects are highlighted in pale green, negative in pale orange and no effects have a clear background. Whilst textual changes to the policy were previously recommended and accepted these were not considered likely to alter the predicted effects. Please also see the supporting SA matrix in Appendix C which shows further detail, including the predicted breakdown of short, medium and long term effects.

Table 24 Summary Assessment: Policy MW15

	1. Decent Affordable Homes	2. Strong Secure Communities	3. Education, Training & Lifelong Learning	4. Health: Inequalities & Lifestyles	5. Need to Travel & Sustainable Transport	6. Alleviate Deprivation	7. Economy & Employment	8. Climate Change: Mitigation	9. Climate Change: Adaptation	10. Biodiversity & Geodiversity	11. Landscape & Townscape	12. Historic Environment	13. Resources: Air, Water & Soil	14. Waste & Use of Materials	15. Minerals Extraction & Impacts
Assessment Outcome	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

4.15.12 Minor effects were predicted against the SA objectives as whilst the policy ensures no new peat extraction sites will be permitted, County Durham's resource is considered commercially unattractive and existing landscape and nature conservation designations contribute towards the protection of the vast, majority of County Durham's resource.

Social Effects

4.15.13 Minor positive effects were predicted against social SA objectives in recognition that whilst proposals for peat extraction are unlikely to be forthcoming the policy intent, not to permit them will safeguard against any impacts to communities associated with haulage or noise for example.

Economic Effects

4.15.14 Minor negative economic effects were predicted as whilst no commercial peat extraction sites operate within County Durham and there is no known commercial interest in this activity, the policy rules out any future, associated employment and training

opportunities, however limited these may be. This is a residual impact which cannot be mitigated.

Environmental Effects

4.15.15 Minor positive environmental effects were predicted as whilst County Durham's peatland resources, predominantly coincide with the North Pennines Area of Outstanding Natural Beauty (AONB) landscape designation and national and international nature conservation designations such as Sites of Special Scientific Interest (SSSI) and Special Areas of Conservation (SAC) the policy adds an additional safeguarding layer. In doing so, the policy will also contribute in a minor way to protecting a non-renewable resource and the significantly important role peatlands play in storing carbon, water attenuation and management. The SA also recognised that the protection of peat can also minimise wildfire risk as dry, damaged peat is increasingly a wildfire hazard during heatwaves.

Significant Issues

None identified

Recommendations / Mitigation

4.15.16 The draft policy establishes that no new peat extraction sites will be permitted in order to protect their value for nature conservation and as a carbon store. This wording could potentially be broadened to further recognise the importance of peat to water management and as a historic record. However, if these changes are made, it will not alter the predicted sustainability impacts of the policy. For the benefit of the reader, it may also be useful to briefly clarify how peat is protected in relation to other minerals and development proposals in the supporting text e.g. which County Durham Plan policies are relevant to this consideration.

Residual Impacts

- Minor negative impacts relating to training and jobs.

Response to SA Recommendations

4.15.17 Recognition of the water management role of peat has been added to the policy. Furthermore, following consideration of the SA recommendation the following text has been added to the supporting text of this policy:

"Proposals for minerals and waste development which impact on the peat resources of the County will need to comply with Policy 41 (Biodiversity and Geodiversity) of the County Durham Plan."

Conclusion and Outstanding Issues

4.15.18 Following the SA the policy helps to highlight the additional benefits of protecting peat and clarifies how the policy works in conjunction with others in the County Durham

Plan to consider this valuable resource when making planning decisions. There are no outstanding issues.

4.16 Policy MW16: Inert waste 'other recovery'

4.16.1 Inert waste is waste which is neither chemically or biologically reactive and will not decompose or only very slowly. Examples of this are materials such as clay, subsoil, chalk, hardcore, sand, concrete and rubble. Inert waste materials arise from a large range of sources including major engineering, infrastructure and development projects and the processing of construction and demolition materials.

4.16.2 According to Environment Agency data, in 2020 a total of 1,092,061 tonnes of inert/construction and demolition waste was received by waste management facilities in County Durham. This is an additional 33,459 tonnes more than that received in 2019 and represents 54% of the total volume of waste received. County Durham also manages over three times more inert waste than that which is reported to arise within the County.⁴⁵

'recovery' means any operation the principal result of which is waste serving a useful purpose by replacing other materials which would otherwise have been used to fulfil a particular function, or waste being prepared to fulfil that function, in the plant or in the wider economy.

4.16.3 The Waste Management Plan for England (2021), recognises that inert waste can and should be recycled followed by 'other recovery' whenever possible. Recovery is defined in Article 3(15) of the Waste Framework Directive as:

4.16.4 Recovery of inert waste could include for example, the creation of restoration landforms at existing active mineral sites, or agricultural or ecological land improvement schemes or civil engineering operations. Please note, it is for the Environment Agency to determine on a case-by-case basis whether an application for an environmental permit constitutes a waste recovery or a disposal operation.

4.16.5 DPD objective 4 is relevant to considering the 'other recovery' of inert waste and is complimentary to County Durham Plan Objectives 19: (Natural Resources) and 21: (Waste Management). Please note that County Durham Plan Policy 47 (Sustainable Minerals and Waste Resource Management) covers the management of waste in line with the waste hierarchy and the associated need to ensure waste prevention, reuse and recycling prior to other recovery and then disposal. This policy is also permissive towards facilities for the recycling of construction and demolition waste.

Reasonable Alternatives

4.16.6 Nationally, the UK is committed to meeting its target of recovering at least 70% by weight of non-hazardous inert waste and the National Planning Policy for Waste recognises that positive planning plays a pivotal role in delivering the country's waste ambitions.

⁴⁵ Source: Durham County Council **Annual Monitoring Report 2020/21** - Environment Agency Waste Data Interrogator 2020 and 2021

Assessment Outcome	0	✓	0	✓	✓	0	✓	✓	✓	✓	✓	✓	✓	✓	✓
--------------------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

4.16.10 Where links between the policy and SA objectives exist, the SA predicted positive social, economic and environmental effects. However, uncertain effects were initially predicted against SA objective 15 (Minerals). The effects predicted are summarised as follows:

Social Effects

4.16.11 Positive social effects were predicted as several criterion within the policy will contribute directly and indirectly towards safeguarding communities and their health and wellbeing from any impacts arising from inert waste 'other recovery' schemes. These include:

- Ensuring proposals demonstrate that inert waste cannot be managed at a higher level of the waste hierarchy will minimise the number of inert waste recovery schemes and their potential impact on communities;
- Ensuring that the quantity of waste is the minimum required in any given scheme and that consideration is given to alternative solutions which would not involve the importation of waste will minimise any traffic and transport impacts to communities; and
- Ensuring that there will be no unacceptable adverse impacts on human health or the amenity of local communities is likely to ensure that permitted proposals can mitigate any impacts during the 'other recovery' of inert waste to land (e.g. noise, traffic etc) and the end results of recovery will be acceptable (e.g. they will not have an unacceptable impact such as through visual intrusion, visual dominance, loss of light etc)

Economic Effects

4.16.12 The measures included within the policy regarding the demonstration of genuine and significant benefits to agricultural land quality resulting from the 'other recovery' of inert waste may contribute positively to the rural economy.

Environmental Effects

4.16.13 Positive environmental effects were predicted as the policy criteria will contribute directly and indirectly towards travel avoidance and reducing the travel requirements related to the recovery of inert waste, including ensuring that:

- Consideration is given to alternative solutions which would not involve the importation of waste;
- The quantity of waste is the minimum required in any given scheme; and that
- There will be no unacceptable adverse impacts on the environment, human health or the amenity of local communities

4.16.14 Travel avoidance and reduction also serves to minimise air pollution, and greenhouse gas emissions from waste management along with the requirement for proposals to demonstrate that they cannot be managed at a higher level of the waste hierarchy in the first instance.

4.16.15 Criteria within the policy relating to the need for proposals to demonstrate that there will be no unacceptable adverse impacts on the environment and the achievement of genuine (now demonstrable), significant agricultural or ecological benefits will contribute towards ensuring that only high quality 'other recovery' land treatment proposals are permitted thereby protecting County Durham's natural topography, associated habitats and heritage. The criteria are also likely to ensure that areas of high environmental value or sensitivity are avoided, impacts to receptors can be mitigated and that resulting benefits outweigh harm. In addition, the criteria are also likely to take into account and ensure the avoidance of changes to topography which could affect water quality, flow, drainage and increase flood risk.

4.16.16 The policy is directly compatible with SA objective 14 (Waste) as it 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 a disposal operation. However, very positive effects were not initially predicted as whilst recognised within the supporting text, the scope of the policy does not include the potential for recovery schemes to include the use of inert waste for landfill site cover or final mineral site restoration and it was considered that this could be included. Effects against SA objective 15 (Minerals) were initially predicted as uncertain due to this issue.

4.16.17 In addition, whilst criteria requiring the consideration of alternative solutions which would not require the importation and use of waste is likely to contribute towards reducing the need to travel i.e. by making the best use of onsite materials instead, this should perhaps be applied more specifically to mineral site / borrow pit restoration and not in the wider context. This is because the main purpose and benefit of the recovery of inert waste is that it substitutes primary materials which would have otherwise been used, thereby contributing to material and resource efficiency.

Significant Issues
None identified

Recommendations / Mitigation

4.16.18 Please note that the references used below relate to the specific social (SOC), economic (ECO) and environmental (ENV) mitigation measure proposed in the detailed matrix for this policy as presented in Appendix C.

- ENV1 and ENV2 - Consider amending policy wording as follows, or similar in order to expand the scope of the policy and ensure the consideration of alternative solutions which would not involve the importation of waste is applied appropriately.

“2a) The objective of the proposal is land treatment which would result in a genuine (now demonstrable) benefit to agriculture or ecological improvement which is significant and not a secondary benefit of the disposal of waste and can outweigh harm including that caused to local landscape character and topography, ecology or other valued characteristics, or an engineering benefit which can be genuinely needed for specific purpose; **or**

2b) The proposal constitutes a genuine ‘other recovery’ operation and either provides final landfill site cover or is essential to deliver a high standard of mineral site or borrow pit restoration which cannot be achieved with making the best use of onsite materials.

4. Alternative solutions have been actively considered which could deliver the identified benefit in a different way, [Delete - which would not require the importation and use of waste have been considered and found not to be practicable.]”

Residual Impacts

4.16.19 The ‘other recovery’ of inert waste as a land treatment will alter existing topography

Response to SA Recommendations

4.16.20 Recommendation noted but disagree. Criterion 2 of the policy refers to an engineering benefit which is genuinely needed for a specific purpose. This can encompass a number of engineering activities where waste is used as a substitute material. It is not therefore necessary to specifically refer and limit the policies scope. Regarding ‘final landfill cover’, inert material is used at non-hazardous landfill sites to create the final restoration landform as part of the process of landfill site engineering. Similarly inert material is and can be used at mineral sites for land stabilisation and other engineering works i.e. landform creation as part of approved mineral site restoration operations.

4.16.21 Finally it is considered that it is important that alternative solutions are always actively considered as this could deliver the identified benefit by the applicant in different way but without the requirement and environmental impacts associated with the import and use of the waste. Where the use of inert waste can be demonstrated, criteria a would apply in all cases (i.e. the inert waste to be used is a substitute for other materials).

Conclusion and Outstanding Issues

4.16.22 Overall, the SA found the Inert Waste ‘other recovery’ policy to be compatible with sustainable development objectives. Clarification provided in response to SA recommendations eliminated the uncertainty originally predicted against SA objective 15 (minerals) and enabled very positive effects to be predicted against SA objective 14 in relation to material and resource efficiency. There are no outstanding issues.

4.17 Policy MW17: Inert waste disposal via landfill

4.17.1 The Resources and Waste Strategy and Waste Management Plan for England recognise the need for and acknowledge that waste management is continually evolving as we move away from landfilling the majority of our waste to a more circular economy where we recover and regenerate products and materials whenever we can.⁴⁶

4.17.2 The Waste Management Plan for England recognises that the waster hierarchy which ranks options for waste management regards disposal - in landfill for example – as the worst option. However, the Plan also recognises that not all waste can be diverted from landfill and that there are some wastes for which landfill remains the best, or least worst, option. Regarding inert waste, it states that that the disposal of inert waste in or on land, i.e., landfill, remains a valid way of restoring quarries and worn-out mineral workings where this is a planning requirement.

4.17.3 The Resources and Waste Strategy also recognises that there is an ongoing role for landfill in managing waste, particularly for inert waste that cannot be prevented, recovered or recycled, but that its use should be minimised as much as possible. Such materials are likely to include: some hazardous wastes – such as asbestos; certain process residues, such as pre-treated industrial wastes from which no further resources can be recovered; and waste for which the alternatives to landfill are not justified on cost or environmental and resource efficiency grounds.

4.17.4 There are three operational, inert landfill sites In County Durham – Bishop Middleham Quarry, Old Quarrington Quarry and Crime Rigg Quarry. These sites are licenced to accept only inert construction and demolition waste and are also active quarries. The evidence base which underpinned the County Durham Plan forecast a landfill capacity gap for the disposal of inert waste over the Plan period to 2035. Table 14 of the County Durham Plan, identified a need for further inert landfill and non-hazardous capacity of 3,682,800 cubic metres. This was qualified to be for inert waste disposal only in the supporting text of the Plan. The forecasting suggested that, based on landfill capacity and the closure dates of existing sites, capacity would be exhausted by 2032.

4.17.5 However, the situation is recognised to be complex, and much will depend upon how the county's landfill sites are operated, the quantity of inert waste which requires disposal and the ongoing availability of void space elsewhere in the Northeast. The latest position on remaining inert landfill void space was published by the Environment Agency in December

⁴⁶ HM Government (2018) **Our Waste, Our Resources: A Strategy for England** and HM Government (2020) **Waste Management Plan for England**

2020. This information indicates that remaining inert landfill void space in County Durham was still very healthy equivalent to 7,261,368 cubic metres in total.⁴⁷

4.17.6 DPD objective 4 is relevant to considering the disposal of inert waste and is complimentary to County Durham Plan Objective 21: (Waste Management). Please note that County Durham Plan Policy 47 (Sustainable Minerals and Waste Resource Management) covers the management of waste in line with the waste hierarchy and the associated need to ensure waste prevention, reuse, recycling and recovery prior to disposal.

Reasonable Alternatives

4.17.7 As stated above, existing waste strategies and plans for the country recognise that whilst it should be minimised, it will not be possible to prevent the landfilling of some inert waste. The adopted County Durham Plan established the need for further inert landfill capacity to be provided and the SA of the County Durham Plan also considered the reasonable alternatives to Policy 60 (Waste Management Provision)

4.17.8 Further movement of waste up the waste hierarchy may mean that existing inert landfill sites take longer to reach their full capacity, but it is assumed that this scope is limited if the high national recovery rates are also being achieved in County Durham. The Waste Management Plan for England reported in 2021 that a recovery rate of 92.1% is being achieved for England and 91.0% for the UK as a whole. As datasets are poor at a local and regional level across all regions it is only possible to assume that what happens in County Durham is in line with national rates of recovery.

4.17.9 The County Durham Plan states that "it is now also recognised that further inert void space at Bishop Middleham Quarry will become available providing an estimated 4 million cubic metres of void space once mineral extraction has ceased in 2029". However, reliance on this void space is not considered to be a reasonable alternative due to the consideration that needs to be given to its availability over the period to 2035.

4.17.10 The availability of this void space is dependent on mineral extraction which has yet to substantially start. It is now anticipated that the majority of the voidspace will only be available after the end of the Plan period and towards the end of the operational life of the site which exists to June 2052. As outlined above without further capacity, existing landfill capacity would be exhausted by 2032.

4.17.11 Tarmac have since advised the Council that further void space (totalling 1,445,210 cubic metres) which is not included with the Environment Agency remaining landfill void space statistics will eventually become available at Old Quarrington Quarry within the permitted phase 5 and phase 6 areas of the quarry. The availability of the additional void space at Old Quarrington is however, dependent on planning permission being granted to extend the duration of that permission and the capacity in the phase 6 area is only likely to be available following the extraction of permitted limestone in the northern part of the quarry. The phase 6 area is currently used and required for the weighbridge and other

⁴⁷ Source: Durham County Council **Annual Monitoring Report 2020/21** - Environment Agency, Remaining landfill capacity: England as at end 2019 and Remaining landfill capacity: England as at end 2020.

ancillary infrastructure that helps to facilitate the operation of the quarry. This additional void space is not expected to be available during the plan period.

4.17.12 In their representations on the Draft M&WDPD, the Environment Agency commented that they are currently seeing a much-reduced interest from industry in pursuing new inert waste landfill sites. Instead, inert waste deposits tend to be sought (from the Environment Agency) under the authorisation of Deposit for Recovery (DfR) permit to avoid the 'stigma' of landfill and the associated landfill tax requirements. However, the Council is seeing an ongoing interest from minerals and waste operators and other developers in gaining planning permission to dispose/recover inert, construction and demolition waste in both existing and former quarries and as part of proposed agricultural land improvement schemes. As mentioned in paragraph 4.16.2, County Durham manages over three times more inert waste than that which is reported to arise within the county and its remaining inert landfill sites are of regional importance.

4.17.13 As the Waste Planning Authority, the Council is required to ensure that adequate provision is made for waste disposal and the need for further inert landfill capacity has been established. Whilst the M&WDPD seeks to meet the need through the allocation of sites (please see section 5 of this report), there are not considered to be any reasonable alternatives to the inclusion of a policy that enables the consideration of inert waste proposals that may also be submitted to the Council over the Plan period. A key issue will be however, to ensure that account is taken of the capacity provided by the allocated sites when considering new proposals.

4.17.14 In respect of the methods of disposal of waste to land, landfilling and landraise are two options which have been used in the UK. Landraising provides the permanent disposal of waste through the construction of landforms above ground level. Typically, smaller quantities of inert waste have been disposed of on a number of landraise sites in County Durham.

4.17.15 To accommodate the inert waste via landraise would require a large number of land raise schemes across County Durham which would have significant impacts on natural topography and landscape character and is likely to be more disruptive to other natural receptors and communities than the use of pre-existing voids which could be made suitable for this purpose. In addition, compared to landfill, landraise schemes offer less opportunity for the recovery of waste which can be achieved through infilling quarries and creating more appropriate landforms as part of their restoration. There are therefore not considered to be any reasonable alternatives to adopting a restrictive approach to landraise schemes.

4.17.16 Whilst additional information has been provided in relation to further void space at Old Quarrington Quarry and representations have been considered, there are not considered to be any reasons to deviate from the approach outlined within the Draft M&WDPD and continued within the Publication Draft. There are therefore no new reasonable alternatives to consider in relation to policy MW17. Reasonable alternatives in relation to allocations for the disposal of inert waste are considered in section 5.2.

Appraising Significant Changes

4.17.17 Changes made to the policy wording between the Draft and Publication stages of M&WDPD development relate to:

- The removal of a criterion requiring proposals to demonstrate that they are allocated within the M&WDPD
- Clarifying that landraise proposals will also need to meet all the criteria outlined within the policy.
- Clarifying that when considering proposals, account will also be taken of capacity available within allocated inert landfill sites in addition to existing inert landfill sites.
- Furthermore, a correction has been made to correctly cite the Water Resources policy.

4.17.18 The SA had assumed that the criterion (now deleted) was included in error and did not take account of it as part of the previous assessment. Whilst allocations for inert waste disposal have since been made in the M&WDPD, the policy should safeguard against over provision when determining proposals by taking account of the allocated capacity. This aids clarity but does not change the emphasis of the policy as it previously guarded against an over provision of capacity. The SA had also previously assumed (as now clarified) that the provisions of the policy also applied to landraise proposals.

4.17.20 These changes are not considered to alter the emphasis of the policy or previous SA outcomes. Therefore, the previous SA assessment is repeated as follows, including previous recommendations and mitigation measures.

Policy Assessment Outcome

4.17.21 The following table illustrates the effects the implementation of the policy is predicted to have against each SA objective. Whilst textual changes to the policy were previously recommended and accepted these were not considered likely to alter the predicted effects. Please also see the supporting SA matrix in Appendix C which shows further detail, including the predicted breakdown of short, medium and long term effects. The commentary below relates to the initial assessment outcome.

Table 26 Summary Assessment: Policy MW17

noise, traffic, light pollution, dust, odour etc) and restoration proposals return the land to its original or better state in respect of safety, security and visual amenity.

4.17.24 The SA also recognised that permitting new inert waste disposal capacity where it meets policy requirements could create new training opportunities and the attainment of qualifications in relation to waste management.

Economic Effects

4.17.25 Positive economic effects were predicted as permitting new inert waste disposal capacity (where it meets the policy requirements) may contribute towards safeguarding existing employment at County Durham's landfill sites and/or create new employment opportunities.

Environmental Effects

4.17.26 The measures mentioned above which will minimise traffic and haulage impacts to communities also contribute to reducing the need to travel in the first instance. Resisting landraise proposals unless capacity at existing or allocated landfill sites is insufficient will also contribute towards directing waste to pre-existing sites which have been found to be acceptable in relation to their traffic levels. These measures, in addition to requiring proposals to demonstrate that they cannot be managed at a higher level of the waste hierarchy all serve to minimise greenhouse gas emissions and air pollution from waste management. In predicting effects against SA objective 8 (Climate change) the SA also noted that inert waste is not chemically or biologically reactive and therefore unlikely to create landfill gas.

4.17.27 Ensuring waste cannot be managed at a higher level of the waste hierarchy or be accommodated by existing or allocated inert landfill sites or by mineral restoration schemes will minimise the number of new landfill or landraise schemes in County Durham and their potential impacts to biodiversity and geodiversity, landscape, the historic environment and air, water and soil resources. Ensuring that landraise schemes are not normally permitted and that significant benefits can be demonstrated will also further minimise the creation of unnatural landforms above ground which can adversely impact upon:

- Topography and landscape character;
- The ability to read historic landscapes such as registered battlefields for example; and
- Water flow and drainage which can increase the risk of localised flooding.

4.17.28 Criteria within the policy relating to the need for proposals to demonstrate that there will be no unacceptable adverse impacts on the environment and that they include a high quality restoration scheme which enhances the natural environment is likely to ensure that areas of high environmental value or sensitivity are avoided, impacts to receptors can be mitigated and that resulting benefits outweigh harm. Ensuring only proposals are permitted where there will be no unacceptable adverse environmental impacts is also likely to ensure that new landfill capacity is engineered to protect groundwater and prevent any leachate. The Environment Agency has published landfill technical guidance that operators

are expected to follow in addition to the conditions set in their Environmental permit. The policy could therefore usefully signpost to this guidance and ensure that when submitting proposals, due regard has been given to it.

4.17.29 Positive effects were predicted against SA objective 14 (Waste) as whilst this policy provides the framework for the consideration of inert waste disposal proposals, it requires applicants to first demonstrate that waste cannot be managed at a higher level of the waste hierarchy and that it would not prejudice the restoration of existing permitted mineral sites where inert materials can be classified as 'recovery' for this purpose. The policy also ensures that proposals do not result in the creation of excessive landfill capacity.

4.17.30 However, the SA recognised that provision for future waste management in County Durham is based upon providing facilities to deal with the county's own waste arisings (net self-sufficiency) whilst acknowledging the established cross boundary flows of waste which exist between County Durham, adjoining areas and the wider region. County Durham plays an important role in making an appropriate contribution to regional net-sufficiency and the wording of the policy could be amended slightly to reflect this.

Significant Issues

None identified

Recommendations / Mitigation

4.17.31 Please note that the references used below relate to the specific social (SOC), economic (ECO) and environmental (ENV) mitigation measure proposed in the detailed matrix for this policy as presented in Appendix C.

- ENV1 and ENV2 - Consider amending policy wording as follows, or similar in order to signpost applicants to the Environment Agency's landfill technical guidance and better reflect County Durham's appropriate contribution towards regional net self-sufficiency

When submitting proposals, due regard should be given to the Environment Agency's Landfill Technical Guidance: [Environmental Permitting Landfill Sector Technical Guidance](#)

4. The proposal would not result in the [Delete - creation of excessive] an **over-provision of capacity** which could lead to the [Delete – unnecessary] **excessive** importation of inert waste from outside County Durham.

Residual Impacts

4.17.32 None identified

Response to SA Recommendations

4.17.33 The Spatial Policy Team agree with the recommendation. Supporting has text been provided in chapter 8 to provide information on the Environment Agency's role, permitting and exemptions and ensure that Environment Agency Technical Guidance is signposted.

4.17.34 Criteria 4 will be amended to provide clarity in line with the wording suggested. Through future decisions the Council need to seek to ensure sufficient additional capacity is provided for waste disposal to meet the identified capacity gap whilst preventing an over provision of capacity.

Conclusion and Outstanding Issues

4.17.35 Whilst the policy provides the framework for the consideration of inert waste disposal proposals, the SA was able to predict positive effects as it:

- Requires applicants to demonstrate that waste cannot be managed at a higher level of the waste hierarchy in the first instance;
- Includes a number of requirements which will limit the number of new waste disposal schemes and;
- Includes a number of requirements which will safeguard communities and the environment in relation to any permitted scheme.

4.17.36 As a result of the SA, the policy better reflects County Durham's contribution towards regional net self-sufficiency and signposts applicants to the Environment Agency's Landfill Technical Guidance which sets out further information to operators on design, engineering and environmental solutions. These changes do not however, alter the effects originally predicted by the SA. There are no outstanding issues.

4.18 Policy MW18: Non-Hazardous Landfill

4.18.1 Policy 47 (Sustainable Minerals and Waste Resource Management) within the County Durham Plan provides a good starting point for the consideration of the disposal of non-hazardous waste. This policy requires proposals for the disposal of residual waste via landfill or via the incineration of waste without energy recovery to be resisted unless a need can be demonstrated which cannot be met by existing facilities and by treatment solutions higher in the waster hierarchy.

4.18.2 Aycliffe Quarry East Landfill is now County Durham's sole remaining non-hazardous waste landfill (which also accepts hazardous waste in a specially engineered cell). Comparison of both 2019 and 2020 data shows a significant fall in void space at Aycliffe Quarry where void space declined from 1,721,036 cubic metres in 2019 to 728,528 cubic metres in 2020.⁴⁸ In 2019, Only 1.5% of County Durham's non-hazardous municipal waste was disposed of to Aycliffe Quarry East Landfill.⁴⁹

⁴⁸ Source: Durham County Council Annual Monitoring Report 2020/21

⁴⁹ Source: [Environment Agency Waste Data Interrogator for 2019 \(December 2020\)](#)

4.18.3 The evidence base for the County Durham Plan identified that over its lifetime, sufficient treatment solutions, higher up the waste hierarchy are expected to come on stream to manage the non-hazardous waste stream (household, commercial and industrial) in County Durham and the North East region. However, it was further recognised that non-hazardous treatment capacity on a regional scale, post 2020 depends upon the finance, construction and delivery of energy recovery and treatment capacity. If planned regional EfW facilities are not delivered or only partially delivered, declining landfill capacity and landfill closures will not be matched by new energy recovery capacity, producing a capacity shortfall at the regional level.

4.18.4 M&WDPD objective 4 is relevant to considering the disposal of waste and is complimentary to County Durham Plan Objective 21: (Waste Management).

Reasonable Alternatives

4.18.5 Please note that the SA of the County Durham Plan assessed waste management provision alternatives. The preferred approach selected and reflected in Policy 60 (Waste Management Provision) is to aim for net self-sufficiency (i.e. management of the waste that arises in County Durham) whilst making an appropriate contribution to regional net sufficiency. There are therefore not considered to be any reasonable alternatives to the inclusion of a policy within the M&WDPD which provides as a backstop, the framework to consider proposals for new non-hazardous landfill in case there is a shortfall in regional capacity resulting from the non-delivery of new energy recovery and treatment capacity. The National Planning Policy for Waste also recognises that whilst waste planning authorities should drive waste management up the waste hierarchy, adequate provision must be made for waste disposal (section 3).

4.18.6 In relation to County Durham's existing Non-Hazardous landfill site, please note that it is not possible to extend the time limit for working at Aycliffe Quarry East as this already runs to 2042, by which time capacity is very likely to be exhausted. In addition, it is outside of the scope of planning to request operators to seek approval from the Environment Agency to increase permitted tipping amounts. This would also serve to increase the rate of decline in existing void space.

4.18.7 Please also note, no new non-hazardous landfill allocations were proposed through the call for new minerals and waste sites which was undertaken in January 2021 or as part of the consultation on the Draft M&WDPD.

4.18.8 Please note that no reasons to deviate from the approach adopted e.g. representations made to the contrary, substantial changes to planning guidance or evidence, (other than updated void capacity) have been forthcoming between the Draft and Publication Draft stages of M&WDPD development. There are therefore no new reasonable alternatives to consider in relation to non-hazardous landfill.

Appraising Significant Changes

4.18.9 Only one change has been made to the policy between the Draft and Publication Stage of M&WDPD preparation. This change has been made to correctly cite the Water

Resources Policy. This correction does not alter the emphasis of the policy or previous SA outcomes. Therefore, the previous SA assessment is repeated as follows, including previous recommendations and mitigation measures.

Policy Assessment Outcome

4.18.10 The following table illustrates the effects the implementation of the policy was predicted to have prior to and following the acceptance of SA recommended changes to the policy wording. Please also see the supporting SA matrix in Appendix C which shows further detail, including the predicted breakdown of short, medium and long term effects. The commentary below relates to the initial assessment outcome.

Table 27 Summary Assessment: Policy MW18

	1. Decent Affordable Homes	2. Strong Secure Communities	3. Education, Training & Lifelong Learning	4. Health: Inequalities & Lifestyles	5. Need to Travel & Sustainable Transport	6. Alleviate Deprivation	7. Economy & Employment	8. Climate Change: Mitigation	9. Climate Change: Adaptation	10. Biodiversity & Geodiversity	11. Landscape & Townscape	12. Historic Environment	13. Resources: Air, Water & Soil	14. Waste & Use of Materials	15. Minerals Extraction & Impacts
Initial Assessment Outcome	0	✓	✓	✓	✓	0	✓	✓/x	0	✓	✓	✓	✓/x	✓	0
Final Assessment Outcome	0	✓	✓	✓	✓	0	✓	0	0	✓	✓	✓	✓	✓	0

4.18.11 The SA predicted positive social and economic effects. Some positive and negative environmental effects were predicted. Please note, that in relation to the likelihood of effects occurring, these were only deemed to be 'possible' as the policy will only be implemented where alternative energy recovery and treatment capacity is not available and proposals for new non-hazardous landfill capacity unexpectedly come forward. The 'possible' effects predicted are summarised as follows.

Social Effects

4.18.12 Positive social effects were predicted as several criterion within the policy will contribute directly and indirectly towards safeguarding communities and their health and wellbeing. These include:

- The number of new non-hazardous landfill sites and their potential impact on communities and health will be minimised by ensuring proposals demonstrate that the waste to be disposed of is the residue of a treatment process (where feasible and necessary) and cannot be managed at a higher level of the waste hierarchy;
- Additionally, ensuring that the requirements of County Durham Plan policies 47 and 60 are met, will mean that it will also need to be demonstrated that there is a need for the disposal capacity which cannot be met by existing facilities. This will also minimise non-hazardous landfill schemes and their potential impact on communities;
- Traffic and haulage impacts to communities will be minimised by ensuring that proposals do not create excessive landfill capacity and associated waste imports;
- Ensuring proposals are supported by a scheme for the long-term management of leachate and landfill gas will help to protect ground and surface waters (which can be used for drinking water) and minimise odours; and
- Ensuring that there will be no unacceptable adverse impacts on the amenity of local communities, along with the requirement for high quality restoration schemes is likely to ensure that permitted proposals can mitigate impacts during operation (e.g. noise, traffic, light pollution, dust, odour etc) and restoration proposals return the land to its original or better state in respect of safety, security and visual amenity.

4.18.13 The SA also recognised that permitting new non-hazardous landfill capacity where it meets policy requirements could create new training opportunities and the attainment of qualifications in relation to waste management.

Economic Effects

4.18.14 Positive economic effects were predicted as permitting new non-hazardous landfill capacity (where it meets the policy requirements) may contribute towards creating new employment opportunities.

Environmental Effects

4.18.15 The measures mentioned above which will minimise traffic and haulage impacts to communities also contribute to reducing the need to transport waste and associated

emissions to air. In addition, the policy requirements which will minimise the transportation of waste, ensure waste cannot be managed at a higher level of the waste hierarchy and ensure maximum practicable recovery of energy from landfill gas all serve to minimise greenhouse gas emissions from waste management. However, it is considered that the policy could be strengthened in this aspect.

4.18.16 Landfill gas is a mix of methane and carbon dioxide. Methane is a flammable toxic greenhouse gas twenty times more damaging to the climate than carbon dioxide. Instead of going into the atmosphere and becoming a greenhouse gas it can be collected in every landfill and used to produce renewable energy. In recognition that a Climate Emergency has been declared in County Durham and methane is a potent greenhouse gas it is suggested that the policy wording requires full recovery of landfill gas or where this is technically not possible, maximum practicable recovery alongside measures to offset residual emissions in County Durham e.g. contributions towards local tree planting projects, peatland restoration etc.

4.18.17 Ensuring waste cannot be managed at a higher level of the waste hierarchy, cannot be dealt with by existing facilities and does not lead to excessive capacity will minimise the number of new non-hazardous landfill schemes in County Durham and their potential impacts to biodiversity and geodiversity, landscape, the historic environment and air, water and soil resources.

4.18.18 Where an established need can be demonstrated, criteria requiring proposals to demonstrate that there will be no unacceptable adverse impacts on the environment and that they include a high quality restoration scheme which enhances the natural environment is likely to ensure that areas of high environmental value or sensitivity are avoided, impacts to receptors can be mitigated and that resulting benefits outweigh harm. The potential for longer term positive effects against SA objectives 10-13 are therefore predicted. Requiring proposal to be supported for the long-term management of leachate and landfill gas, including energy recovery from landfill gas will protect surface and groundwater quality and minimise fugitive emissions of landfill gas to air. However, strengthening the policy in line with the recommendations against SA objective 8 would also serve to further benefit air quality.

4.18.19 In relation to SA objective 14 (Waste), the SA recognised the policy requirements which will positively help to drive waste up the waste hierarchy and minimises the need for new landfill capacity. As for Policy MW17 (Inert waste Disposal via Landfill) the SA also recognised that provision for future waste management in County Durham is based upon providing facilities to deal with the county's own waste arisings (net self-sufficiency) whilst acknowledging the established cross boundary flows of waste which exist between County Durham, adjoining areas and the wider region. County Durham plays an important role in making an appropriate contribution to regional net-sufficiency and the wording of the policy could be amended slightly to reflect this.

Significant Issues

None identified

Recommendations / Mitigation

4.18.20 Please note that the references used below relate to the specific social (SOC), economic (ECO) and environmental (ENV) mitigation measure proposed in the detailed matrix for this policy as presented in Appendix C.

- Consider amending policy wording as follows, or similar:
 2. The proposal would not result in the [Delete 'creation of excessive'] an **over-provision of** capacity which could lead to the [Delete 'unnecessary'] **excessive** importation of non-hazardous waste from outside County Durham. (ENV3)
 3. The proposal is supported by a scheme for the long-term management of leachate and landfill gas which seeks to ensure [Delete 'maximum practicable'] **full** recovery of energy from landfill gas **or where this is not technically possible**, maximum practicable recovery of energy from landfill gas **with measures to offset residual emissions within County Durham.** (ENV1 & ENV2)

Residual Impacts

4.18.21 None identified

Response to SA Recommendations

4.18.22 The Spatial Policy Team agree with the recommendations, criteria 2 has been redrafted to refer to an "over provision of capacity" as this terminology should relate better to the Council's assessment of waste management capacity. Criteria 3 has been amended to reflect the SA recommendation relating to landfill gas and emissions.

Conclusion and Outstanding Issues

4.18.23 Whilst the policy provides the framework for the consideration of non-hazardous landfill proposals, the SA was predominantly able to predict, possible positive effects as the policy requirements help to drive the management of waste up the waste hierarchy in the first instance, minimise new landfill schemes in County Durham and ensure that the impacts of any new permitted schemes are minimised and deliver longer term enhancements.

4.18.24 However, the SA identified that the policy could be strengthened further in relation to reducing the causes of climate change, protecting air quality and could better reflect County Durham's contribution towards regional net-self-sufficiency. Neutral effects are now predicted against SA objective 8. There are no outstanding issues.

4.19 Policy MW19: Water Resources

4.19.1 Water is an essential resource for domestic, agricultural and industrial use and is vital to human health and the ecological well-being of the county's natural environment. County Durham is situated within the Northumbria River Basin District and has several rivers running through it (i.e. Rivers Tees, Wear, Derwent, Greta, Skerne, Browney, Deerness) along with associated tributaries, numerous streams, natural springs, the major Magnesian Limestone aquifer underlying the East of the county which provides a vital source of drinking water, secondary (type A and B) aquifers and Nitrate Vulnerable Zones. A prerequisite of sustainable development must be to ensure that these surface water and groundwaters are protected.

4.19.2 However, minerals and waste development have the potential to pollute surface and ground water quality and impact upon its quantitative status where activities such as dewatering are required. Problems can arise from surface run-off; changes to groundwater and mine water levels; extraction of water drawing pollutants from other areas of the water system; leachate from waste disposal, sludge and composting sites; the discharge of waste water and cross contamination due to flooding or accidental spills of liquid materials.

4.19.3 M&WDPD objective 1 is relevant to the protection of water resources and is complimentary to County Durham Plan objectives 9 (Natural Environment), 14 (Quality of Life), 19 (Natural Resources), 20 (Supply of Minerals) and 21 (Waste Management). Please note that County Durham Plan policies 35 (Water Management) and 36 (Water Infrastructure) provide for the protection of water quality relating to other development types and establish the priorities and requirements relating to the disposal of foul water and sewage treatment infrastructure.

Reasonable Alternatives

4.19.4 The National Planning Policy Framework (NPPF) requires planning policies to contribute towards ensuring new development does not cause unacceptable levels of water pollution and wherever possible, helps to improve local water quality, taking into account relevant information such as river basin management plans (Par 170 e). The locational criteria provided within the National Planning Policy for Waste for determining the suitability of sites or areas for waste management facilities also requires the protection of water quality and consideration to be given to the proximity of vulnerable surface and groundwater or aquifers. (Appendix B, criteria a). There are therefore not considered to be any reasonable alternatives to the inclusion of a policy in the DPD which (when applied in conjunction with the relevant County Durham Plan policies) aims to ensure that minerals and waste development protects and where possible, enhances water resources.

4.19.5 In relation to groundwater resources, the Environment Agency uses a tier-based approach to regulate activities that may impact groundwater resources and to prevent and limit pollution. In their 'Approach to Groundwater Protection' document they recognise that groundwater can be at serious risk of pollution unless landfills are located in the right place

and subject to the right operational controls.⁵⁰ The Environment Agency's approach is therefore to steer the development of landfills to less sensitive hydrogeological locations. A landfill location position statement, setting out where they would object to proposals has been established in this regard. There are not considered to be any reasonable alternatives to ensuring that the M&WDPD policy is consistent with this position statement.

4.19.6 Please note that the existing Minerals Local Plan and Waste Local Plan include policies relating to the protection of water resources. Therefore, the inclusion of a policy in the M&WDPD which also seeks to protect water resources maintains the business-as-usual approach.

4.19.7 Please note that no representations were received on the policy during the Draft M&WDPD consultation advocating that a different approach should be taken to the protection of water resources than that presented. Only comments of support were received. However, following subsequent discussions with Northumbrian Water Ltd, the previous provisions relating to sewage sludge have been removed. This is due to the understanding that the disposal of sewage sludge is an activity that is dealt with under regulated discharge consents and permits by Northumbrian Water Ltd and is not an activity that requires planning consent. There are therefore not considered to be any reasonable alternatives to the removal of the provisions relating to sewage sludge from the policy.

Appraising Significant Changes

4.19.8 The removal of the provisions relating to sewage sludge constitute a significant change to the policy, requiring its re-assessment. In addition to this change, it has been clarified that the policy will apply to inert waste 'other recovery' development in addition to landfill, landraise and minerals development.

Policy Assessment Outcome

4.19.9 The following table shows the 2021 assessment outcome for the policy and the new predicted outcomes following the significant changes made to it. Please also see the supporting SA matrix in Appendix C which shows further detail, including the predicted breakdown of short, medium and long term effects. The commentary below relates to the initial 2022 assessment outcome.

Table 28 Summary Assessment: Policy MW19

⁵⁰ Environment Agency (February 2018 version 1.2) The Environment Agency's approach to groundwater protection

	1. Decent Affordable Homes	2. Strong Secure Communities	3. Education, Training & Lifelong Learning	4. Health: Inequalities & Lifestyles	5. Need to Travel & Sustainable Transport	6. Alleviate Deprivation	7. Economy & Employment	8. Climate Change: Mitigation	9. Climate Change: Adaptation	10. Biodiversity & Geodiversity	11. Landscape & Townscape	12. Historic Environment	13. Resources: Air, Water & Soil	14. Waste & Use of Materials	15. Minerals Extraction & Impacts
2021 Assessment Outcome	0	✓	0	✓	?	0	0	✓	✓	✓	✓	0	✓	✓	✓
2022 Assessment Outcome	0	0	0	✓	?	0	0	✓/x	✓	✓	✓	0	✓	0	✓

4.19.10 The table shows that the changes made to the policy have altered the effects predicted against SA objective 2 (communities), 8 (climate change) and 14 (waste). This is because the policy no longer needs to include provisions to safeguard communities against sewage sludge disposal facilities (SA objective 2) and the benefits of biogas creation will not be realised as a result of this policy (SA objective 8). The inclusion of inert waste other recovery proposals within the scope of the policy could in some instances restrict the recovery of inert waste (SA objective 14). The effects predicted are described as follows:

Social Effects

4.19.11 Positive effects were predicted against SA objective 4 (Health). The Environment Agency have defined Source Protection Zones (SPZs) for groundwater sources such as wells, boreholes and springs used for public drinking water supply. These zones show the risk of contamination from any activities that might cause pollution in the area. The closer the activity, the greater the risk.

4.19.12 The criteria within the policy relating to landfill, landraise and inert waste other recovery proposals i.e. not permitting these within SPZ1 is consistent with the Environment Agency’s position statement on the location of landfills and protection of groundwater resources and public drinking water. In terms of inert waste recovery proposals, inside SPZ1 the Environment Agency will only object to proposals for new development of non-landfill waste operations where it believes the operation poses an intrinsic hazard to groundwater. For example, deposit of waste for recovery activities. The policy criteria should therefore contribute towards protecting health and wellbeing, and particularly for residents within

Hartlepool who are dependent on County Durham's groundwater for their drinking water supply.

4.19.13 Ensuring that a risk assessment is undertaken for landfill, landraise and inert waste other recovery proposals in areas falling outside of SPZ1 will also contribute positively to the protection of water resources and health. The policy can also protect the quality of waterbodies that are used for recreational purposes.

4.19.14 No other social effects were predicted in relation to this policy

Economic Effects

4.19.15 No clear links between the policy and economic SA objectives were made.

Environmental Effects

4.19.16 Effects against SA objective 5 (Travel) are uncertain as it is not possible to ascertain whether locating landfills, landraise or inert waste recovery operations away from Source Protection Zones will increase or decrease the need to transport waste from where it arises. The impact of proposals in relation to the transportation of waste will need to be considered on a case-by-case basis.

4.19.17 The uncertainty relating to whether the policy contributes towards reducing waste transportation overall, also brings some uncertainty into the prediction of effects against SA objective 8 (climate change) and associated transport related, greenhouse gas emissions. However, on the positive side, restricting landfill, landraise and inert waste recovery proposals in any strata where the groundwater provides an important contribution towards river flow or other sensitive receptors is likely to contribute indirectly towards protecting County Durham's peatlands and the important role they play in carbon sequestration.

4.19.18 In relation to climate change adaptation and specifically flood risk, positive effects were predicted as the requirement for proposals to demonstrate no unacceptable impacts on water resources on site and within the surrounding area along with detailed hydrological and hydrogeological risk assessments should minimise the risk of surface or groundwater flooding which can be exacerbated by climate change.

4.19.19 In relation to SA objective 10 (biodiversity), ensuring that development which could adversely affect the quality of surface water may help to prevent against nutrient pollution to freshwater habitats. Whilst there may be less instances where minerals and waste development could contribute towards nutrient pollution compared to new housing development for example, the scope of the policy would allow for the nutrient impacts of these proposals falling within the nutrient neutrality catchment area for the Teesmouth and Cleveland Coast Special Protection Area/Ramsar to be considered.

4.19.20 Ensuring that minerals and waste proposals protect water bodies throughout exploration, the working life of the site and following final restoration should also contribute towards protecting associated wetland, peatland and riparian habitats and species.

4.19.21 Not permitting landfill, or landraise proposals where long term management would be needed to prevent pollution to any strata where the groundwater provides an important contribution to river flow or other sensitive receptors will also contribute towards protecting the ecological health of water bodies, wetlands and associated species/habitats including those subject to nature conservation designations.

4.19.22 In relation to SA objective 11 (landscape) ensuring that minerals and waste proposals protect water bodies throughout exploration, the working life of the site and following final restoration should contribute towards protecting associated wetland, peatland, river corridors etc and their contribution towards County Durham's landscape character.

4.19.23 Restricting proposals for landfill, landraise and inert waste other recovery proposals in Groundwater Source protection Zone1 should contribute indirectly to protecting the landscape character and quality of the Magnesian Limestone Plateau. Elsewhere, restricting proposals in any strata where the groundwater provides an important contribution towards river flow or other sensitive receptors is likely to contribute indirectly towards protecting the peatlands and landscape character associated with the North Pennines AONB.

4.19.24 The policy is directly compatible with the protection of County Durham's water resources and with ensuring that minerals development reduces its impact on society and the environment. No clear links with heritage objectives were identified.

4.19.25 However, in some instances, the need to protect water resources may prevent the recovery of inert waste. Minor negative effects are therefore predicted against SA objective 14 (waste).

Significant Issues

None identified

Recommendations / Mitigation

4.19.26 There are not considered to be any measures that would either enhance positive effects or minimise the uncertainty or minor negative effects predicted with this policy. Overall, the policy is considered compatible with the objectives of sustainable development.

Residual Effects

- The uncertainty surrounding whether the policy will contribute positively or negatively to reducing the distances waste is transported remains.
- In some instances, the need to protect water resources may prevent the recovery of inert waste.

Response to SA Recommendations

4.19.27 Whilst no recommendations have been made the assessment outcomes are agreed.

Conclusion and Outstanding Issues

4.19.28 The policy is compatible with the objectives of sustainable development and there are no outstanding issues.

4.20 Policy MW20: Mineral Site Restoration, Landfill and Landraise

4.20.1 Restoration led planning is concerned with identifying what is to be achieved by a restoration scheme at the start of a proposal and then managing its implementation through to establishment of the after-use on site. Ultimately, it is a vision of the final appearance and characteristics of a site including the after-use, once extraction, disposal, restoration and any aftercare have been completed. The restoration of land following the cessation of minerals and waste operations is integral to the achievement of longer term sustainability associated with such development.

4.20.2 M&WDPD objective 5 is relevant to the achievement of high quality restoration and aftercare of sites and compliments County Durham Plan objectives 9 (Natural Environment), 19 (Natural Resources), 20 (Supply of Minerals) and 21 (Waste Management).

Reasonable Alternatives

4.20.3 The National Planning Policy Framework (NPPF) requires the Council to provide for the restoration and aftercare of minerals sites at the earliest opportunity and for this to be carried out to high environmental standards, through the application of appropriate conditions (Para 205e). The National Planning Policy for Waste (section 7) also requires land raising or landfill sites to be restored to beneficial afteruses at the earliest opportunity and to high environmental standards through the application of conditions where necessary. There are therefore not considered to be any reasonable alternatives to the inclusion of a policy within the M&WDPD which sets the framework for determining the appropriateness of restoration, afteruse and aftercare schemes submitted in line with national policy requirements. Both the existing Minerals and Waste Local Plans include policies on restoration, afteruse and aftercare, therefore the M&WDPD maintains the business as usual approach.

4.20.4 With respect to the approach to the restoration and afteruse of proposals affecting best and most versatile agricultural land, please note that this has already been established by County Durham Plan Policy 14 (Best and Most Versatile Agricultural Land and Soil Resources). This policy recognises that proposals should seek where practicable to minimise its loss and retain its longer-term capability unless the benefits of alternative restoration strategies outweigh its loss.

4.20.5 Please note that no reasons to deviate from the approach adopted (e.g. representations made to the contrary, substantial changes to planning guidance or evidence) have been forthcoming between the Draft and Publication Draft stages of M&WDPD development. There are therefore not considered to be any new reasonable alternatives to assess in relation to the restoration of mineral, landfill and landraise sites.

Appraising Significant Changes

4.20.6 Following consultation on the draft version of the policy amendments have been made to improve its clarity and to further highlight the types of potential environmental enhancements and afteruses that could be delivered. This includes enhancing or revealing the significance of heritage assets, historic character and the archaeology of the site. Historic England, in their representations on the Draft M&WDPD advised that their can be a strong role for the conservation and enhancement of heritage assets when planning for the aftercare of a mineral site.

4.20.7 In addition, further wording has been added to the supporting text to highlight that sufficient regard should be given to the long term protection of groundwater and other resources to address representations made by the Environment Agency and others in this regard.

4.20.8 The types of potential environmental enhancements that could be achieved and the need for these to be appropriate were issues that were taken into account by the previous SA of this policy. Therefore, no changes to the previous SA assessment are considered necessary. This is repeated as follows, including previous recommendations and mitigation measures.

Policy Assessment Outcomes

4.20.9 The following table illustrates the effects the implementation of the policy was predicted to have prior to and following the acceptance of the majority of SA recommended changes to the policy wording. Please also see the supporting SA matrix in Appendix C which shows further detail, including the predicted breakdown of short, medium and long term effects. The commentary below relates to the initial assessment outcome.

Table 29 Summary Assessment: Policy MW20

	1. Decent Affordable Homes	2. Strong Secure Communities	3. Education, Training & Lifelong Learning	4. Health: Inequalities & Lifestyles	5. Need to Travel & Sustainable Transport	6. Alleviate Deprivation	7. Economy & Employment	8. Climate Change: Mitigation	9. Climate Change: Adaptation	10. Biodiversity & Geodiversity	11. Landscape & Townscape	12. Historic Environment	13. Resources: Air, Water & Soil	14. Waste & Use of Materials	15. Minerals Extraction & Impacts
Initial Assessment Outcome	?	✓	0	✓	✓	✓	✓	✓	✓	✗	✓/✗	✓/✗	✓/✗	✓	✓/✗
Final Assessment Outcome	0	✓	0	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

4.20.10 The SA predominantly predicted positive social and economic effects. Both positive and negative aspects were predominantly predicted in relation to environmental SA objectives. The effects predicted are summarised as follows:

Social Effects

4.20.11 Positive social effects were predicted due to the following policy requirements:

- Delivery of high quality restoration appropriate to the site and its surroundings – likely to ensure that schemes are compatible with and do not impact upon community amenity on their completion;
- Restoration is carried out at the earliest opportunity and progressive in nature - likely to help minimise the duration and any visual adverse effects of minerals and temporary waste development to communities;
- The provision of environmental enhancements and other benefits where appropriate as part of after-use proposals may also directly or indirectly benefit communities e.g. the provision of new community woodland etc;
- Ensuring that provision is made for the long-term management of areas will also help to secure any community benefit in the longer term and may contribute towards the overall safety and security of the site;
- Making the best use of onsite materials for restoration purposes will minimise the need to import materials and the associated impacts of HGV movements to communities.

4.20.12 The SA predicted possible positive effects against SA objectives 4 (Health) and 6 (Deprivation) where afteruses provide for enhanced public access to green space, informal recreation opportunities and contribute towards strategies for local regeneration. However, the SA recognised that meaningful engagement with communities should take place to help inform restoration proposals, the level of aftercare that is needed and appropriate, beneficial afteruses.

4.20.13 Uncertain effects were predicted against SA objective 1 as whilst it is understood that the usual location for mineral working and other temporary waste development is away from urban areas, there is uncertainty as to whether after-use proposals could include built development such as housing and business uses. These types of afteruses may be particularly relevant on the occasion where sites are well-related to existing settlements and/or where mineral extraction has supported the remediation of derelict or contaminated land.

Economic Effects

4.20.14 Positive economic effects were predicted as ensuring that provision is made for the long-term management of areas or features where this is required to secure their benefits may help to 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 stated against SA objective 1 (Housing) further clarification is needed in relation to Afteruses for business.

Environmental Effects

4.20.15 Positive effects were predicted against SA objectives 5 (Travel), 8 (Climate Change), 9 (Adaptation) and 14 (Waste). Ensuring the best use of onsite materials in restoration will help to either avoid in full or minimise the transportation of materials to site for this purpose. This is also directly compatible with making the sustainable and efficient use of materials. The SA acknowledged that the process of restoring minerals and temporary waste developments is likely to increase greenhouse gas emissions in the short to medium term, however as stated against SA objective 5 (Travel), making the best use of onsite materials for this purpose will minimise transportation emissions and air pollution associated with importing materials. The longer term after-use of sites can also contribute towards the sequestration of greenhouse gas emissions eg. through tree planting and contribute towards adaptation where for example, wetland habitats are created which assist in flood alleviation. Afteruses may also contribute towards the generation of renewable energy. Restoration, aftercare and afteruse proposals may also provide benefits to sustainable travel where they result in an enhancement to public rights of way or as a minimum re-instate any temporarily stopped or diverted rights of way.

4.20.16 In relation to SA objective 10 (Biodiversity), the SA recognised that the restoration, after-use and aftercare of minerals and waste development provide a fantastic opportunity to contribute towards targets for priority habitat creation, biodiversity net gains and create features of geological interest. Positively, the policy 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.

4.20.17 However, as drafted the policy only required the provision of environmental enhancements and other benefits 'where appropriate.' This was considered contrary to County Durham Plan policy 41 which requires net gains for biodiversity to be provided and the requirements of the Environment Act.

4.20.18 In addition, whilst the supporting text to the policy recognised that the process of restoring a site may itself have environmental impacts in addition to the effects of the development itself, the requirement to minimise such effects was not included within the policy text which would help to highlight its importance. It may also be beneficial to highlight that schemes should preferably aim to mitigate the effects of development on site or near to site as opposed to elsewhere in County Durham.

4.20.19 In relation to SA objectives 11 (Landscape) and 12 (Heritage) The requirement within the policy 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 as they are worked and shorten the duration of and temporary impact to the setting of heritage assets.

4.20.20 The requirement to deliver a high-quality restoration appropriate to the site and its surroundings is also likely to ensure that schemes are compatible with local landscape character and the historic environment. Ensuring that schemes are designed to mitigate the effects of the development are also more likely to ensure that land is reconstructed to its original landform or where it is not possible to recreate the original topography this is integrated well with the surrounding landscape.

4.20.21 The provision of environmental enhancements 'where appropriate' may contribute to enhancing the quality and character of the landscape in a way which meets the aims of County Durham's Landscape Strategy. Beneficial after-uses of sites may also for example, include the installation of interpretation in order to improve understanding where archaeological features have been discovered as a result of development or contribute towards the enhancement of heritage assets in other ways. However, positive longer term effects are 'possible' only.

4.20.22 However, as mentioned above, whilst the supporting text to the policy recognises that the process of restoring a site may itself have environmental impacts in addition to the effects of the development itself, (e.g. restoration blasting could potentially damage undiscovered archaeological features, or the storage of mounds of soil could have visual impacts) the requirement to minimise such effects was not included within the policy text which would help to highlight its importance.

4.20.23 In relation to SA objective 13 (Air, Water and Soil) the requirement to make the best use of onsite materials, as discussed, minimises transportation and associated emissions to air. In addition, this requirement should also ensure that soils are conserved and managed properly throughout the operational lifetime of the development. The requirement for site

restoration to be carried out at the earliest opportunity and to be progressive in nature may also help to ensure that soil quality does not deteriorate to the extent that agricultural land cannot be restored to at least its original quality in the longer term. However, as mentioned above, the policy wording could be strengthened to more explicitly recognise that the process of restoration itself can have environmental impacts which ought to be minimised and that enhancements and afteruses need to be appropriate, minimising conflict between the achievement of environmental objectives.

4.20.24 Overall, (SA objective 15 - Minerals) there are many aspects to the policy as drafted which contribute positively to the longer term sustainability of minerals development. However, the SA identified aspects which could be strengthened further in relation to ensuring effective engagement with communities, protecting the environment and ensuring that the policy does not inadvertently contradict existing standards in relation to the achievement of biodiversity net gain.

Significant Issues

None Identified.

Recommendations / Mitigation

4.20.25 Please note that the references used below relate to the specific social (SOC), economic (ECO) and environmental (ENV) mitigation measure proposed in the detailed matrix for this policy as presented in Appendix C.

- Consider amending policy wording supporting text as follows, or similar:

...Proposals will be permitted where they....

3. Are designed to mitigate the effects of the development **in that location** and, [Delete 'where appropriate'], provide **appropriate** environmental enhancements and other benefits meeting wider objectives including the delivery of nature recovery networks and other relevant plans and strategies.(ENV2)

7. Are carried out in a way which avoid or minimise harm to acceptable levels. (ENV3, ENV4, ENV5, ENV6)

Supporting Text:

"To ensure high quality restoration, applicants are therefore always encouraged therefore to discuss their proposals for restoration, after-use, and aftercare with the Council **and engage with local communities** prior to planning applications being submitted" (SOC2)

"In preparing proposals for restoration, after-use and aftercare applicants should consider the characteristics of the site and the surrounding land uses and have regard to the requirements of all relevant plans and strategies including but not limited to the County Durham Plan, the County Durham Landscape Strategy, **Climate Emergency Response Plan...**" (ENV1)

- SOC1 and ECON1 - Clarify the approach to built development after-uses

Residual Impacts

4.20.26 The process of restoring mineral sites will increase greenhouse gas emissions

Response to SA Recommendations

- ENV2 - Agreed - the following wording has been added to the policy and now reads 'Are designed to mitigate the effects of the development in that location and provide appropriate environmental enhancements including net gains to biodiversity and other benefits meeting wider objectives including the delivery of nature recovery networks and other relevant plans and strategies.
- ENV3, ENV4, ENV5, ENV6 - Agreed - Criteria has been amended to reflect and now reads 'minimise harm to acceptable levels and are carried out at the earliest opportunity and are progressive in nature where this can reduce impacts.
- SOC2 - Disagree - engagement with communities relating to the working and restoration of minerals sites is covered by policy MW13 - Local Liaison Groups
- ENV1 - Agree - Reference to the Climate Emergency Response Plan has been included.
- SOC1 and ECON1 - Disagree - This is clarified by the supporting text which indicates that a separate planning application may be required for some proposed afteruses. Most mineral sites are in open countryside and there acceptability would be determined by other County Durham Plan policies.

Conclusion and Outstanding Issues

4.20.27 The SA identified many aspects of the policy as drafted which contribute positively to the longer term sustainability of minerals and temporary waste development. However, the acceptance of SA recommendations means the policy and its supporting text:

- Further recognise the links between the after use of sites and their potential to contribute towards addressing climate change by including reference to the Council's Climate Emergency Response Plan;
- Ensures that the policy does not inadvertently contradict existing standards in relation to the achievement of biodiversity net gain and reflects the preference for mitigation to be achieved on or near to site; and
- 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.

4.20.28 The justification provided for not accepting some of the SA recommendations is accepted. Please see table 29 (final assessment outcome) to see the improvement to predicted effects against several SA objectives. There are no remaining significant issues or outstanding issues as a result.

5. DPD Assessment – Site Allocations

5.0.1 Through the provisions of the County Durham Plan the Council as Mineral Planning Authority sought to ensure a steady and adequate supply of minerals to meet societies needs whilst also protecting communities and the environment. The County Durham Plan includes several strategic mineral and waste policies including the following three strategic site allocations for future mineral working:

- Carboniferous Limestone - 3.7 million tonne allocation to the west of Heights Quarry near Eastgate in Weardale
- Carboniferous Limestone - 8.2 million tonnes eastern extension to Hulands Quarry near Bowes in Teesdale
- Brick Making Raw Materials - Strategic Area of Search to meet the future needs of Todhills Brickworks near Newfield

5.0.2 In addition, the evidence base which underpinned the County Durham Plan forecast a landfill capacity gap for the disposal of inert waste over the Plan period to 2035.

5.0.3 Together with the County Durham Plan the M&WDPD aims to provide assurance to both the public and industry as to where future development may be allowed. As part of this, one of the roles of the M&WDPD is to provide a mechanism to allow the consideration of non-strategic minerals and waste sites and allocate these where needed and justified.

5.0.5 The allocation of any non-strategic site needs to take account of the spatial and quantitate approach (where applicable) provided by the County Durham Plan and the most up to date information available. In the case of aggregates, account will be taken of the council's latest Local Aggregate Assessment. The following text provides a summary of the current position. Further detail is presented within chapter 9 of the M&WDPD.

Aggregates – Sand and Gravel

5.0.6 Allocations for further sand and gravel are required to maintain a steady and adequate supply and maintain a seven-year sand and gravel landbank. 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.

Aggregates – Crushed Rock

5.0.7 At the time the County Durham Plan was prepared the Council was able to demonstrate that in quantitative terms (and following the allocation of the two Carboniferous Limestone sites), there was no need for further allocations of crushed rock as supply could be maintained to 2035, that at least a ten -year rock landbank could also be a maintained and that County Durham's quarries were able to meet the annual scale of production required.

5.0.8 This position has not materially changed. At the end of 2020, crushed rock permitted reserves were reported as 97.468 million tonnes, equivalent to a landbank of 31.2 years. In addition, a further 8.2 million tonnes remain allocated but not permitted on

land to the east of Hulands Quarry, near Bowes. A large proportion estimated at 78.9 million tonnes on 31 December 2020 or 81% of all permitted reserves also lay within County Durham's magnesian limestone quarries. Therefore, County Durham does not need to seek to make any additional provision for crushed rock over the period to 2035 as there are sufficient reserves with planning permission to deliver supply over this period.

5.0.9 The latest Local Aggregate Assessment advised that provision remains for a further 2.93 million tonnes of carboniferous limestone to be made to meet the County Durham Plan target of 14.1 million tonnes. The County Durham Plan recommended that scope for additional provision is considered through work to prepare the Minerals & Waste Policies and Allocations. However, subject to planning permission being granted to an environmentally acceptable extension to Hulands Quarry it is considered that there would be productive capacity to supply at least 800,000 tonnes of carboniferous limestone per annum thereby helping to ensure a steady and adequate supply of this mineral over the plan period to 2035 and beyond.

5.0.10 Previous Local Aggregate Assessments have reported a degree of uncertainty over the future of County Durham's one dolerite quarry (Force Garth Quarry) which has planning permission for mineral extraction until 2042. However, in February 2020 details for the working of the site over the next twenty years were approved

Inert Waste Disposal

5.0.11 The evidence base which underpinned the County Durham Plan forecast a landfill capacity gap for the disposal of inert waste over the Plan period to 2035. Table 14 in the County Durham Plan identified a need for further inert landfill and non-hazardous capacity of 3,682,800 cubic metres. This was qualified to be for inert waste disposal only. The forecasting suggested that, based on landfill capacity and the closure dates of existing sites, capacity would be exhausted by 2032. Whilst the situation is recognised to be very complex, as the Waste Planning Authority, the Council is required to ensure that adequate provision is made for waste disposal and the need for further inert landfill capacity has been established.

5.0.12 The M&WDPD therefore seeks to allocate sites to meet the need identified for further sand and gravel and inert landfill capacity. The County Durham Plan (paragraph 5.529) also stated that the Council would seek to provide a measure of certainty, in locational terms, to both operators and the public by considering potential surface mined coal allocations in the preparation of the M&WDPD.

5.0.13 DPD objective 6 is relevant to the consideration of non-strategic minerals and waste site allocations and is complimentary to County Durham Plan objectives 20 (Supply of Minerals) and 21 (Waste Management).

Reasonable Alternatives

5.0.14 In January 2021, the Council wrote to the minerals and waste industry, their representative bodies, planning consultants and key landowners to ask them to propose any new mineral and waste sites so they can be considered and if appropriate, form part of the M&WDPD. The Site Assessment document accompanying the M&WDPD Draft Plan provided the Council's justification for the allocation or non-allocation of the sites proposed at the previous stage of M&WDPD preparation. No new, additional site allocations were proposed through the consultation on the M&WDPD Draft Plan.

5.0.15 Where the reason given for not allocating a site was due to limited information being made available to the Council to make an informed decision, some additional information has since been provided, through the consultation on the M&WDPD Draft Plan. All the proposed allocations for sand and gravel have therefore been subject to SA as they could all contribute to varying degrees, to meeting the further demand requirements. Apart from one proposed allocation, where insufficient information has been provided to inform an assessment (Eldon Quarry), all proposed inert waste allocations have also been subject to SA as they could contribute, to varying degrees, to addressing the identified waste disposal capacity gap. Further information on these options, their assessment and the decision regarding whether to either discount or allocate in the Plan is provided in the following sections of this report.

5.0.16 The following table aims to provide an overview of the reasons why other sites/proposals submitted are not considered to be reasonable alternatives and why they have not been allocated within the M&WDPD. Further information is provided in the updated Site Assessment document and the Council's Statement of Consultation.

Table 30 Reasons for Discounting Sites / Proposals

Site / Proposal Name	Key Details	Summary of Reasons for Discounting
M1: Witch Hill Quarry Eastern Extension (Land west of Thornley)	5 million tonnes of magnesian limestone for aggregate and agricultural lime uses. Quarrying would commence in 2030 and would last approximately 25 years. Anticipated production 200,000 tonnes per annum.	Witch Hill Quarry has planning permission to 2042 and at the end of 2020 contained 3 million tonnes of magnesian limestone suitable for both aggregate and agricultural lime uses. An eastern extension to Which Hill Quarry is not required over the period to 2035 and is not currently required to maintain a steady and adequate supply of crushed rock or magnesian limestone aggregate.
M2: Raisby Quarry Eastern Extension (Land west of Trimdon Grange)	37 million tonnes of magnesian limestone for aggregate and agricultural lime uses. Quarrying would commence in 2042. Production anticipated at up to 1.2 million tonnes per	Raisby Quarry has planning permission to 2042. At the end of 2020 it was reported contained 18.5 million tonnes of crushed rock suitable for aggregate production and several million tonnes suitable for agricultural lime. production. An eastern extension to Raisby Quarry is not required over the period to 2035 and is not currently

Site / Proposal Name	Key Details	Summary of Reasons for Discounting
	annum which would equate to approximately 960,000 tonnes of magnesian limestone aggregate and 240,000 tonnes of agricultural limes per annum over 30 years.	required to maintain a steady and adequate supply of crushed rock, or magnesian limestone aggregate.
M4: Boldron Cross Lanes (new site) (Land south of Boldron)	20 million tonnes of carboniferous limestone. Quarrying would start circa 2028 meaning that the resulting end date would be circa 2068. Anticipated production 500,000 tonnes per annum.	The Council considers that the existing planning permissions for the winning and working of carboniferous limestone at Kilmond Wood Quarry, Heights Quarry and at Hulands Quarry in combination with the reserves within the Preferred Area allocated under Policy 58 of the County Durham Plan should be sufficient to ensure a steady and adequate supply of carboniferous limestone over the Plan period to 2035.
M7: Thrislington East Quarry (Land southeast of West Cornforth)	Consideration of the potential for the current restrictive sales conditions for limestone at Thrislington East Quarry to be relaxed to help meet demand for construction aggregates. No annual or overall volumes provided. No timescale for operations provided, although current permission runs until 01/07/2045.	The proposal at Thrislington East Quarry has been treated as a representation and not an allocation. The approach of the statutory development plan to existing and permitted reserves of high-grade dolomite is set out by Policy 57 (The Conservation and Use of High-Grade Dolomite) of the adopted County Durham Plan (October 2020). The issue can only be reconsidered through a review of the County Durham Plan. The Council does not consider that there is a need for the Minerals and Waste Policies and Allocations document to consider this issue further.
M10: Hulands Quarry Eastern Extension (Land west of Boldron)	14.2 million tonnes of carboniferous limestone. Quarrying would commence in 2024 following the exhaustion of permitted reserves in the existing quarry permission area which would mean that the resulting end date would be circa 2072. Anticipated production 300,000 tonnes per annum. (Note a large part of the site approximately 20 ha containing an estimated 8.2 million tonnes of	The Council acknowledges that its Local Aggregate Assessment advised that “provision remains for a further 2.93 million tonnes of carboniferous limestone to be made to meet the County Durham Plan target of 14.1 million tonnes and it recommended that scope for additional provision is considered through work to prepare the Minerals & Waste Policies and Allocations document thereby helping to reinforce long term supply and productive capacity”. However, through work to prepare the Minerals and Waste Policies and Allocations document and consider the proposed site allocations for further carboniferous limestone working this matter has been considered. The need identified in the County Durham Plan was sufficient to meet need to 2035

Site / Proposal Name	Key Details	Summary of Reasons for Discounting
	<p>carboniferous limestone is allocated under County Durham Plan Policy 58 (Preferred Areas for Future Carboniferous Limestone Extraction).</p>	<p>plus ten years supply thereafter. This need forecast was calculated on this basis of a generous 900,000 tonnes of carboniferous limestone per annum, which is a level of sales which has not been achieved for a number of years. Therefore, this shortfall in supply is only equivalent to just over 3 years supply post 2042. It is considered that provided that the County Durham Plan allocation at Hulands Quarry for 8.2 million tonnes is permitted that the additional allocation which is now proposed is not needed to maintain a steady and adequate supply of carboniferous limestone over the period to 2035. It is considered that the County Durham Plan Preferred Area in combination with existing permissions at Heights Quarry (which now has planning permission to 31st September 2046) and Kilmond Wood Quarry (which has planning permission to 21 February 2042) should provide for a sufficient supply of carboniferous limestone. On this basis, it is considered the proposed site allocation, is not required and would not contribute to meeting the need identified in the County Durham Plan and would be inconsistent with the NPPF requirements for a steady and adequate supply of crushed rock aggregate.</p>
<p>M11: Eldon Quarry (West of Old Eldon)</p>	<p>Variation of existing permission. Mineral to be worked clays / shale with incidental coal. Total quantity to be worked approximately 2,000,000 tonnes. Time period / end date 8th December 2039 (currently approved). Annual production rate at between 130,000 to 150,000 tonnes per annum.</p>	<p>Through the preparation of the County Durham Plan the Council has considered the need for future need for brickmaking raw materials and provision has been made to meet the needs of Todhills Brickworks in County Durham and permitted reserves are also available to meet the long-term needs of the Union Brickworks which is served by Birtley Quarry in County Durham. The Council is not aware of any unmet need and no case has been made for an allocation based on meeting the specific needs of a brickworks in County Durham or in any other area in the Northeast. The site is also safeguarded through the provisions of the Policy 48 (Safeguarding Minerals Sites, Minerals Related Infrastructure and Waste Management Sites). On this basis it is not considered necessary or appropriate to allocate this site.</p>

Site / Proposal Name	Key Details	Summary of Reasons for Discounting
M12: Coal Preferred Area	Large area of North Durham. Very limited information provided.	No proposals for site allocations for coal have been submitted for consideration. The proposed Preferred Area covers a very large area of County Durham, part of which has been extensively worked by previous surface mined coal permissions and is also overlain by a plethora of environmental designations and contains areas close to settlements. The submission does not contain sufficient site-specific detail. The Council's call for sites document advised that, failure to provide the information as set out above may impact upon the Council's ability to assess the suitability of a site and therefore the ability to allocate a site.
M13: Undefined Sand and Gravel Area of Search	Unspecified area proposed for area of search based upon British Geological Survey geological mapping data. Very limited information provided.	The proposed area of search covers a very large area of County Durham, part of which has been worked by previous permissions and is also overlain by a plethora of environmental designations and contains areas close to settlements. The submission does not contain sufficient site-specific detail. The Council's call for sites document advised that, failure to provide the information as set out above may impact upon the Council's ability to assess the suitability of a site and therefore the ability to allocate a site. In addition, the information which has been submitted is the full extent of the areas identified by the British Geological Survey as the glacial and fluvial sand and gravel resource in County Durham. This provided the basis for the Council's safeguarding of this resource in the CDP.
W4: Eldon Quarry (West of Old Eldon)	Deposit for Recovery Operation or Inert Landfill (temporary permission). Waste Stream(s) Inert – predominantly construction, demolition and excavation waste for recovery or disposal. No annual or overall volumes provided. No timescale for operations provided.	The proposals for waste infilling are dependent on the extraction of the mineral within the quarry and there is not a permission in place to allow the extraction and export of the permitted reserves. In these circumstances it would not be possible for inert waste to be imported and deposited at the quarry as this would sterilise the mineral resource which is safeguarded by the County Durham Plan. The Minerals Planning Group have not provided any details of the overall volume of waste which would be proposed to be disposed over the life of the site, no timescale has been provided for commencement or completion of disposal operations and no information on final levels have

Site / Proposal Name	Key Details	Summary of Reasons for Discounting
		been provided. Until further information has been provided the Council cannot assess this proposal further.

5.1 Potential Sand and Gravel Allocations

5.1.1 This section presents the assessment of the reasonable alternatives which could contribute towards providing 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.

Reasonable Alternatives

5.1.2 In January 2021, the Council wrote to the minerals and waste industry, their representative bodies, planning consultants and key landowners to ask them to propose any new mineral and waste sites so they can be considered and if appropriate, form part of the M&WDPD. The Site Assessment document accompanying the M&WDPD Draft Plan provided the Council's justification for the allocation or non-allocation of the sites proposed at the previous stage of M&WDPD preparation.

5.1.3 At the time, it was considered that the only reasonable alternatives to providing the required sand and gravel resources were to allocate additional basal Permian sand at Thrislington West Quarry and a northern extension to Crime Rigg Quarry. In coming to this conclusion, consideration was given to whether only Thrislington West Quarry should be allocated due to its quantity of reported sand reserves.

5.1.4 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 (Para 204f). In addition, the NPPF also requires Minerals Planning Authorities to ensure that large landbanks bound up in very few sites do not stifle competition (para 204g). Only allocating one site would, as other existing sites close, result in a large landbank concentrated in a single site which may stifle competition and would result in a reduced ability in County Durham's ability to maintain a steady and adequate supply of sand and gravel as future sales would be limited to the productive capacity of the allocated site once planning permission is granted.

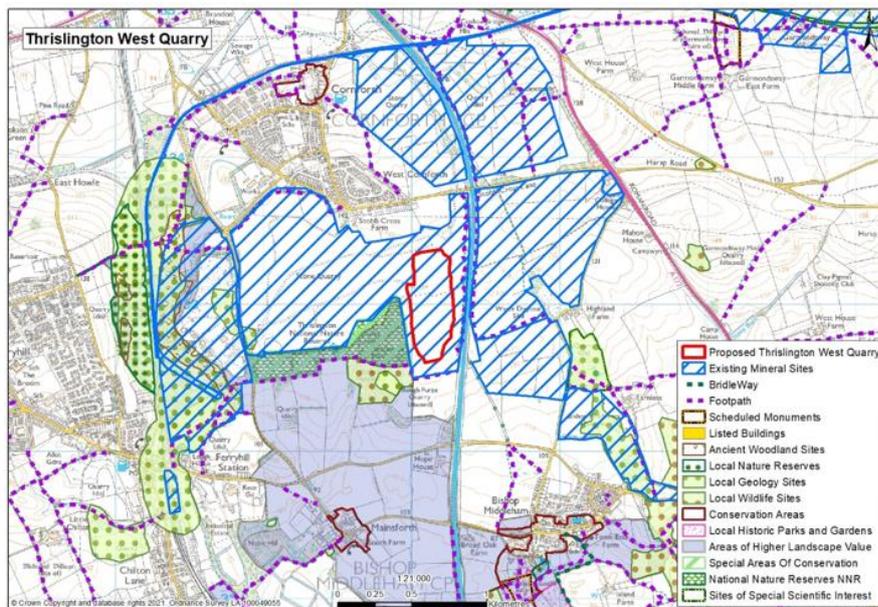
5.1.5 Since then, representations have been received and further information has been provided, requiring further consideration of Old Quarrington Quarry (Quarrington North) and a western extension to Low Harperley. The options are therefore briefly described as follows:

Thrislington West Quarry

5.1.6 Thrislington West Quarry is a large magnesian limestone and basal Permian sand quarry (covering some 153 hectares) located on the Magnesian Limestone Escarpment to the south of West Cornforth and east of Ferryhill. Garmondsway Road and Stobbs Cross Road in West Cornforth border the quarry to the north, the A1(M) borders the quarry to the east with Thrislington East Quarry beyond and the minor C69 road borders the quarry to the west. Thrislington Plantation Special Area of Conservation (SAC), Thrislington Plantation Site of Special Scientific Interest (SSSI) and Thrislington National Nature Reserve (NNR), the former Rough Furze Quarry County Wildlife Site (CWS) and agricultural land border the quarry to the south.

5.1.7 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.

Map 1: Proposed allocation at Thrislington West Quarry

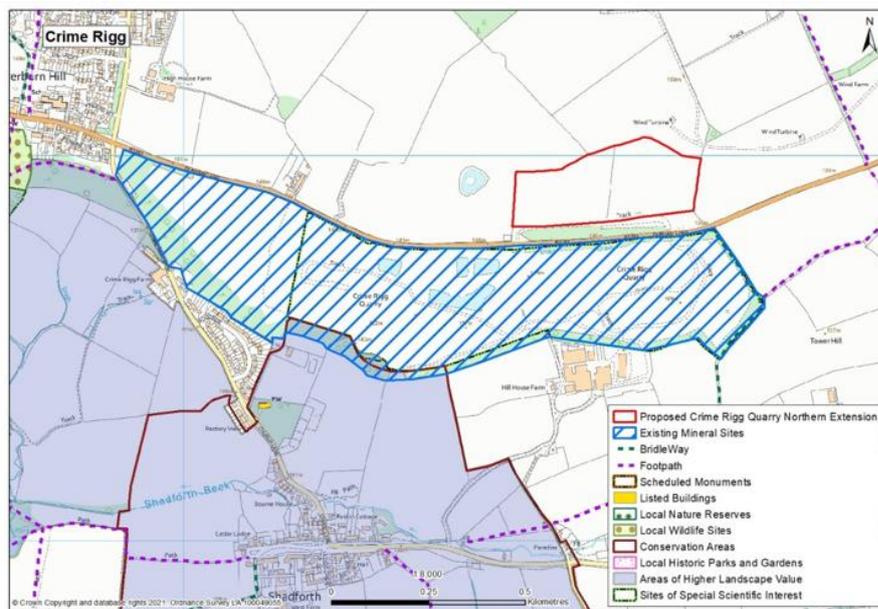


Crime Rigg Quarry (northern extension)

5.1.8 Crime Rigg Quarry lies on the Magnesian Limestone Escarpment and is located approximately 4 km to the east of Durham. The nearest settlements to the existing quarry are the villages of Sherburn Hill which lies directly to the west, Shadforth approximately 350 metres to the south and Ludworth approximately 480 metres to the southeast at their closest points.

5.1.9 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.

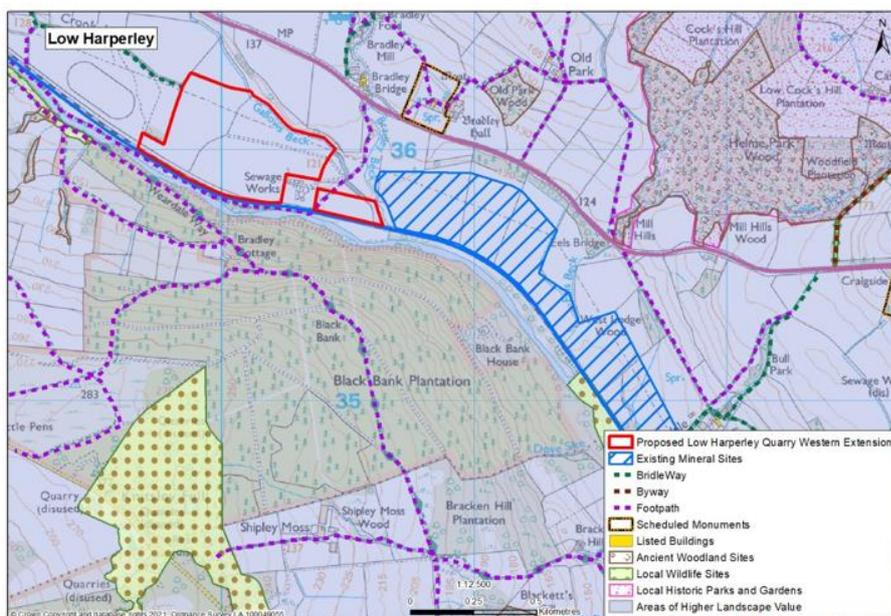
Map 2: Proposed Northern Extension to Crime Rigg Quarry



Low Harperley (western extension)

5.1.10 The proposed western extension to Low Harperley lies to the north of the River Wear approximately 1.7 km to the southeast of Wolsingham and 4 km to the west of Crook. 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.

Map 3: Proposed Western Extensions to Low Harperley Quarry



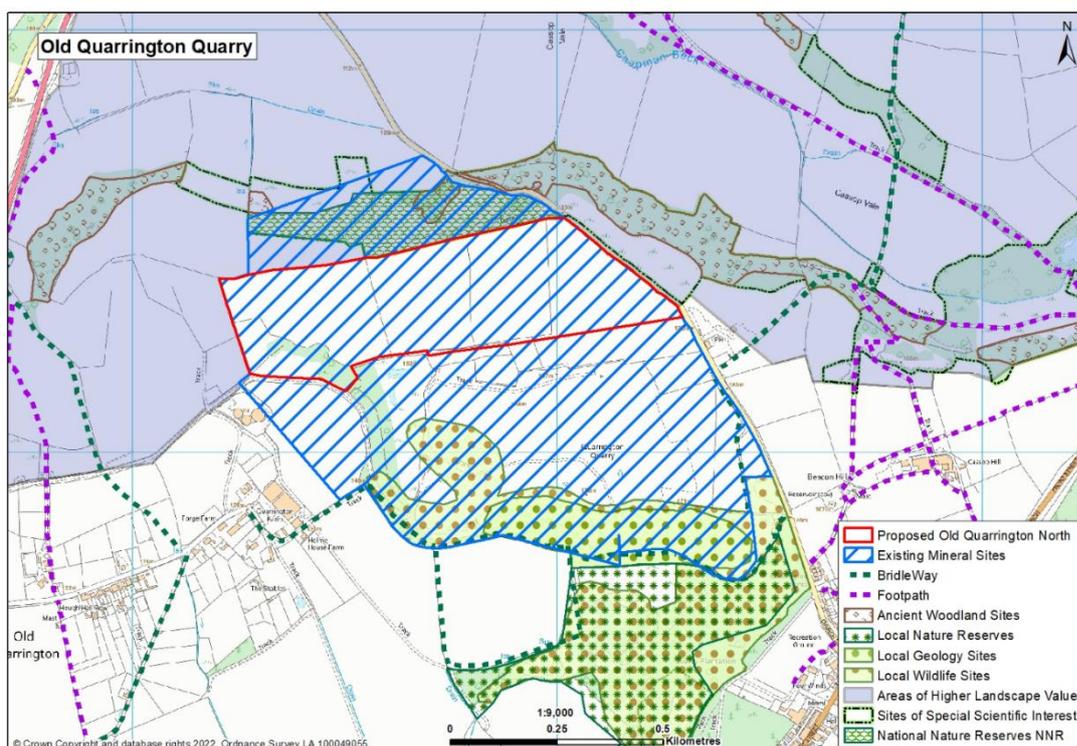
Quarrington North

5.1.11 Quarrington North is located on the Magnesian Limestone Escarpment 1 km to the east of Bowburn between the hamlet of Old Quarrington and Quarrington Hill. It forms part of a site known as Old Quarrington and Cold Knuckle Quarry which through a previous permission are being worked as one. Old Quarrington Quarry lies immediately to the north of Cold Knuckle Quarry.

5.1.12 The proposed site allocation 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. This area extends to 35 hectares and is overlain to the north by national wildlife designations including Cassop Vale National Nature Reserve (NNR) and Cassop Vale Site of Special Scientific Interest (SSSI). The area also contains ancient woodland and is designated as an Area of Higher Landscape Value (AHLV).

5.1.13 However, 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 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 is not considered to be a reasonable alternative and the SA has focused on the smaller, revised area.

Map 4: Proposed allocation within the Northern Extent of Old Quarrington Quarry (Quarrington North)



Options Assessment Outcome

5.1.14 The following table shows the predicted impacts of each option against the SA objectives. Please also see the supporting SA matrix in Appendix B which provides further detail.

Table 31 Summary Assessment: Sand Options

	1. Decent Affordable Homes	2. Strong Secure Communities	3. Education, Training & Lifelong Learning	4. Health: Inequalities & Lifestyles	5. Need to Travel & Sustainable Transport	6. Alleviate Deprivation	7. Economy & Employment	8. Climate Change: Mitigation	9. Climate Change: Adaptation	10. Biodiversity & Geodiversity	11. Landscape & Townscape	12. Historic Environment	13. Resources: Air, Water & Soil	14. Waste & Use of Materials	15. Minerals Extraction & Impacts
Thrislington West Quarry	0	0	✓	?	✓	✓	✓✓	x	?	0	0	0	x	✓	✓
Crime Rigg Quarry (northern extension)	0	x	✓	?	x	✓	✓✓	x	?	✓/x	✓/x	0	x	x	✓/x
Low Harperley Quarry (western extension)	0	0	0	?	✓/x	✓	✓	x	✓/x	✓/x	xx	x	x	✓	✓/x
Quarrington North	0	x	✓	?	x	✓	✓	xx	?	xx	xx	xx	x	✓	x

5.1.15 All of the options assessed can make a meaningful contribution to County Durham's ability to maintain a steady and adequate supply of sand and gravel to 2035, maintenance of a seven-year landbank at 2035 and the overall scale of additional provision that is required to be made as identified in the Council's Local Aggregate Assessment (April 2022). Common to all options, the SA found that they can contribute towards safeguarding jobs, associated training and can help communities within deprived areas. All options also have good access to the strategic road network where transportation by road is required.

5.1.16 The SA recognises that working within existing operational quarries may be preferable to areas where no activity or impact to communities or the environment is currently occurring e.g. land in other uses or dormant mineral sites. However, there may still

be adverse effects associated with additional extraction from existing voids or quarry extensions.

5.1.17 The SA also recognises that the Government has committed to phasing out new, non zero-emission heavy goods vehicles weighing 26 tonnes and under by 2035, with all new HGV's sold in the UK to be zero emissions by 2040. From 2035 onwards there may therefore be a declining quantity of HGV related emissions as older HGV's are phased out. Operators may also have their own carbon reduction commitments that they are working towards meeting.

5.1.18 The following sections provide a summary of the key sustainability issues for each option. For further detail and commentary, please read alongside the corresponding matrices in Appendix B.

Thrislington West Quarry

5.1.19 In terms of quantitative provision, at 5.8 million tonnes of sand, this option would provide the highest level of supply.

5.1.20 To summarise, the key, differentiating sustainability issues for the option are that working within an existing quarry void, avoids the need to remove overburden and minimises the social and environmental impacts of minerals working whilst ensuring the full recovery of minerals from the quarry. Ecological, landscape and heritage impacts are predicted to be nil or neutral and there would be no loss of agricultural land. Levels of minerals traffic associated with working the option are not considered to be over and above existing levels and there are opportunities for the use of rail to transport minerals.

5.1.22 Allocating this option will also contribute towards securing the continuation of the quarry and associated employment. Economically, this option may be a greater priority for allocation as reserves are expected to be exhausted sooner than the other options i.e. by 2025. However, the option would extend any existing impacts of minerals working to communities by a further 20 years.

5.1.23 The key environmental constraint that would need to be overcome is the potential impact on groundwater resources. Whilst like Crime Rigg and Quarrington North, this option is located on the principal magnesian limestone aquifer and within groundwater source protection zone 3 and a nitrate vulnerable zone, potential reserves may need to be worked below the water table, increasing risk further.

Crime Rigg Quarry (northern extension)

5.1.24 In terms of quantitative provision, at 910,000 tonnes of sand, this option would provide the third greatest level of supply.

5.1.25 To summarise, the key, differentiating sustainability issues for the option are that its allocation would help to secure the continuation of the quarry and associated employment beyond 2029 with limited environmental impacts. The main constraint to overcome would be the high risk of pollution to groundwater resources, although it may be possible to work reserves above the water table.

5.1.26 However, the option would extend any existing impacts to communities by a further 18-20 years and may increase traffic for a period of time due to the need to first remove 1.7 million tonnes of overlying magnesian limestone and undertake concurrent working with the existing quarry in order to access the basal permian sand in the extension area. No further provision of Magnesian Limestone is required, so the option represents a less efficient use of the county's mineral resources and will also increase environmental impacts related to vehicle and carbon emissions and blasting over other options where the prior removal and transportation of magnesian limestone is not required. Whilst opportunities to minimise trips exist, there are no known, current sustainable transport opportunities linked to the working of this option.

Low Harperley (western extension)

5.1.27 In terms of quantitative provision, at 700,000 tonnes of sand, this option would provide the lowest level of supply.

5.1.28 To summarise, the key differentiating, sustainability issues for the option are that its allocation could contribute to supply in a way that is unlikely to significantly extend the time period and impact of minerals working on communities. Allocation would contribute towards keeping the quarry open and protecting existing employment, albeit this would only be for 4-5 years. There would potentially be less risk of groundwater pollution compared to other options as the site is not located on a principal aquifer and there could be opportunities to deliver flood attenuation measures as part of restoration. Whilst there are also no current, directly linked sustainable transport opportunities associated with the transportation of minerals at this site, there may be opportunities in the future associated with the Weardale Line.

5.1.29 However, compared to Crime Rigg Quarry, Thrislington Quarry and Quarrington North, the option adversely impacts a local landscape designation and compared to Crime Rigg Quarry and Thrislington Quarry would have some adverse impacts on the setting of heritage assets. The option may also incur a greater loss of best and most versatile agricultural land compared to Crime Rigg Quarry. The option may also potentially be a 'bad neighbour' to Wolsingham Showground which supports the visitor and rural economy on an annual basis. Compared to all the options, there is also higher potential risk of surface water pollution due to proximity to the River Wear and Gallows Beck.

Quarrington North

5.1.30 In terms of quantitative provision, at 1.7 million tonnes of sand, this option would provide the second highest level of supply.

5.1.31 To summarise, the key differentiating, sustainability issues for the option are that whilst its allocation could secure the continued supply of sand from the site beyond 2027 it would extend any existing impact of mineral working on communities by the longest time period i.e. until 2057. Whilst positive economic effects are predicted in relation to extending the operation life of the quarry there is less of an economic imperative to allocate the site compared to other options. This is because the quarry has permission for working the

northern part of the site until 2042 and disposal void space which is yet to be created elsewhere within the quarry ensures its continuation in the longer term. Unlike other options, the quarry will not close if additional provision of mineral is not made.

5.1.32 Compared to other options and based on the information provided, this option also has the potential to have the most adverse impact on biodiversity and heritage. Whilst not directly impacting a local landscape designation, this option, like Low Harperley, also has the potential for significant landscape and visual impacts. Key potential impacts include impacts to a Site of Special Scientific Interest (SSSI), National Nature Reserve, ancient woodland, setting of the Durham World Heritage Site, Cassop Conservation Area, non-designated heritage assets and potential for significant landscape and visual impacts. The option is also assumed to be the most carbon intensive due to scale of mineral working required, lack of current sustainable transport opportunities and duration of mineral working.

5.1.33 Working of the underlying sand resource would commit to minerals working and associated emissions for a greater length of time (until 2057) and beyond the target date by which carbon neutrality within the county should be achieved by. Whilst it is recognised that advances in automotive and other technologies/opportunities may move on over the duration of mineral working, helping to further minimise emissions it is considered precautionary to predict very negative impacts against SA objective 8 (climate change) at this stage.

5.1.34 Whilst permitted, the option would require approximately 9 times more removal of overlying magnesian limestone than Crime Rigg (a further 7.6 million tonnes) for 790,000 tonnes (46%) more sand than Crime Rigg. Like Crime Rigg the option also has a high risk of impact to groundwater resources, but it may be possible to work reserves above the water table.

Pros and Cons

5.1.35 In order to help further outline the relative sustainability pros and cons of each option they have been presented in the following table.

Table 32 Pros and Cons of Options

Option	Pros	Cons
Thrislington West Quarry	<ul style="list-style-type: none"> • As working would take place within the existing quarry void there would be no requirement to remove overburden or overlying minerals, avoiding the need to blast, transport and process additional minerals and the associated social and environmental impacts of doing so • Ensures full recovery of resources within the quarry 	<ul style="list-style-type: none"> • Extends any existing impact of minerals working on communities by 20 years and delays restoration benefits • Situated on the principal magnesian limestone aquifer, groundwater and groundwater nitrate vulnerable zone. The north eastern extent of the site falls within Groundwater Source Protection Zone 3. Option poses highest risk of pollution to

Option	Pros	Cons
	<p>without the need to remove further magnesian limestone, for which there is no current need for further supply</p> <ul style="list-style-type: none"> • Allocation would help to secure the continuation of this quarry in County Durham beyond 2025, jobs and its contribution towards the economy and resilience of the sector • Working the void will not increase vehicle movements over and above existing levels • Opportunities to make use of existing rail head for the sustainable transport of minerals via the East Coast Main Line • Existing onsite processing facilities can help to minimise trip generation • Working within an existing quarry void limits ecological, heritage, landscape and visual impacts to nil or neutral. (The impacts to Thrislington Special Area of Conservation have also been screened out) • No impact on agricultural land • Lowest risk of causing pollution to surface water resources of all the options 	<p>groundwater resources as reserves may need to be worked below the water table.</p>
<p>Crime Rigg Quarry (northern extension)</p>	<ul style="list-style-type: none"> • Onsite processing facilities and opportunities for back hauling of inert waste can help to minimise the need to travel • Allocation would help to secure the continuation of this quarry in County Durham beyond 2029, jobs and its contribution towards the economy and resilience of the sector • Unlikely to be significant ecological constraints and opportunity to expose and 	<ul style="list-style-type: none"> • Requires the removal of overlying magnesian limestone where there is no need for additional provision • Need to remove overlying magnesian limestone will increase social and environmental impacts over and above options where this is not required e.g. vehicle movements, dust and carbon emissions • Extends any existing impact of minerals working to communities by 18-20 years and delays restoration benefits

Option	Pros	Cons
	<p>create features of geological interest</p> <ul style="list-style-type: none"> • No impact on local or national landscape designations and unlikely to incur significant landscape and visual impacts • No or neutral impacts to heritage assets • Whilst high risk of pollution to groundwater resources, the reserves could potentially be worked above the water table 	<ul style="list-style-type: none"> • No known opportunities for use of sustainable transport • Situated on the principal magnesian limestone aquifer, groundwater source protection zone 3 and nitrate vulnerable zone • Close to a pond • May incur the loss of best and most versatile agricultural land.
<p>Low Harperley (western extension)</p>	<ul style="list-style-type: none"> • Requires soil and some overburden stripping works but unlikely to require blasting and the working of the extension is unlikely to increase traffic above existing levels • Existing onsite processing facilities can help to minimise trip generation • Allocation would help to secure the continuation of this quarry in County Durham beyond 2029, jobs and its contribution towards the economy and resilience of the sector (albeit only for a period of 4-5 years) • Contributes to supply without significantly extending time period of any existing impacts of minerals working to communities • Potentially less impact on settlements due to rural location • Assumed to generate the lowest carbon emissions • Provides opportunities to deliver flood attenuation as part of restoration • Unlikely to be significant ecological constraints • Some but lower risk of groundwater pollution and 	<ul style="list-style-type: none"> • Will have some impact on Public Rights of Way • Only extends operational life of quarry and associated employment by 4-5 years • May be a 'bad neighbour' in relation to Wolsingham showground • Location within functional floodplain increase risk of flooding to ancillary facilities • Located within a local landscape designation (AHLV) and some significant landscape and visual impacts during operation • Some potential adverse impacts to the setting of heritage assets at Bradley Hall • Higher potential risk of surface water pollution than other options. • May incur the loss of best and most versatile agricultural land and potentially more than associated with the Crime Rigg option due to extent of site.

Option	Pros	Cons
	<p>potential to work above water table</p> <ul style="list-style-type: none"> • Does not require removal of minerals where there is no need for further supply • Potential future opportunities to utilise the Weardale Line 	
Quarrington North	<ul style="list-style-type: none"> • Onsite processing facilities and opportunities for back hauling of inert waste can help to minimise the need to travel • Extends operational life of quarry and associated employment by 15 years (to 2057) and ensures a continued supply of sand beyond 2027 • Whilst high risk of pollution to groundwater resources, the reserves could potentially be worked above the water table • Whilst access to sand resources first requires the removal of overburden this is already permitted (along with removal of agricultural land) and the magnesian limestone reserves are counted towards the provision of a steady and adequate supply of crushed rock 	<ul style="list-style-type: none"> • Extends existing impact of minerals working on communities by 15 years and overall option would commit to mineral working at the site until at least 2057 • Potential for some increase in vehicle movements over and above existing • Whilst permitted, the option requires the greatest removal of overlying magnesian limestone (7.6 million tonnes more than at Crime Rigg) For the scale of magnesian limestone removal, the option will only deliver a further 46% more sand than Crime Rigg • Less of an economic imperative to allocate as quarry has planning permission until 2042 and unlike other options will not close • Assumed to be more carbon intensive than other options due to scale of mineral working required, lack of sustainable transport opportunities and duration of mineral working. • Potential for very negative impacts to national wildlife designations (SSSI and NNR) and ancient woodland which is an irreplaceable habitat • Potentially very negative landscape and visual impacts • Potentially harmful to the setting of the World Heritage Site, a Conservation Area and some non-designated heritage assets

Option	Pros	Cons
		<ul style="list-style-type: none"> • Situated on the principal magnesian limestone aquifer, groundwater source protection zone 3 and nitrate vulnerable zone • Close to two ponds

Significant Issues

- Old Quarrington option has the potential to harm nationally designated wildlife sites and the setting of the Durham World Heritage Site. Potential for significant landscape and visual impacts
- High risk of pollution to groundwater identified for Thrislington, Crime Rigg and Old Quarrington options
- Low Harperley Quarry – Impact on local landscape designation and potential for significant landscape and visual impacts

Recommendations

5.1.36 The options can be ranked as followed in terms of their sustainability:

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

5.1.37 Overall, Thrislington Quarry contributes the most to the provision of sand required in quantitative terms, is of a greater economic imperative to allocate than other options due to the date by which existing reserves are expected to be exhausted and will generally minimise social and environmental impact through working of an existing quarry void. This also allows the full recovery of minerals from the quarry. However, impacts to groundwater will be a key constraint to overcome.

5.1.38 Whilst a northern extension to Crime Rigg Quarry requires the removal of overlying magnesian limestone, where no further provision of this mineral is currently required, on balance, Crime Rigg is predicted to be more sustainable than the western extension to Low Harperley. This is because the option is predicted to have more positive economic effects and less adverse environmental effects, particularly in respect of landscape and heritage.

5.1.39 However, compared to Low Harperley, working may have greater adverse social impacts, primarily due to the extended duration that mineral working will take place (18-20 years) and due to the need to work the existing quarry and extension area concurrently for a period of time. The volume of traffic generated is however, considered likely to be acceptable and should be safely accommodated on the local highway network. As for Thrislington West Quarry, impacts to groundwater will be a key constraint to overcome.

5.1.40 Quarrington North is considered the least sustainable option. The option has the potential for the most adverse impacts to the environment, will prolong impacts to communities for the longest and there is less of an economic imperative for allocation. If further reserves are not permitted, unlike other options the Quarry will not close over the Plan period.

5.1.41 The SA recommends the continued allocation of Thrislington West Quarry and a northern extension to Crime Rigg in the M&WDPD.

Mitigation

- If allocated and planning permission sought, options should be supported by further Traffic and Transport Assessments. Planning proposals should also be supported by measures outlining how site security and community safety will be achieved.
- Detailed assessments on the impact of working the proposals on human health and wellbeing would be required to inform any planning decision.
- The feasibility of transportation of minerals by rail for at least part of the onward journey either from both existing and new rail handling facilities should be considered. The use of low or zero emission vehicles could also be considered by operators.
- Any temporary or permanent diversion of Public Rights of Way should be as attractive and convenient as possible to ensure continued use. (Low Harperley option only)
- If any of the options are allocated within the Plan and planning permission is sought, applications should be supported by an assessment of greenhouse gas emissions and an evaluation of their significance against net zero targets where EIA development.
- If any of the sites are allocated within the Plan and planning permission is sought, hydrogeological assessments will be required to inform the planning decision and any associated mitigating measures and conditions. For the Thrislington West Quarry, Crime Rigg and Old Quarrington options, the assessment would also need to take into account the cumulative impacts of minerals working and other activities for the sites located on the Principal Aquifer.
- If any of the options are allocated within the Plan and planning permission is sought, proposals should be supported by ecological assessments in order to identify the presence or absence of protected/priority species and any associated mitigation measures. Biodiversity net gain will need to be achieved for each proposal.
- If any of the options are allocated within the Plan and planning permission is sought, proposals should be supported by a detailed appraisal of impact on landscape and visual impact.
- If any of the options are allocated within the Plan and planning permission is sought, proposals should be supported by an appraisal of impact on heritage along with an archaeological evaluation.
- If any of the options are allocated within the Plan and planning permission is sought, proposals should be supported by dust management strategies and hydrological assessments.

- Where applicable, agricultural land classification assessments and a soil management strategy will also be required. (Crime Rigg and Low Harperley options only)

Additional Mitigation Measures – Low Harperley Quarry Option

- A flood risk assessment should be undertaken to ensure that ancillary facilities are located in areas of least risk and the site can be worked in a way which avoids increasing flood risk elsewhere.
- Consideration should be given to the mitigation potential identified within the Landscape assessment – e.g. restoring the site to land uses and features appropriate to, or characteristic of, the floodplain including naturalistic waterbodies, wet woodland and wet pasture / advanced planting / progressive restoration and seeding of operational ground

Additional Mitigation Measures– Old Quarrington Quarry Option

- Proposals will need to demonstrate further that adverse effects can be avoided or that the benefits of the development outweigh ecological harm to the SSSI and NNR. If deterioration to ancient woodland is likely to occur following the application of standoff distances, exceptional circumstances will need to be demonstrated and a suitable compensation strategy will need to be provided.
- Further information on the precise operational activities, including those that could be visible on the skyline would require detailed landscape investigation to inform design.
- Further detailed investigation of the specific operations will be required to determine effects further. Any harm to the setting of Durham World Heritage Site, Conservation Areas and non-designated heritage assets will require clear and convincing justification and will need to be weighed against the public benefits of the proposal.

Residual Impacts

- All options would extend the duration and any associated impacts of minerals working to communities and delay restoration
- For Thrislington, Crime Rigg and Old Quarrington Quarries, the loss of part of the principal aquifer would be a residual impact of working the proposed allocations.
- Increased greenhouse gas emissions unless operators are able to offset these through the restoration of the sites or other offsetting activities

Response to SA Recommendations

5.1.42 The SA assessment of sand site options is based in part upon the detailed site assessment document which was prepared by the Spatial Policy Team. This document which was updated as part of work to prepare the Publication Draft Plan is intended to provide the basis for making decisions on the allocation or non-allocation of sites proposed by the minerals and waste industry. As part of considering the proposed site allocations the Spatial

Policy Team have sought the views of Council specialists (landscape, ecology, cultural heritage, public rights of way and highways) and has also sought the views and engaged with National Highways, Environment Agency and Natural England.

5.1.43 In terms of the overall recommendations both the SA and Spatial Policy Team are in agreement in relation to which proposed sites should or should not be allocated.

5.1.44 The proposed mitigation measures outlined are very extensive. Many of these relate to topics or issues which will be considered by the Council in determining planning applications for mineral working and are addressed by specific policies of the statutory development plan and therefore do not all need to be specifically addressed by the allocation policies. Specifically in relation to climate change, Policy MW1 and its supporting text have been revised following discussions with the SA Team. The M&WDPD needs to be consistent with NPPF provisions on climate change.

5.1.45 A key SA concern appears to be transport emissions from HGVs. The majority of minerals are transported by road within County Durham and the North East and this cannot be avoided. Over the period to 2050, emissions from HGVs will be significantly reduced as measures introduced by the Government to decarbonise the transportation sector which include the phasing out new, non-zero emission heavy goods vehicles weighing 26 tonnes and under by 2035, with all new HGVs sold in the UK to be zero emission by 2040. Individual policies of the M&WDPD seek to encourage the early adoption of low and zero emission vehicles and recognise that particular value will be placed upon measures which help mitigate and adapt to climate change.

Conclusion

5.1.46 The decision to continue to support the allocations of Thrislington West Quarry and a northern extension to Crime Rigg quarry in the M&WDPD aligns with SA recommendations.

5.1.47 In terms of the climate change mitigation measure it is understood that any allocations made within the M&WDPD will only be supported by an assessment of greenhouse gas emissions if they constitute Environmental Impact Assessment (EIA) development. To determine the significance of effects it is highly likely that an evaluation of a proposals carbon footprint against net zero targets/trajectories will be undertaken as best practice within the EIA. Further information is provided within paragraphs 4.1.33 and 4.1.35 of this report.

5.1.48 In response to the feedback that 'a key SA concern appears to be transport emissions from HGV's' please note, emissions from transport was one aspect that was considered as part of the assessment but was not the only one. Other factors included for example; the quantity of mineral to be extracted; if blasting is likely to be required; likely energy requirements associated with processing; the likely duration of works compared to the targeted date by which carbon neutrality/net zero is to be achieved etc. This is 2045 for County Durham and 2050 for the UK. Committing to long term developments could affect the ability to meet national and local climate change targets if they significantly increase the magnitude of greenhouse gas emissions and mitigation measures do not achieve the

reductions in emissions necessary to ensure consistency with a trajectory towards net zero. Further justification for the predicted effects against SA objective 8 (climate change) is provided in the detailed SA matrices in Appendix B.

5.1.49 The SA acknowledges and accepts that Government net zero targets for HGV's will contribute towards decreasing carbon emissions. However, these targets are at the end of the Plan period or beyond it and measures will be needed to mitigate emissions in the interim period and will also be needed in addition to phasing out older HGV's in the longer term.

5.2 Potential Inert Waste Disposal Allocations

5.2.1 As discussed in section 4.17 and paragraph 5.0.11 there is currently an acknowledged need for further waste disposal capacity in County Durham over the Plan period to 2035. However, this is a longer-term need towards the end of the Plan period. 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.

5.2.2 The Council monitors the quantity of waste that is deposited and remaining landfill capacity across all of County Durham's landfill sites on an annual basis and has prepared updated forecasts taking into account Environment Agency and waste operator information. The latest position on remaining inert landfill void space was published by the Environment Agency in December 2021. This information indicates that remaining inert landfill void space in County Durham was still very healthy at the end of 2020, equivalent to 7,261,368 cubic metres in total.

5.2.3 The data provided by the Environment Agency does not include void space which will be created through additional permitted mineral extraction. This includes an additional 4 million cubic metres of void space once mineral extraction has ceased at Bishop Middleham Quarry in 2029. However, as discussed in section 4.17.10 and 14.17.11 it is not considered reasonable to rely upon its availability as this is dependent upon the mineral extraction being completed by 2029.

5.2.4 Similarly, the operator of Old Quarrington Quarry have advised the Council that further void space (totalling 1,445,210 cubic metres) which is not included with the Environment Agency remaining landfill void space statistics will eventually become available within the permitted phase 5 and phase 6 areas. The availability of the additional void space at Old Quarrington is however, dependent on planning permission being granted to extend the duration of that permission and the capacity in the phase 6 area is only likely to be available following the extraction of permitted limestone in the northern part of the quarry i.e., beyond the Plan period.

5.2.5 DPD objective 6 is relevant to the consideration of non-strategic minerals and waste site allocations and is complimentary to County Durham Plan objectives 20 (Supply of Minerals) and 21 (Waste Management).

Reasonable Alternatives

5.2.6 The need for further waste disposal capacity is a longer term need towards the end of the Plan period. In addition to relying on void space which may or may not become available over the Plan period, the option to rely on planning applications coming forward over the interim period to meet the need is also not considered to be a reasonable alternative as the purpose of the M&WDPD is to provide direction and certainty that waste disposal requirements will be met. The National Planning Policy for Waste requires waste planning authorities to prepare Local Plans which identify sufficient opportunities to meet the identified needs of their area for the management of waste streams and to identify sites and/or areas for new or enhanced waste management facilities in appropriate locations. The consideration of potential inert waste disposal allocations is therefore considered to be the only reasonable alternative to ensuring that need can be met and providing the certainty and direction needed.

5.2.7 In January 2021, the Council wrote to the minerals and waste industry, their representative bodies, planning consultants and key landowners to ask them to propose any new mineral and waste sites so they can be considered and if appropriate, form part of the M&WDPD. The Site Assessment document accompanying the M&WDPD Draft Plan provided the Council's justification for the allocation or non-allocation of the sites proposed at the previous stage of M&WDPD preparation. This has been republished alongside the M&WDPD Publication Draft Plan.

5.2.8 At the time the Draft Plan was being developed, it was considered that no reasonable alternatives had been proposed. Further information was needed to support the waste proposals at Crime Rigg Quarry, Cold Knuckle Quarry and Quarrington North. The proposal at Eldon was considered dependant on the extraction of the mineral within the quarry where there is not a permission in place to allow the extraction of the reserves. Under these circumstances it would not be possible for waste to be imported and deposited at Eldon quarry as this would sterilise the mineral resource which is safeguarded by the County Durham Plan. This option was therefore not considered to be a reasonable alternative.

5.2.9 Following consultation on the Draft M&WDPD, further information has been provided to warrant further consideration and assessment of the waste proposals at Crime Rigg Quarry, Cold Knuckle Quarry and Quarrington North. Information to support three alternative waste infilling operations at Crime Rigg Quarry has also been provided. No further representations were received to the contrary in relation to the waste proposal at Eldon Quarry.

5.2.10 The options are therefore briefly described as follows:

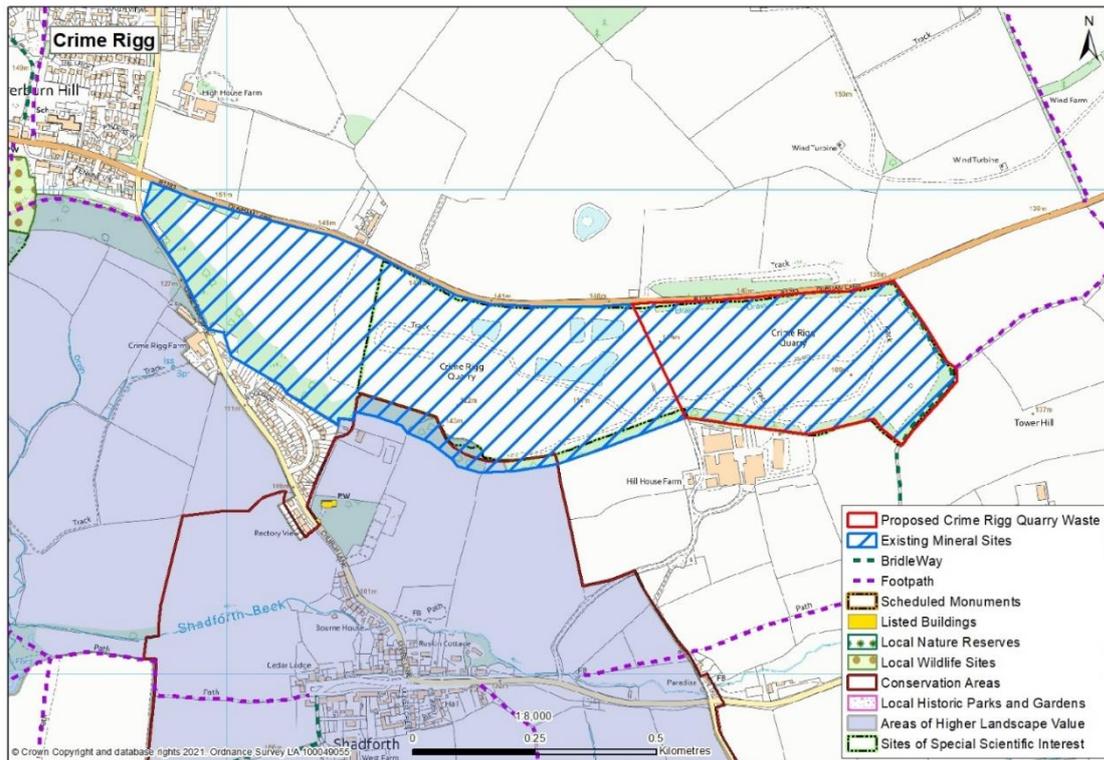
Crime Rigg Quarry

5.2.11 Crime Rigg Quarry lies on the Magnesian Limestone Escarpment and is located approximately 4 km to the east of Durham. The proposed site allocation extends to 11 hectares and lies on a low ridge between the shallow valleys of the Sherburn Hill Burn and the Shadforth Beck. It is the eastern part of an operational quarry made up of an open void with perimeter soil mounds and structure planting.

5.2.12 The operator proposes the restoration of the eastern part of Crime Rigg quarry by means of infilling with imported inert construction, demolition and excavation waste (CDEW). The submission proposes the importation of 200,000 tonnes (133,000 cubic metres) of inert waste into the site per annum. Three potential scenarios have been offered that the operator acknowledge require significant consideration and design development. These are:

- 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 plan also includes the replacement of farm track from Durham Road to the north, to Hill House Lane to the south. 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. This scenario would not result in a significant amendment to the contours affecting the northern quarry and is therefore expected to avoid impact on the integrity of Crime Rigg Quarry Site of Special Scientific Interest (SSSI) which is located within the site boundary.
- Scenario 2 (Low Level Restoration within Eastern Void) – The operator have advised that this option would provide a significant opportunity for biodiversity net gain and/or potentially provide significant benefits in compensating for the potential loss of agricultural land relating to the northern quarry extension. The contours for this design would fall to the ‘toe’ of the northern quarry wall, protecting the integrity of the SSSI. 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 reflects the previous submission to the Council in 2021 and would result in the complete restoration of the quarry void to surrounding land levels which would result in the burial of the SSSI. 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).

Map 5: Proposed allocation within the Eastern extent of Crime Rigg Quarry



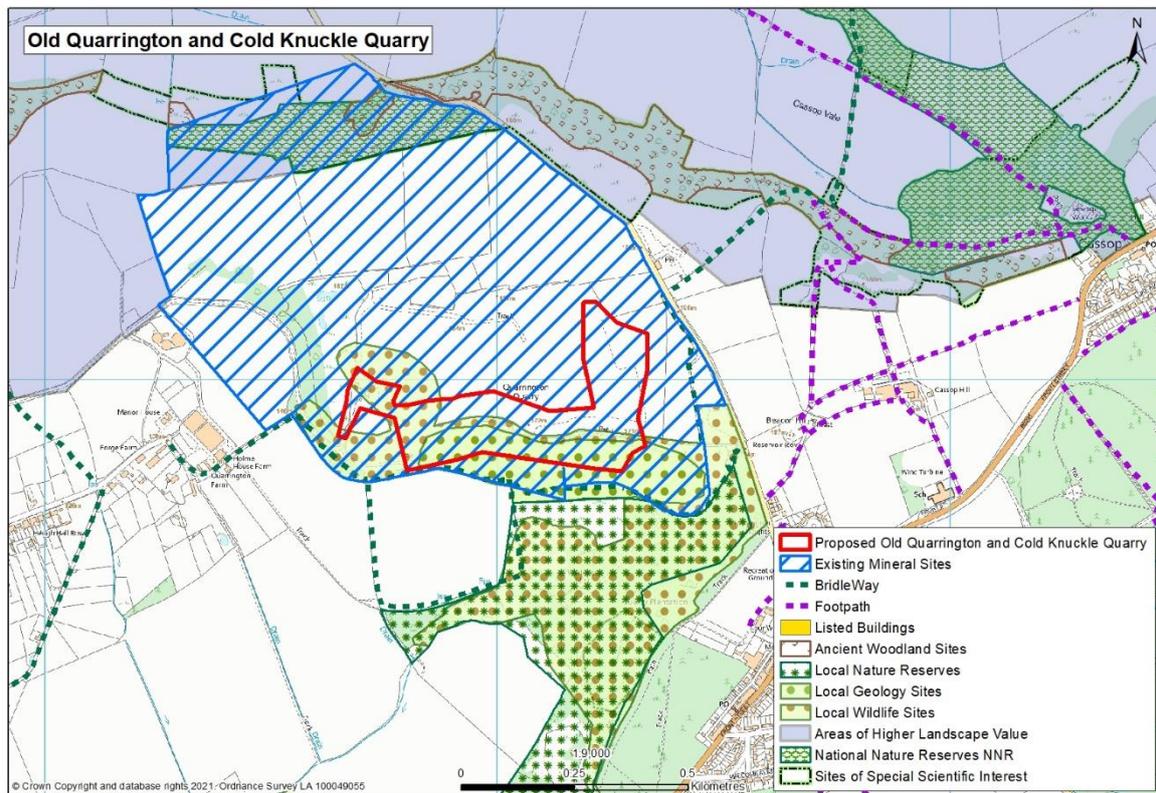
Cold Knuckle Quarry

5.2.13 Cold Knuckle Quarry is located on the Magnesian Limestone Escarpment 1 km to the east of Bowburn between the hamlet of Old Quarrington and Quarrington Hill. It forms part a larger quarry known as Old Quarrington and Cold Knuckle Quarry which through previous planning permissions is now in effect being worked as one site.

5.2.14 The proposed site allocation extends to approximately 10.6 hectares and lies on the southern edge of the spur between Cassop Vale and Old Quarrington Vale. It is made up of currently operational areas of Old Quarrington Quarry including parts of the unrestored former Cold Knuckles Quarry.

5.2.15 The operator have proposed an allocation that 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.

Map 6: Proposed Allocation at Cold Knuckle Quarry



Quarrington North

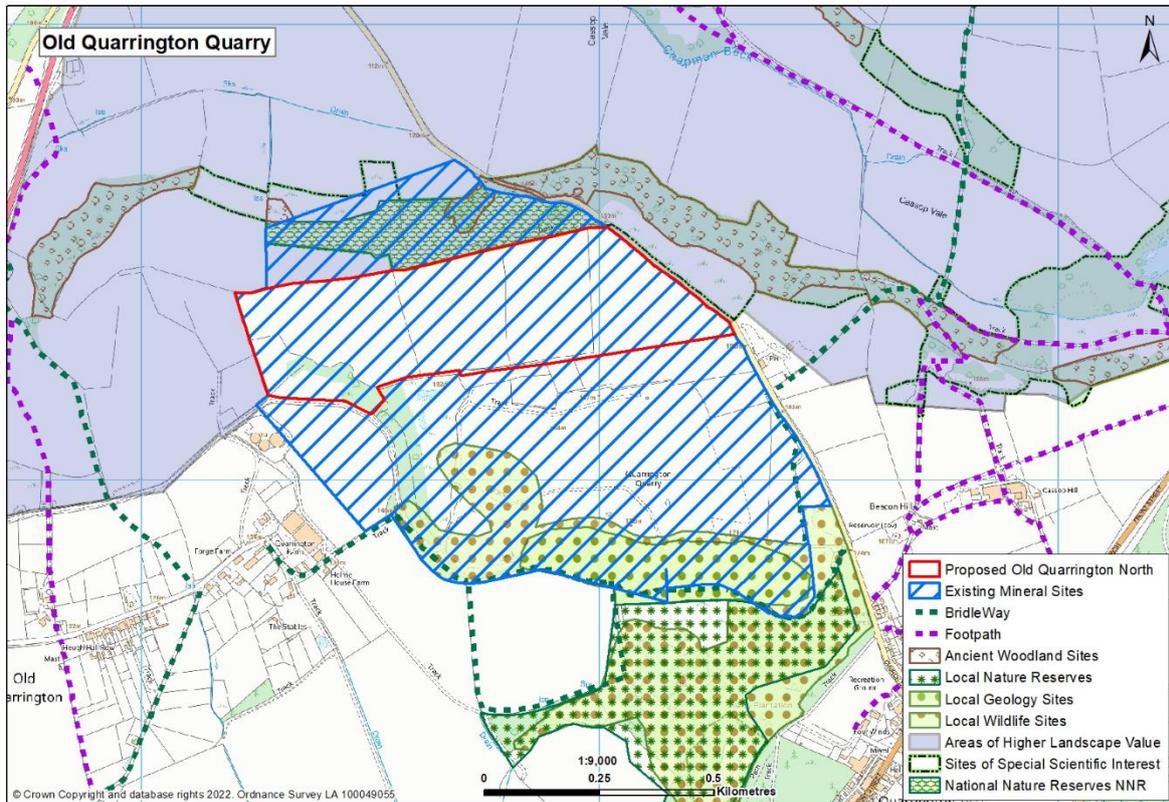
5.2.16 Quarrington North is located on the Magnesian Limestone Escarpment 1 km to the east of Bowburn between the hamlet of Old Quarrington and Quarrington Hill. It forms part of a site known as Old Quarrington and Cold Knuckle Quarry which through a previous permission are being worked as one. Old Quarrington Quarry lies immediately to the north of Cold Knuckle Quarry.

5.2.17 In addition to the proposed allocation of basal Permian sand in the northern part of the quarry, the operator has also proposed that the void created could be allocated for inert landfill. The proposed site allocation 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. This area extends to 35 hectares and is overlain to the north by national wildlife designations including Cassop Vale National Nature Reserve (NNR) and Cassop Vale Site of Special Scientific Interest (SSSI). The area also contains ancient woodland and is designated as an Area of Higher Landscape Value (AHLV).

5.2.18 However, 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 work the full extent of the permission area this is not considered to be a reasonable alternative and the SA has focused on the smaller, revised area.

Map 7: Proposed allocation within the Northern Extent of Old Quarrington Quarry (Quarrington North)



Options Assessment Outcome

5.2.19 The following table shows the predicted impacts of each option against the SA objectives. Please also see the supporting SA matrix in Appendix B which provides further detail.

Table 33 Summary Assessment: Inert Waste Options

	1. Decent Affordable Homes	2. Strong Secure Communities	3. Education, Training & Lifelong Learning	4. Health: Inequalities & Lifestyles	5. Need to Travel & Sustainable Transport	6. Alleviate Deprivation	7. Economy & Employment	8. Climate Change: Mitigation	9. Climate Change: Adaptation	10. Biodiversity & Geodiversity	11. Landscape & Townscape	12. Historic Environment	13. Resources: Air, Water & Soil	14. Waste & Use of Materials	15. Minerals Extraction & Impacts
Crime Rigg Quarry (Scenario 1)	0	0	0	?	0	0	x	x	?	0	✓/x	0	✓/x	x	✓
Crime Rigg Quarry (Scenario 2)	0	0	✓	?	x	✓	✓	x	?	x	✓/x	0	✓/x	✓	x
Crime Rigg Quarry (Scenario 3)	0	x	✓	?	xx	✓	✓✓	xx	?	xx	✓	0	✓/x	x	xx
Cold Knuckle Quarry	0	0	0	?	x	0	✓	x	?	0	0	0	x	✓	✓
Quarrington North	0	x	✓	?	xx	✓	✓✓	xx	?	xx	xx	xx	x	xx	xx

5.2.20 Please note that no short term effects were predicted as all the options except for inert waste disposal at Quarrington North contribute towards waste disposal needs towards the end of the Plan period. The Quarrington North option is assumed to provide long term effects (i.e. beyond the Plan period) only.

5.2.21 The table shows that Crime Rigg Quarry (Scenarios 1 and 2) and Cold Knuckle Quarry will have the least adverse social and environmental effects but Scenario 1 could have worse economic effects than the other options. Crime Rigg Quarry (Scenario 3) and Old Quarrington Quarry are predicted to have the most positive economic impacts but could also have more adverse environmental effects than the other options. Of the options, Old Quarrington Quarry could have the most adverse environmental impacts, predominantly as a result of additional potential impacts to landscape character and heritage assets.

5.2.22 Please note that with all options it is recognised that further inert waste disposal at existing operational quarries which accommodate inert landfill sites may be preferable to

areas where no activity or impact to communities or the environment is currently occurring i.e. dormant mineral sites or landraise proposals. However, there may still be adverse effects associated with infilling active mineral sites with inert waste.

5.2.23 The SA also recognised that all of the options require the disposal of inert waste that cannot be recycled further, although its use in the restoration of mineral sites may help to conserve primary resources such as soils which could otherwise be used for this purpose. As the waste type is 'inert' there will be no landfill gases such as methane associated with the options. The SA also recognises that the Government has committed to phasing out new, non zero-emission heavy goods vehicles weighing 26 tonnes and under by 2035, with all new HGV's sold in the UK to be zero emissions by 2040. From 2035 onwards there may therefore be a declining quantity of HGV related emissions as older HGV's are phased out. Operators may also have their own carbon reduction commitments that they are working towards meeting.

5.2.24 An overview of each option and the key differentiating issues is provided as follows.

Crime Rigg Quarry Scenario 1

5.2.25 The proposed site allocation is a quarry void within the eastern part of the operational area of Crime Rigg Quarry. Current planning permission for the site requires restoration to be completed by the end of 2024 and for this part of the quarry to be restored to a low level so that suitable faces could be left exposed, providing a replacement area of geological Site of Special Scientific Interest (SSSI) for the western part of the quarry which is designated as SSSI and is being infilled with waste. However, a planning application is being prepared to extend the existing mineral permission to reflect the remaining mineral extraction, voidspace and infill rate. Capacity at the site is now expected to be exhausted by 2029/30. Subject to a future planning application being submitted in line with the timescales previously proposed by the operator and being granted, restoration of the existing site is anticipated to be by 2032.

5.2.26 The operator have advised that there are several practical issues with the approved restoration contours that could be improved by amendment. This scenario would result in a minor extension of the landfill towards the quarry void and is calculated to provide 434,000 cubic metres of net capacity for inert waste, amounting to approximately 3.26 years of capacity. Amending the restoration contours is not anticipated to increase vehicle movements over and above existing baseline levels and will not extend the operational life of the quarry and associated HGV movements near to settlements (Sherburn Hill, Ludworth and Shadforth) beyond the timescale that planning is intended to be sought for i.e. 2032. Neutral effects against SA objectives 2 (communities) were therefore predicted and 3 (education) and 6 (deprivation) as the option is unlikely to safeguard existing employment and associated training beyond the timescale that planning is intended to be sought for.

5.2.27 Uncertain effects were predicted overall against SA objective 4 (Health) although it was recognised that the amendment of the restoration contours could (according to the operator) enable better public access to the restored site for recreation purposes for those with mobility issues.

5.2.28 The area within Crime Rigg quarry where the proposed infilling with inert waste is proposed is within 0.5km of Ludworth, 1.2km east of Sherburn Hill and within 0.6km of residential properties at Churchill Terrace. Given the distances involved, inert waste could potentially be imported without any significant impacts to health and wellbeing (e.g. as a result of dust, noise, odour etc). Further detailed assessments would be required to support this at the planning application stage, including an assessment of cumulative impacts. Please note that the potential amendment of the restoration contours could enable better public access to the restored site for recreation purposes for those with mobility issues.

5.2.29 Economic effects were assessed as potentially negative for this option. Crime Rigg Quarry is one of County Durham's three remaining inert landfill void sites. Whilst rectifying the current approved restoration profile would improve access to a farm (according to the operator) and provide additional capacity, it is unlikely to be sufficient to ensure disposal operations throughout the Plan period and could result in closure of the landfill operation, associated employment and contribution to the region prior to 2035. Inert waste disposal operations could become concentrated in a smaller number of sites which could impact on the resilience of County Durham's waste management sector.

5.2.30 Environmentally, whilst the scenario is not expected to increase vehicle movements above baseline conditions, increasing landfill capacity and associated activity will incur greenhouse gas emissions.

5.2.31 Minor negative effects were predicted against SA objective 10 (biodiversity and geodiversity) as whilst this option is unlikely to affect Crime Rigg Quarry (geological) SSSI as it will not conceal existing exposed faces, increased infilling at the site could increase disturbance to protected species within the site.

5.2.32 The Heritage Impact Assessment undertaken of the site found that the scenario (and all Crime Rigg scenarios) would have no direct impacts on heritage assets and indirect impacts to the setting of assets would be either nil or neutral. As an operational quarry void, the proposed scenario would have no archaeological potential.

5.2.33 The site is not within a local or national landscape designation and the landscape assessment of the site has advised that the importation of waste would be unlikely to result in significant landscape and visual effects subject to detailed design.

5.2.34 In terms of impacts to air, water and soil resources all of the Crime Rigg scenarios (along with all of the other options) have the potential to increase dust emissions. Of the Crime Rigg scenarios, scenario 3 could increase emissions by the most as requires the most infilling.) All of the scenarios (and indeed, all of the options assessed) could adversely impact on groundwater as they are situated on the Magnesian Limestone Escarpment which is a principal aquifer and within groundwater Source Protection Zone 3. The site also lies in a groundwater nitrate vulnerable zone (NVZ). However, no dewatering is undertaken within the current quarry, minerals are worked above the water table and infilling with inert waste compared to other waste types minimises the risk of pollution to groundwater. As a quarry void there is no agricultural land that could be affected. However, modifying the current

restoration profile under scenario 1 could improve stability and reduce soil erosion according to the operator.

5.2.35 In terms of reducing waste and encouraging the sustainable and efficient use of materials, this has been considered in relation to how closely the option contributes towards the identified longer term need for further inert waste disposal capacity beyond 2032. This scenario is estimated to provide capacity to 2032 so is unlikely to contribute towards meeting the longer term need for further inert waste disposal capacity beyond 2032. Whilst the scenario represents a minor extension of the landfill, negative effects are predicted as it would provide further disposal capacity that is unlikely to contribute towards meeting a need.

5.2.36 The scenario will however, contribute towards the restoration of a minerals site and in doing so is considered to have the least impact on communities and the environment of all the options. Notwithstanding, that potential impacts to groundwater will be a key issue to safeguard against if the site is allocated and planning permission is sought.

Crime Rigg Quarry Scenario 2

5.2.37 Compared to scenario 1, this option further extends disposal and restoration operations into the eastern quarry void. The contours for the design would fall to the 'toe' of the northern quarry wall and is estimated by the Council to increase capacity by approximately 1,541,000 cubic metres net. Potentially the site allocation would enable approximately 200,000 tonnes (133,000 cubic metres) of inert waste to be imported per annum. This is commensurate with the existing scale of inert waste disposal within the quarry so any adverse effects to communities in the mid to longer term may not increase over and above existing. However, based on figures provided and with remaining capacity at the end of 2020, this scenario could extend the operational life of the quarry and associated HGV movements near to settlements (Sherburn Hill, Ludworth and Shadforth) until 2040 i.e a total of 12 years (beyond the anticipated exhaustion date) and a further 9 years beyond the 2032 timescale that planning is being sought for. The potential for minor negative effects to communities are therefore predicted. However, as the scenario safeguards the use of the quarry for longer and associated employment, education and training opportunities more positive effects were predicted against SA objectives on education and deprivation. As for scenario 1, uncertain effects were predicted to health and wellbeing, although it was acknowledged that if there were any impacts, in terms of dust, noise, etc compared to scenario 1 these would be prolonged for longer.

5.2.38 Positive economic effects were predicted as compared to scenario 1 this option ensures continued inert landfilling operations and safeguards associated employment throughout the Plan period and for 6 years beyond this. However, the number of years worked beyond the Plan period would depend on several factors including start date and actual disposal rates. Should the site be allocated the proposal would provide for both direct and indirect employment associated with disposal of inert waste. There would also be opportunities for businesses, including local companies to supply goods and services throughout the life of the site allocation.

5.2.39 Environmentally, this scenario provides a further 1,107,000 cubic metres capacity compared to scenario 1 and will therefore increase numbers of trips associated with infilling it with inert waste (albeit vehicle numbers may be comparable with levels conditioned by existing planning permissions). Negative effects have therefore been predicted against SA objective 5 (travel) and 8 (climate change) and compared to all the options, this option is considered to rank 3rd (1st being the best and 5th being the worst) in terms of trip generation and carbon emissions.

5.2.40 Negative effects were predicted against SA objective 10 (biodiversity and geodiversity) as whilst this option is also unlikely to affect the integrity of Crime Rigg Quarry (geological) SSSI, the greater level of infilling with waste required increases the risk of disturbance further to protected species.

5.2.41 As for Scenario 1, the option is unlikely to have an impact on heritage assets and is unlikely to result in significant landscape and visual effects subject to detailed design. Impacts to air quality may be worse than scenario 1 due to increased vehicle emissions and dust associated with increased tipping. Risk to groundwater could also potentially be higher under this scenario as more of the quarry floor will be infilled. Compared to scenario 1 however, scenario 2 could help to compensate for the loss of agricultural land because of mineral working.

5.2.42 In terms of reducing waste and encouraging the sustainable and efficient use of materials, the scenario is estimated by the Council to increase capacity by approximately 1,541,000 cubic metres net. An additional 1,541,000 cubic metres is estimated to provide capacity to 2041. (This estimate assumes that deposits will be 200,000 tonnes per annum and even if the rate of disposal increases it will be limited by planning conditions relating to allowable vehicle movements to and from the site.) This option is therefore likely to contribute towards meeting the identified capacity gap over the Plan period to 2035 but not all of the capacity will be used by the end of the Plan period. If landfilling commences in 2030 at 200,000 tonnes per annum, it is estimated that by 2035, 665,000 cubic metres could be utilised leaving a remaining 876,000 cubic metres (or 57%) providing capacity for a further 6 years beyond the Plan period. Whilst the capacity gap would need to be reviewed to determine need beyond the Plan period it is considered unlikely that the option would result in the creation of excessive landfill provision in the longer term.

5.2.43 The scenario will also contribute towards the restoration of a minerals site and is considered to rank 3rd (1st being the best and 5th being the worst) in terms of doing so whilst reducing the adverse impacts on communities and the environment.

Crime Rigg Quarry Scenario 3

5.2.44 This scenario would result in the complete restoration of the quarry void to surrounding land levels. This is estimated by the Council to increase capacity by approximately 3,226,000 cubic metres (net). Based on figures provided and with remaining capacity at the end of 2020, this scenario could extend the operational life of the quarry and associated HGV movements near to settlements (Sherburn Hill, Ludworth and Shadforth) until 2054 i.e., a total of 25 years (beyond the anticipated exhaustion date) and a further 22

years beyond 2032. Whilst levels of inert waste imported per annum are likely to be commensurate with the existing scale of disposal, negative effects are predicted due to the significant increase to the duration that the site will be worked. This option is second only to Quarrington North in terms of the duration of inert waste landfilling to communities.

5.2.45 As the scenario safeguards the use of the quarry for longer and associated employment, education and training opportunities more positive effects were predicted against SA objectives on education and deprivation than scenario 1. Very positive effects were not predicted as improving education, training and reducing deprivation are considered to be indirect effects associated with the proposal. As for scenarios 1 and 2, uncertain effects were predicted to health and wellbeing, although it was acknowledged that if there were any impacts, in terms of dust, noise, etc compared to scenario 1 and 2 (and Cold Knuckle Quarry) these would be prolonged for longer.

5.2.46 Very positive economic effects were predicted as like scenario 2, this option will ensure continued landfilling operations throughout the Plan period but will also ensure it for a further 19 years beyond this. This scenario therefore safeguards associated employment for longer and due to this duration may provide more opportunities for job creation. This option is second only to Quarrington North in terms of the duration that working at the quarry could continue for.

5.2.47 Environmentally, as for scenario 1 and 2, the option is unlikely to have an impact on heritage assets. However, as this option provides the greatest landfill capacity of the scenarios (and is second overall of all the options in terms of capacity) it is considered likely to generate a significant number of vehicle movements and could lock in greenhouse gas emissions associated with inert waste landfilling within the county until 2053 i.e. 8 years beyond the period that carbon neutrality within the county needs to be achieved.

5.2.48 Furthermore, this option would result in the burial of the SSSI and potential loss of habitat for protected species. These impacts are unlikely to be avoided and would need to be compensated for. In terms of the SSSI, Natural England have advised the Council that if a northern extension to the quarry is worked, they anticipate that the geological exposures within this extension area could be comparable with the existing SSSI. However, there are a lot of uncertainties and the proposal as submitted, is considered to have an unacceptable impact on the SSSI. This is a significant issue.

5.2.49 Whilst this scenario is considered to have very negative effects overall against SA objective 10, it is recognised that restoring the quarry to predevelopment levels provides greater opportunities for the creation of range of habitats with a high ecological value compared to scenarios 1 and 2. For this reason, the potential for positive landscape effects were predicted as scenario 3 could provide further benefits to landscape character and quality than the existing approved restoration as the highest level of landscape mitigation is likely to arise from restoration to something close to original levels and to an enhanced agricultural value with a high nature conservation value: limestone grassland, native woodland and species rich hedges.

5.2.50 Impacts to air quality may be worse than scenarios 1 and 2 due to the increased duration of vehicle emissions and dust. Risk to groundwater could also potentially be higher under this scenario as the quarry floor will be fully infilled. Compared to scenarios 1 and 2 however, this option could further help to compensate for the loss of agricultural land because of mineral working.

5.2.51 In terms of reducing waste and encouraging the sustainable and efficient use of materials, the scenario is estimated by the Council to increase void capacity by approximately 3,226,000 cubic metres (net) and is estimated to provide capacity to 2054. This scenario therefore provides capacity over the Plan period to 2035 but not all of the capacity will be used. If landfilling commences in 2030 at 200,000 tonnes per annum it is estimated that by 2035, 665,000 cubic metres could be utilised leaving a remaining 2,561,000 cubic metres (or 79%), providing capacity for a further 19 years beyond the Plan period. Whilst the capacity gap would need to be reviewed to determine need beyond the Plan period there is a higher risk that given the quantity of remaining void space, excessive long term landfill provision could be created if other void space at Bishop Middleham and Old Quarrington also become available over the Plan period.

5.2.52 The scenario will contribute towards the restoration of a minerals site but is considered to rank 4th in terms of doing so whilst reducing the adverse impacts on communities and the environment.

Cold Knuckle Quarry

5.2.53 The proposed allocation 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. The permitted mineral extraction and inert fill would be undertaken in a phased manner and is intended to be complete by 2033. This would only extend working of Cold Knuckle Quarry by an additional 2.4 years but the sale of the magnesian limestone which would have otherwise been set aside on site and import of inert waste is likely to increase vehicle movements compared to the original proposal.

5.2.54 However, HGV movements would in effect represent a continuation of current operations, but minor negative effects are still predicted as it would continue such movements for an additional 2.4 years to communities, the nearest including Old Quarrington, Bowburn and Quarrington Hill. Cumulative impacts with the proposed allocations at Old Quarrington are unlikely to occur due to the differing time periods within which infilling and mineral extraction activity would occur.

5.2.55 Minor positive effects against SA objectives 3 (education) and 6 (deprivation) were predicted as the option could safeguard existing employment and associated training opportunities at the quarry for a further 2.4 years.

5.2.56 Uncertain effects were predicted overall against SA objective 4 (Health). The closest settlements to the quarry are Old Quarrington and Quarrington Hill. The access road to the quarry passes within approximately 200 metres of properties within Old Quarrington. The closest properties to the site are Quarrington Farm approximately 100 metres to the west, properties on Church Street some 150 metres to the southwest, the Heather Lad Inn 20 metres to the east and Cassop Hill some 400 metres to the east. Given that operations are likely to be similar to existing operations taking place within the quarry, are for a relatively short duration and due to distances involved, inert waste could be potentially imported into this part of the quarry without any significant impacts to health and wellbeing (e.g. as a result of dust, noise etc). Further detailed assessments would be required to support this at the planning application stage. Please note that this option provides the lowest additional capacity and is therefore likely to require the least importation of inert waste. However, it will require the transportation of 0.9 million tonnes of magnesian limestone that would have otherwise been used for restoration purposes on site.

5.2.57 Positive economic effects were predicted for this option. Despite there not being a need for further magnesian limestone to be permitted, this option would enable the sale of 0.9 million tonnes of magnesian limestone from County Durham that would otherwise be sterilised through its use in site restoration. The provision of further waste disposal capacity within a quarry void adjacent to an existing inert landfill could increase capacity by 400,000 cubic metres net, supporting an additional 2.4 years of related employment. This will contribute to ensuring disposal operations continue at Old Quarrington and Cold Knuckle Quarry throughout the Plan period along with their associated benefits to the local economy.

5.2.58 Environmentally, the option provides the least additional capacity for inert waste compared to the others but will also require the transportation of 0.9 million tonnes of magnesian limestone from the site which would have otherwise been set aside and used to achieve the previously approved restoration profile at the quarry. Negative effects against SA objective 5 (travel are therefore predicted) and 8 (climate change).

5.2.59 Two local biodiversity and geodiversity designations overlie the proposed allocation, these being Old Quarrington Quarry Local Geology Site (LGS) and Quarrington Hill and Coxhoe Bank Local Wildlife Site (LWS). However, the impact to these sites has already been considered and found to be acceptable in the context of the existing permitted operation at the quarry and its restoration. Substituting magnesian limestone for inert waste to achieve the restoration is considered unlikely to cause any additional harm to biodiversity or geodiversity. However, the restoration of the site should as a minimum achieve the same level of benefits to biodiversity as existing proposals that aim to provide biodiversity net gain and support ecological networks.

5.2.60 Please note that the proposed allocation is also within 286 metres of Quarrington Hill SSSI (to the south) and 250 metres of Cassop Vale SSSI, Cassop National Nature Reserve and ancient woodland (to the north). These designations will not be impacted directly by the proposal and any indirect effects are not considered likely to cause any additional harm than

existing operations and the approved restoration. Neutral effects to biodiversity and geodiversity are therefore predicted overall.

5.2.61 Neutral impacts to landscape were also predicted as it is considered that the restoration of the site would be likely to be identical or very close to that of the approved scheme with the removal of limestone and its replacement with inert materials undertaken broadly within the balance of cut and fill provided for in the approved scheme. There would be no material effect on the final restoration.

5.2.62 The Heritage Impact Assessment undertaken also concluded that the proposals would not have any direct effect on the significance (physical fabric) of any identified heritage asset. The magnitude of effect upon the setting(s) of the heritage assets has been identified as either nil, or minor with the level of impact neutral. As an operational quarry void, the proposed scenarios would have no archaeological potential.

5.2.63 In terms of impacts to air, this option will increase vehicle emissions as it requires the transportation of 0.9 million tonnes of magnesian limestone from the site which would have otherwise been set aside and used to achieve the previously approved restoration profile at the quarry, along with the importation of waste.

5.2.64 As for all the options this site is situated on the Magnesian Limestone Escarpment which is a principal aquifer and within groundwater Source Protection Zone 3. The site also lies in a groundwater nitrate vulnerable zone (NVZ). However, no dewatering is undertaken within the current quarry and the operator have advised that the base of the current sand extraction and inert landfill lies above the water table.

5.2.65 As a quarry void there is no agricultural land that could be affected. Restoration of the site through the use of inert waste could compensate for the loss of agricultural land due to mineral working but this would occur in any event as part of the existing approved restoration. On balance, the potential for negative effects were predicted against SA objective 13 (air water and soil) as unlike the Crime Rigg scenarios, there are no known additional benefits to soil resources.

5.2.66 In terms of reducing waste and encouraging the sustainable and efficient use of materials, the option is estimated to increase capacity by approximately 400,000 cubic metres (net) and is estimated to provide capacity to 2033 (i.e. within the Plan period only and will contribute towards identified need beyond 2032). There is unlikely to be remaining capacity beyond the Plan period and the option is not considered likely to result in the creation of excessive landfill provision over the medium term. The option, unlike the others also avoids the sterilisation of magnesian limestone. Whilst there is no quantitative need for magnesian limestone, the mineral would have been extracted as part of the original approved restoration and its sale as opposed to use in restoration represents a more efficient use of resources.

5.2.67 The scenario will also contribute towards the restoration of a minerals site and is considered to rank 2nd (1st being the best and 5th being the worst) in terms of doing so whilst reducing the adverse impacts on communities and the environment.

Quarrington North

5.2.68 In addition to the proposed allocation for the extraction of basal Permian sand in the northern part of the site once the permitted, overlying magnesian limestone is extracted, the operator proposes that the void created should be allocated for inert landfill, providing capacity for 4.93 million cubic metres of inert waste. No information has been provided on the intended duration or timing of the inert waste disposal but based on current tipping rates, the Council has calculated that an allocation is being sought for 30 years. The Council has also assumed that disposal would not commence until after 2041 based on Environment Agency remaining void space capacity data and information from the operator regarding void space which is yet to be created. This option could therefore, potentially extend the operational life of the quarry until 2071.

5.2.69 In terms of permitted daily vehicle numbers, a significant increase in vehicle movements over current levels are not anticipated with the proposed allocation (individually or in combination with the proposed sand allocation) but there may be some. Whilst not unacceptable in terms of impact, negative effects to communities are predicted as, the option would extend the duration of working by an estimated 30 years. The nearest settlements include Old Quarrington, Bowburn and Quarrington Hill.

5.2.70 Similar to Crime Rigg Scenarios, 2 and 3 positive effects against SA objectives 3 (education) and 6 (deprivation) were predicted as the option could safeguard existing employment and associated training opportunities at the quarry for a further 30 years.

5.2.71 Uncertain effects were predicted overall against SA objective 4 (Health). This option is similar to the Cold Knuckles Quarry option with some minor variations in terms of distances from properties. However, the closest properties are situated closer to the existing active areas of Old Quarrington and Cold Knuckles Quarry than the proposed northern part of the site. Compared to Cold Knuckles Quarry (and Crime Rigg scenarios 1 and 2), this proposed allocation will however, be operational for longer. Given that operations are anticipated to be similar to existing operations, and due to distances involved, inert waste could be potentially imported into this part of the quarry without any significant impacts to health and wellbeing (e.g. as a result of dust, noise etc). The northern part of the quarry already has planning permission for the extraction of limestone so it is assumed that this can be worked without unacceptable adverse impacts to health and wellbeing. Further detailed assessments would be required to support this at the planning application stage. Please note that this option provides the greatest additional capacity and is therefore likely to require the greatest importation of inert waste.

5.2.72 The potential for very positive economic effects have been predicted as the option could contribute towards safeguarding employment at the quarry for a significant period of time in the longer term (assumed from 2041 to 2071). Should the site be allocated, the proposal would provide for both direct and indirect employment associated with disposal of inert waste. There would also be opportunities for businesses, including local companies to supply goods and services throughout the life of the site allocation

5.2.73 Environmentally, emissions associated with this option could be greater than others as at 4.93 million cubic metres, this option provides the greatest level of inert landfill capacity and could lock in landfilling activity for the greatest length of time beyond the period that carbon neutrality within the county needs to be achieved (possibly to 2071). Whilst it is recognised that advances in automotive and other technologies/opportunities may have moved on by the time disposal activity could commence, helping to further minimise emissions, it is considered precautionary to predict very negative impacts against SA objective 8 (climate change) at this stage.

5.2.74 In terms of biodiversity and geodiversity, the allocation of the site will indirectly result in the loss of habitat although this impact is associated with the removal of permitted overlying magnesian limestone. It is recognised that whilst not subject to the proposed allocation, the limestone would be required to be worked to then access the underlying basal Permian sand and create the void for inert waste. The revised, allocation area also falls outside of Cassop Vale National Nature Reserve (NNR), Cassop Vale Site of Special Scientific Interest (SSSI) and Cassop Vale area on ancient and semi-natural woodland. There would therefore be no direct impacts to these designations. However, very negative, indirect effects could still occur from:

- Exceeding critical loads of nutrient enrichment from dust, nitrogen deposition and other airborne pollutants to the SSSI and its associated magnesian limestone grassland and plants.
- Changes to water supply. Natural England have advised the Council that the designated sites, calcareous flushes need base rich water
- Vibrations from blasting and other quarrying activities required to create the void. This could damage the designated sites' interest features or cause risk to people visiting the sites

5.2.75 Increased noise levels could also negatively impact on people's enjoyment and visitation of Cassop Vale NNR and SSSI.

5.2.76 The intended application of stand off / buffer distances from the designated sites may help to minimise or avoid indirect impacts from air pollution and vibration but this is uncertain at this point in time. Stand off / buffer distances may not address potential impacts to water supply. Due to proximity to these designations, it is considered precautionary to predict very negative effects against SA objective 10 (biodiversity and geodiversity) at this stage.

5.2.77 The potential for very negative effects are also predicted against SA objective 11 (landscape quality and character). The revised allocation area is not covered by any national or local landscape designations. However, the site occupies part of the most notable, attractive and intact spur of the limestone escarpment (between Cassop Vale and Old Quarrington Vale). The site also occupies elevated ground and is visible in views from a wide range of near, middle distance and long distance views to the north, north-east and west. Land to the immediate north lies within an area identified in the County Durham Plan as an Area of Higher Landscape Value (AHLV).

5.2.78 The landscape assessment has taken into account the impact of both extraction and disposal activity, given that mineral extraction would be required initially in order to create the void. The assessment advised that the effects of the precise extent of the void and activities on the skyline would need detailed investigation to inform design. The importation of waste to restore to original levels could be beneficial in maintaining the integrity of the spur as a topographical feature but could involve more operational activities on the skyline. Overall, the assessment concluded that the working of limestone reserves in the permission area could be undertaken without significant landscape or visual effects if appropriately designed. Given the sites' role as part of a sensitive landscape feature and its visibility in important views there remains potential for significant effects and this will need to be assessed in detail to inform the extent of extraction and the detailed design of site operations and restoration. As the potential for significant effects have been identified within the landscape assessment, it is considered precautionary to predict very negative effects against this SA objective at this stage.

5.2.79 Similarly, the Heritage Impact Assessment has assessed the option as potentially harmful to the setting(s) of Durham World Heritage Site, Old Cassop Conservation Area and some Non-Designated heritage assets close. The landscape assessment also confirmed that the site sits in the backdrop to views of the Durham Castle and Cathedral World Heritage Site from the north-west, and operations on the skyline could be potentially harmful to its setting, requiring careful assessment.

5.2.80 In terms of impacts to air, water and soil resources negative effects have been predicted as similar to the Cold Knuckle Quarry option, there would be no potential additional benefit to soil resources as these would have occurred in any event as part of restoration for the permitted extraction of magnesian limestone. Emissions to air are considered to be greater than the other options due to the scale of the void proposed and associated tipping activity that would be needed to fill it. Impacts to groundwater and risk could also be greater as a larger proportion of the aquifer could be affected.

5.2.81 In terms of reducing waste and encouraging the sustainable and efficient use of materials, this option will provide capacity for 4.93 million cubic metres of inert waste. However, it is assumed that disposal would not commence until after 2041 and therefore the option is unlikely to contribute towards meeting the identified capacity gap over the Plan period. Whilst the capacity gap would need to be reviewed to determine need beyond the Plan period there is also a high risk that the capacity could create excessive long term landfill provision. Very negative effects are therefore predicted.

5.2.82 The scenario will contribute towards the restoration of a minerals site (albeit mineral extraction has yet to commence) but is considered to rank 5th (1st being the best and 5th being the worst) in terms of doing so whilst reducing the adverse impacts on communities and the environment.

Significant Issues

- Potential individual and cumulative impact of inert waste infilling on the principal Magnesian Limestone aquifer and groundwater resources

- Crime Rigg (Scenario 3) option – loss of Crime Rigg Quarry SSSI requiring compensatory provision elsewhere
- Quarrington North option
 - potential to harm Cassop Vale SSSI, Cassop National Nature Reserve and ancient woodland
 - potential significant adverse landscape and visual impacts
 - potential harm to the setting of the Durham World Heritage Site
 - Does not contribute to meeting an identified need and due to capacity provided, presents a high risk of creating excessive long term landfill provision

Recommendations

5.2.83 Whilst the options can be ranked as follows in terms of their social and environmental impact (from least to highest impact):

- 1) Crime Rigg Quarry Scenario 1
- 2) Cold Knuckle Quarry
- 3) Crime Rigg Scenario 2
- 4) Crime Rigg Scenario 3
- 5) Quarrington North

5.2.84 This does not take into account their economic effects and therefore, overall sustainability. Crime Rigg Quarry Scenario 2 is considered to be the most sustainable of these scenario as it will not have the adverse economic effects of scenario 1 or as significant environmental effects as scenario 3. Unlike Scenario 1, this option will also contribute towards meeting the identified need for further inert waste disposal. This scenario should be considered further for allocation.

5.2.85 Cold Knuckle Quarry should also be considered further for allocation due to lack of environmental constraints, likely minimal impacts to communities and it avoids the sterilisation of mineral resources. Together it is considered that these options would make a meaningful contribution towards addressing the capacity gap, providing an estimated 1,941,000 cubic metres (net) additional void space.

5.2.86 Crime Rigg Quarry Scenario 1 should not be considered further for allocation as it will not contribute towards meeting the need for inert waste disposal between 2032 and 2035.

5.2.87 Crime Rigg Quarry 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 SSSI where there is currently limited certainty that a suitable alternative replacement can be provided.

5.2.88 Unless further detailed information is provided to determine effects further, Quarrington North should not be considered further due to the potential harm this option could cause to a Site of Special Scientific Interest, National Nature Reserve, ancient woodland, the World Heritage Site and local landscape character. In addition, the allocation is unlikely to contribute towards meeting need towards the end of the Plan period.

Mitigation

5.2.89 All options:

- Traffic and Transport Assessments would be required for all sites. This should include an assessment of individual and cumulative impacts with other minerals and waste activities in the area.
- Planning proposals should also be supported by measures outlining how site security and community safety will be achieved.
- Detailed assessments on the impact of working the proposals on human health and wellbeing (including cumulative impacts) would be required to inform any planning decision.
- Opportunities to minimise trips through the back hauling of inert waste using lorries which are used to transport minerals from it should be realised and sought as part of planning conditions. The use of low or zero emission vehicles could also be considered by operators.
- Any additional impacts to Public Rights of Way (PROW) and mitigation measures required as a result of importing inert waste should be considered as part of the preparation of any future planning applications.
- If any of the sites are allocated within the Plan and planning permission is sought, applications should be supported by an assessment of greenhouse gas emissions and an evaluation of their significance against net zero targets where EIA development.
- If any of the sites are allocated within the Plan and planning permission is sought, hydrogeological assessments will be required to inform the planning decision and any associated mitigating measures and conditions. The assessment would also need to take into account the potential cumulative impacts of landfill operations and minerals working for all options due to their location on the Principal Aquifer.
- If any of the sites are allocated within the Plan and planning permission is sought, proposals should be supported by ecological assessments in order to identify the presence or absence of protected/priority species and any associated mitigation measures. Biodiversity net gain will need to be achieved for each proposal.
- If any of the sites are allocated within the Plan and planning permission is sought, proposals should be supported by a detailed appraisal of impact on landscape and visual impact.
- Measures to mitigate the landscape and visual impact of working should be sought where needed and restoration proposals should contribute towards local landscape enhancement.
- If any of the sites are allocated within the Plan and planning permission is sought, proposals should be supported by an appraisal of impact on heritage along with an archaeological evaluation.
- If any of the options are allocated within the Plan and planning permission is sought, proposals should be supported by dust management strategies and hydrological assessments.

- When submitting proposals due regard should be given to the Environment Agency's Landfill Technical Guidance: [Environmental Permitting Landfill Sector Technical Guidance](#)
- If the sites are allocated within the Plan, they should be allocated for inert waste only and proposals will need to demonstrate that they will not result in excessive long term landfill provision in the county.

Additional Mitigation - Crime Rigg Quarry (Scenario 3)

- Crime Rigg Scenario 3 should only be considered for allocation if the proposed northern extension is also allocated in the Plan. Sufficient evidence will need to be provided at the planning application stage to demonstrate the viability of the northern extension becoming the replacement SSSI. The applicant would also need to demonstrate that comparable special interest features will be exposed concurrently with the landfill operations.
- Measures may be needed to ensure disturbance levels to protected species can be avoided or minimised to acceptable levels. Alternative, compensatory habitat may need to be created on site.

Additional Mitigation - Cold Knuckle Quarry

- The restoration of Cold Knuckle Quarry should as a minimum achieve the same level of benefits to biodiversity as existing proposals that aim to provide biodiversity net gain and support ecological networks.

Additional Mitigation - Quarrington North

- Proposals will need to demonstrate further that adverse ecological effects can be avoided or that the benefits of the development outweigh the harm. If deterioration to ancient woodland is likely to occur following the application of standoff distances, exceptional circumstances will need to be demonstrated and a suitable compensation strategy will need to be provided.
- The landscape and visual effects of the precise extent of the void and activities on the skyline would need detailed investigation to inform design
- Further detailed investigation of the specific operations will be required to determine effects to heritage assets further. Any harm to the setting of Durham World Heritage Site, Conservation Areas and non-designated heritage assets will require clear and convincing justification and will need to be weighed against the public benefits of the proposal.

Residual Effects

- Loss of existing SSSI at Crime Rigg Quarry (scenario 3) – any alternatives may not be able to replicate this exactly
- Increased greenhouse gas emissions unless operators are able to offset these through the restoration of the sites or other offsetting activities

- All options would extend the duration and any associated impacts of disposal activity to communities and delay restoration

Response to SA Recommendations

5.2.90 The SA assessment of inert waste disposal sites is based in part upon the detailed site assessment document, which was prepared by the Spatial Policy Team, with input from other specialist teams. This document which was updated as part of work to prepare the Publication Draft Plan is intended to provide the basis for making decisions on the allocation or non-allocation of sites proposed by the minerals and waste industry. As part of considering the proposed site allocations the Spatial Policy Team have sought the views of Council specialists (landscape, ecology, cultural heritage, public rights of way and highways) and has also sought the views and engaged with National Highways, Environment Agency and Natural England.

5.2.91 In terms of the overall recommendations regarding the Quarrington North site allocation proposal both the SA and the Spatial Policy Team agree that the site should not be allocated for inert waste disposal. In terms of the overall recommendation for Cold Knuckle Site allocation proposal both the SA and the Spatial Policy Team agree that the site should be allocated. However, the Spatial Policy Team, disagree with the specific overall recommendation regarding Crime Rigg Quarry. In considering this site allocation the Council has engaged with Natural England and the policy will be written to provide flexibility for a range of waste disposal scenarios based on scenarios 2 and 3, one of which is dependent in part on an applicant demonstrating that the northern extension to Crime Rigg Quarry could become the replacement Crime Rigg SSSI. Ensuring policies are written flexibly is essential in plan preparation.

5.2.92 Harm as recommended by Natural England through their correspondence, can potentially be avoided through compensatory measures, if it can be demonstrated that the northern extension to Crime Rigg Quarry can become the replacement SSSI whilst at the same time demonstrating that comparable special interest features will be exposed during the transition period. Harm can be also avoided if an applicant can demonstrate that there will be no adverse impacts on Crime Rigg Quarry Site of Special Scientific Interest (SSSI). Policy M23 will be worded to address both eventualities whilst also being consistent with NPPF para 180.

5.2.93 The proposed mitigation measures outlined are very extensive. Many of these relate to topics or issues which will be considered by the Council in determining planning applications for waste disposal and are addressed by specific policies of the statutory development plan and therefore do not all need to be specifically addressed by any allocation policies. Specifically in relation to climate change Policy MW1 and its supporting text have been revised following discussions with the SA Team. The M&WDPD needs to be consistent with NPPF provisions on climate change.

5.2.94 A key SA concern appears to be transport emissions from HGVs. Currently all waste is transported by road within County Durham and this cannot be avoided. Over the period to 2050, emissions from HGVs will be significantly reduced as measures introduced by the

Government to decarbonise the transportation sector which include the phasing out new, non-zero emission heavy goods vehicles weighing 26 tonnes and under by 2035, with all new HGVs sold in the UK to be zero emission by 2040. Individual policies of the M&WDPDP seek to encourage the early adoption of low and zero emission vehicles and recognise that particular value will be placed upon measures which help mitigate and adapt to climate change. It is also important to recognise that the inert waste which could be disposed of at the proposed sites will need to be disposed of somewhere and it would be preferable in transport terms if this could be achieved in locations which are proximate to the source of the waste arisings. In this regard the NPPW requires that “adequate provision is made for waste disposal”. Similarly, the National Waste Management Plan for England states that the “disposal of inert waste in or on land, i.e., landfill, remains a valid way of restoring quarries and worn out mineral workings where this is a planning requirement” and “The Resources and Waste Strategy recognises there is an ongoing role for landfill in managing waste, particularly for inert waste that cannot be prevented, recovered or recycled.”

Conclusion

5.2.95 The allocation of Crime Rigg Quarry (Scenario 2) and Cold Knuckle Quarry within the M&WDPDP aligns with SA recommendations. As does the discounting of Crime Rigg (Scenario 1) and Quarrington North.

5.2.96 The allocation of Crime Rigg Quarry Scenario 3 does not align with SA recommendations, but the justification provided in terms of advice received from Natural England provides comfort that it may be possible to create a compensatory geological SSSI. The way in which this will be addressed by M&WDPDP policies is key and will require further assessment.

5.2.97 In terms of the climate change mitigation measure it is understood that any allocations made within the M&WDPDP will only be supported by an assessment of greenhouse gas emissions if they constitute Environmental Impact Assessment (EIA) development. To determine the significance of effects it is highly likely that an evaluation of a proposals carbon footprint against net zero targets/trajectories will be undertaken as best practice within the EIA. Further information is provided within paragraphs 4.1.33 and 4.1.35 of this report.

5.2.98 In relation to other issues raised in the feedback:

- Government net zero targets for HGV’s will contribute towards decreasing carbon emissions – This is acknowledged and accepted by the SA. However, these targets are at the end of the Plan period or beyond it and measures will be needed to mitigate emissions in the interim period and will be needed in addition to phasing out older HGV’s in the longer term.
- Waste has to go somewhere and it would be preferable in transport terms if this could be achieved in locations which are proximate to the source of the waste arisings – This is understood but County Durham also manages over three times more inert waste than that which is reported to arise within the county.

Next Steps

5.2.99 The following sections of this report provide the outcomes of the assessment for each of the sites selected for allocation within the M&WDPD.

5.3 Policy MW21 Site Specific Allocation, land at Thrislington West Quarry

5.3.1 Thrislington West Quarry is a large magnesian limestone and Basal Permian sand quarry located on the Magnesian Limestone Escarpment to the south of West Cornforth and east of Ferryhill. The proposed site allocation lies within the quarry void at its eastern end adjacent to the A1(M) and would enable the extraction of 5,800,000 tonnes of Basal Permian sand at a proposed rate of between 200,000 and 300,00 tonnes of sand per annum. This is commensurate with the current rate of sand extraction within the quarry.

5.3.2 The proposed site allocation would ensure the continued working of sand from this existing quarry and would be expected to extend its operation life by twenty years, depending upon annual sales meaning that the resulting end date would be circa 2045. The site allocation lies in a void of the operational quarry.

Reasonable Alternatives

5.3.3 Please see section 5.1 of this report.

Appraising Significant Changes

5.3.4 Changes have been made to the policy text between the Draft and Publication stages of M&WDPD development to improve clarity and to add more specific detail about existing access and traffic arrangements, avoiding impacts on nearby designated wildlife sites and ensuring restoration enhances ecological linkages. Whilst the amendments provide more clarity and detail, they do not significantly alter the emphasis of the policy or change the impacts previously predicted by the SA.

5.3.5 The previous SA recognised that it would be important to obtain the view of the Environment Agency in respect of the impact of the proposed allocation on the Magnesian Limestone Principal aquifer. In their consultation response, the Environment Agency have commented that the risk of pollution to groundwater in the Magnesian Limestone principal aquifer (including the Basal Permian Sands) from poor quality water in the underlying Coal Measures is high. The Environment Agency have also indicated that Groundwater Source Protection Zones are likely to be further extended around the Thrislington area in the future.

5.3.6 Whilst a high level of risk to groundwater resources has been indicated, it is considered that it will only be possible to qualify the significance of effects further once site specific hydrogeological assessments are undertaken to support any future planning application. The additional information provided by the Environment Agency has been used to update the SA and its recommendations. The negative effects previously predicted against SA objective 13 which covers impacts to water resources remain.

5.3.7 In addition to the additional information provided by the Environment Agency, the SA has also been updated to take account of a Heritage Impact Assessment (HIA) that has been undertaken since the previous SA report was published. The HIA has confirmed that impacts to heritage are likely to be nil and neutral as predicted by the previous SA.

5.3.8 Furthermore, the previous SA has been updated to take account of the potential for nutrient pollution which is a particular problem for freshwater habitats. In March 2022, Natural England published a policy paper which requires 'nutrient neutrality' to be demonstrated where protected sites are in an unfavourable condition due to excess nutrients and where new development will increase levels of nutrient pollution.⁵¹ Nutrient Neutrality catchment areas have been identified to help local authorities develop mitigation measures in these areas. Relevant development proposals in County Durham falling within the identified River Tees Catchment will need to demonstrate that mitigation can be implemented that achieves nutrient neutrality to avoid adverse impacts to the Teesmouth and Cleveland Coast Special Protection Area (SPA) and Ramsar site. Advice received by the Council from Natural England in April confirms that minerals and waste proposal will also need to demonstrate that they can be delivered without causing additional nutrient enriched water to enter the catchment.

5.3.9 Whilst the previous SA of Policy MW22 has been updated to reflect new evidence and information and associated mitigation measures, no changes to the effects previously predicted against each SA objective are required. These are repeated as follows.

Policy Assessment Outcome

5.3.10 The following table illustrates the effects the implementation of the policy is predicted to have against each SA objective. No textual changes to the policy were considered necessary. Please also see the supporting SA matrix in Appendix C which shows further detail, including the predicted breakdown of short, medium and long term effects.

⁵¹ [Natural England Policy Paper \(March 2022\) Nutrient pollution: reducing the impact on protected sites](#)

Table 34 Summary Assessment: Policy MW21

	1. Decent Affordable Homes	2. Strong Secure Communities	3. Education, Training & Lifelong Learning	4. Health: Inequalities & Lifestyles	5. Need to Travel & Sustainable Transport	6. Alleviate Deprivation	7. Economy & Employment	8. Climate Change: Mitigation	9. Climate Change: Adaptation	10. Biodiversity & Geodiversity	11. Landscape & Townscape	12. Historic Environment	13. Resources: Air, Water & Soil	14. Waste & Use of Materials	15. Minerals Extraction & Impacts
Assessment Outcome	0	0	✓	?	✓	✓	✓	X	?	0	0	0	X	✓	✓

5.3.11 No short term effects were predicted as it is anticipated that the quarry operator would continue to extract permitted reserves until 2025. In the medium to longer term, the SA predicted a mixture of minor negative, uncertain and positive social effects. Positive economic effects and a mixture of negligible, positive and negative environmental effects were also predicted. These are summarised as follows:

Social Effects

5.3.12 As Basal Permian sands in County Durham are mainly worked as a source of building sand, minor positive effects were predicted against SA objective 1 (Homes) as the allocation at Thrislington West Quarry will contribute to the supply of building sand needed to construct new homes.

5.3.13 Subject to a more detailed proposal of how the site will be worked the allocation enables the extraction of 5.8 million tonnes of Basal Permian Sand at a rate of between 200,000 and 300,00 tonnes per annum. This is commensurate with the current rate of sand extraction within the quarry so any adverse effects to communities in the mid to longer term may not increase over and above existing levels. However, as the allocation extends the operational life of the quarry to circa 2045 the potential for minor negative effects to communities are predicted.

5.3.14 Access to the existing quarry site is off the C69, opposite to the main processing plant located east of the East Coast Mainline and west of the A1(M) highway. Ensuring that this access is used will ensure that access is not within close proximity to residential properties and is a relatively secure access point with little adverse impacts on the community. The Quarry uses well established haulage routes, with the majority of HGV vehicle movements using the A1(M). The nearest properties are located approximately 250m north of the site,

in Cornforth. The residential properties in Mainsforth are approximately 900m to the south, and there are no residential properties east or west prior to the A1(M) and East Coast Mainline respectively.

5.3.15 Whilst it is likely that sand can be extracted from the proposed area within the void without any significant impacts to health and wellbeing (e.g. as a result of dust, noise etc) on nearby receptors, further detailed assessments would be required to support this at the planning application stage.

5.3.16 Positive indirect effects were predicted against education and deprivation SA objectives as the proposal would safeguard existing employment in a relatively deprived area of County Durham until circa 2045 and would lead to indirect training opportunities which are linked to employment up until this point. Should the extraction of minerals continue beyond 2045 then this would have a continued effect on education, training and employment.

Economic Effects

5.3.17 Positive economic effects were predicted as allocating the proposed sand extraction area at Thrislington West Quarry would extend the operational life of the quarry, thereby contributing to safeguarding existing employment opportunities and potentially creating new jobs in the medium and longer term.

Environmental Effects

5.3.18 Meeting the forecast need for additional sand using an existing, operational quarry, whilst extending the duration of operations will contribute towards minimising environmental impacts overall and ensure the full recovery and use of materials from site. For example, as the site is an existing working quarry, it is not likely to have any additional adverse impacts on biodiversity and geodiversity in the medium to long term. The Habitats Regulations Assessment of the site was also able to screen out any adverse impacts to the integrity of the nearby internationally designated Thrislington Special Area of Conservation (SAC). In relation to nutrient neutrality and potential indirect impacts to Teesmouth and Cleveland Coast SPA and Ramsar, the allocation lies within the Nutrient Neutrality catchment area. However, it is considered that the allocation can be delivered without causing additional nutrient enriched water to enter the designated site. This is because the site is not agricultural land and there are no nutrient enriched soils within the quarry void to be removed or stockpiled. Therefore, there is no risk of nutrients leaching out into surface and groundwater or issues associated with any run-off from soils. It is envisaged that water within the quarry void will be managed as existing within the quarry void. However, as the proposal falls within the catchment information to support any future planning application may need to set out water attenuation measures and run off rates.

5.3.19 The site is of low landscape value and low sensitivity to the effects of mineral extraction and considered to be in poor condition by virtue of it being an operational quarry. However, it is a visually contained site, and its current workings do not have a significant detrimental impact on its surroundings. However, the SA recognised that the

proposed allocation would delay the restoration of the land, although the policy requirement for a high-quality restoration and aftercare scheme to accompany proposals may provide opportunities to enhance landscape and biodiversity outcomes in the longer term.

5.3.20 The Heritage Impact Assessment undertaken also confirmed that the proposed allocation will have no impact on the significance of Listed Buildings, Scheduled Monuments, Non-Designated Heritage Assets or their setting. In addition, the proposed allocation will have no direct physical impact on conservation areas nor any element that contributes to their special historic and architectural interest, character, appearance, and significance. This is due to the subject site and the heritage assets being physically divorced the closest conservation area being c.1.3km away from the subject site in the south-east. Regarding setting, the subject site forms part of the wider landscape in which the conservation area is sited. But the contribution it makes is not particularly positive due to being contained within the existing quarry workings. Given its location, within an existing quarry void, the allocation also has very limited to no archaeological potential. Notwithstanding this, further heritage and archaeological assessment should be undertaken to support any future planning applications.

5.3.21 The main environmental impact of the proposed allocation is from the risk of pollution to groundwater in the Magnesian Limestone principal aquifer (including the Basal Permian Sands) from poor water quality in the underlying Coal Measures. The Environment Agency consider this risk to be high and have indicated that groundwater source protection zones may be extended to cover the Thrislington area in the future. The north-eastern extent of the proposed site currently falls within Groundwater Source Protection Zone (SPZ) 3. There is also uncertainty around what impact deepening the existing void may have on the water table and risk of groundwater flooding. Detailed hydrogeological assessment would be required to inform the planning decision.

5.3.22 Whilst negative climate change effects are predicted as allocating the proposed sand extraction area extends the operational life of the quarry and will continue greenhouse gas emissions associated with its working, the SA acknowledged a couple of advantages to allocating Thrislington West Quarry in respect of reducing the causes of climate change. These are:

- There would be no need to remove overlain material to access the sand which could increase the emissions associated with extraction; and
- There are opportunities to make use of existing rail connections to the site to minimise emissions associated with transport.

5.3.23 Policy requirements such as ensuring the existing quarry access and facilities are used and that the scheme is accompanied by high quality restoration proposals contribute more widely towards the achievement of sustainable mineral development and minimising social and environmental impacts.

Significant Issues

High risk to groundwater resources identified

Recommendations / Mitigation

5.3.24 Please note that the references used below relate to the specific social (SOC), economic (ECO) and environmental (ENV) mitigation measure proposed in the detailed matrix for this policy as presented in Appendix C.

- SOC1 - Detailed assessments on the impact of working the site on human health and wellbeing will be required to inform the planning decision
- ENV1 & ENV4 – Hydrogeological assessments will be required to inform the planning decision and any associated mitigating measures and conditions. Proposals should also include an outline of measures which avoid or minimise air and water pollution. In the event that the supporting information provided does not sufficiently demonstrate that individual and cumulative risks are acceptable and can be mitigated, permission should be refused.
- ENV2 - Proposals should be supported by ecological assessments in order to identify the presence or absence of protected/priority species and any associated mitigation measures, including those relating to water attenuation.
- ENV3 - Further historic and archaeological assessments should be undertaken to support any future planning applications.
- ENV5 - In the event that groundwater Source Protection Zones are further extended within the allocated area, the implications of this will need to be taken into account as part of a future review of minerals permissions.
- ENV6 - Planning applications should also be supported by an assessment of greenhouse gas emission and an evaluation of their significance against net zero targets where EIA development.

Residual Impacts

- The loss of part of the principal aquifer would be a residual impact of working the proposed extraction area.
- Continued greenhouse gas emissions associated with working the quarry
- Delay to the restoration of the quarry

Response to SA Recommendations

5.3.25 The Spatial Policy Team note the SA recommendations. Policy MW22 will be used in conjunction with other relevant development plan policies to determine any future planning application that is submitted to the Council. The SA recommendation/mitigation refers to a range of assessments to inform the planning decision. In accordance with policy requirements and the Council's existing Planning Application Validation Checklist a range of detailed assessments would be required at the planning application stage.

5.3.26 An Environmental Impact Assessment should be required and separate assessments on a range of matters will also be needed including but not limited to a transport assessment, visual and landscape assessment, heritage assessment/statement, ecological assessment, noise, dust, vibration from blasting, lighting assessment, an agricultural land classification report and a Hydrogeological Risk Assessment. Should planning permission be granted it is intended that the permission will require and that suitable groundwater monitoring and mitigation measures are in place or can be implemented. When necessary, all planning permissions will be subject to a periodic review.

Conclusion and Outstanding Issues

5.3.27 The SA has identified the need for further detailed assessment to support the planning application stage and identify specific mitigation measures. It will not be possible to qualify the significance of effects to groundwater resources further until a hydrogeological assessment is undertaken in support of a planning application. This is an outstanding issue.

5.3.28 Please note that the need to deal with uncertainties is not uncommon to the SA process. The appraisal of development plans is rarely straightforward and the outcome may include considerable levels of uncertainty. SA is not Environmental Impact Assessment (EIA), so detailed site-specific information about the environmental qualities of sites is often not available to determine effects more precisely.

5.4 Policy MW22 Site Specific Allocation, northern extension to Crime Rigg Quarry

5.4.1 Crime Rigg Quarry is a medium sized magnesian limestone and Basal Permian sand quarry, located on the Magnesian Limestone Escarpment, approximately 7km east of Durham City and immediately east of Sherburn Hill. The proposed allocation of a northern extension to the quarry would enable the extraction of 910,000 tonnes of Basal Permian sand together with an overlying quantity of 1,775,000 tonnes of magnesian limestone at an expected rate of 40,000 tonnes of sand and 100,000 tonnes of magnesian limestone per annum.

5.4.2 The proposed site allocation would ensure the continued working of sand and magnesian limestone from this existing quarry and would be expected to extend its operation life by 18-20 years, subject to annual sales. The resulting end date would be circa 2043/2045. Quarrying would start circa 2025 to ensure sufficient sand has been exposed in the extension to enable extraction to commence immediately upon exhaustion of the current reserves in Crime Rigg Quarry.

Reasonable Alternatives

5.4.3 Please see section 5.1 of this report.

Appraising Significant Changes

5.4.4 Changes have been made to the policy text between the Draft and Publication stages of M&WDPD development to improve clarity and to add more specific detail about restoration requirements and existing access and traffic arrangements. The amendments regarding restoration of the northern extension reflect the new allocation of land for inert waste infilling at Crime Rigg Quarry (Please see policy MW23) and associated advice received from Natural England.⁵² This relates to ensuring that if further inert waste infilling takes place at Crime Rigg, the proposed northern extension to the Quarry could become the replacement geological SSSI, subject to demonstrating its viability and that comparable special interest features could be exposed during the transition period.

5.4.5 Natural England also published a policy paper in March 2022 which requires 'Nutrient Neutrality' to be demonstrated where excess nutrients are adversely affecting the condition of protected sites and new development has the potential to exacerbate this. Further consideration of this issue has therefore been included in the SA of the proposed northern extension to Crime Rigg Quarry.

5.4.6 Historic England in their consultation response on the Draft Plan advised that further assessment of Shadforth Conservation Area and Ludworth Tower would be required before allocating the northern extension to Crime Rigg for development. They advised that impacts should be assessed as uncertain (as opposed to negligible) until more detailed assessment is carried out. Heritage Impact Assessments have since been completed and the outcome of this has therefore been included within the SA.

5.4.7 The previous SA recognised that it would be important to obtain the view of the Environment Agency in respect of the impact of the proposed allocation on the Magnesian Limestone Principal aquifer. In their consultation response, the Environment Agency have commented that the risk of pollution to groundwater in the Magnesian Limestone principal aquifer (including the Basal Permian Sands) from poor quality water in the underlying Coal Measures is high.

5.4.8 Whilst a high level of risk to groundwater resources has been indicated, it is considered that it will only be possible to qualify the significance of effects further once site specific hydrogeological assessments are undertaken to support any future planning application. The additional information provided by the Environment Agency has however, been used to update the SA and its recommendations. The negative effects previously predicted against SA objective 13 which covers impacts to water resources remain

5.4.9 As a result of the new emphasis placed on the restoration of the northern extension to Crime Rigg Quarry and further evidence and information, the previous SA has been updated.

Policy Assessment Outcome

5.4.10 The following table illustrates the effects the implementation of the policy is predicted to have against each SA objective. The table shows that the assessment outcome for short and medium term effects remains unchanged from the previous assessment but

⁵² Email received from Natural England (31/03/2022) Reference: 386570

longer term effects against SA objectives 8 (climate change), 11 (landscape) and 15 (minerals) have been revised. Please also see the supporting SA matrix in Appendix C which provides further detail.

Table 35 Summary Assessment: Policy MW22

	1. Decent Affordable Homes	2. Strong Secure Communities	3. Education, Training & Lifelong Learning	4. Health: Inequalities & Lifestyles	5. Need to Travel & Sustainable Transport	6. Alleviate Deprivation	7. Economy & Employment	8. Climate Change: Mitigation	9. Climate Change: Adaptation	10. Biodiversity & Geodiversity	11. Landscape & Townscape	12. Historic Environment	13. Resources: Air, Water & Soil	14. Waste & Use of Materials	15. Minerals Extraction & Impacts
Short and Medium Term Effects	0	X	✓	?	X	✓	✓	X	?	X	✓/X	0	X	X	X
Long Term Effects 2021 Assessment	0	0	✓	?	0	✓	✓	0	?	✓	✓	0	X	✓	✓
Long Term Effects 2022 Assessment	0	0	✓	?	0	✓	✓	X	?	✓	0	0	X	✓	0

5.4.11 The SA predicted a mixture of positive, negative and uncertain social effects. Economic effects were predicted to be positive. Environmental effects were predominantly predicted to be negative in the short and medium term with the potential for either negligible or positive longer term effects. These are summarised as follows:

Social Effects

5.4.12 As Basal Permian sands in County Durham are mainly worked as a source of building sand, minor positive effects were predicted against SA objective 1 (Homes) as the northern extension to Crime Rigg will contribute to the supply of building sand needed to construct new homes. However negative effects against SA objective 2 (Communities) were predicted in the short to medium term, primarily due to HGV movements. Please note, the nearest properties are located approximately 0.6km north of the site, (Haswell Moor Farm) and 0.6km south of the site (Hill House Farm). The residential properties in the settlement of Ludworth are approximately 1km to the southeast, Residential properties in Sherburn Hill are approximately 1.2km to the north west.

5.4.13 As the extraction of overlying magnesian limestone in the northern extension would be worked concurrently for a limited period (assumed between 2025- 2029) with the existing quarry, the number of vehicle movements associated with the site is likely to increase over the short to medium term. However, it is anticipated that such movements would not exceed those conditioned by existing planning permissions. Whilst an estimation of vehicle movements has been provided within the M&WDPD Site Assessment document and has concluded that traffic volumes should be safely accommodated on the local highways network this would need to be confirmed by a Transport Assessment. The proposed extension also extends the operational life of the quarry and associated haulage of minerals near to settlements for 18-20 years.

5.4.14 The requirements within the policy to utilise the existing quarry access and relocate existing site processing storage, plant and other infrastructure to the extension area could contribute towards mitigating effects but Traffic and Transport Assessments will be required to ensure all appropriate avoidance and mitigation measures are established. Further detail on the measures which will be put in place to ensure site security and community safety would also be required.

5.4.15 Minor negative effects are predicted in the longer term as the period of concurrent working will have finished and remaining reserves will either be exhausted or close to exhaustion by 2043/2045.

5.4.16 Uncertain effects were predicted against SA objective 4 (Health) as it is not possible to ascertain whether there will be any impact on nearby receptors in respect of noise, emissions to air and vibration to levels which could adversely impact on health until a detailed assessment is undertaken in support of any planning application.

5.4.17 Positive effects were predicted against SA objective 3 (Education) and 6 (Deprivation) as the proposal would safeguard existing employment at the site until circa 2043/2045 and could lead to training opportunities which are linked to employment up until this point. As the northern extension area is situated within Shadforth Lower Super Output Area (LSOA) which is within the top 20 to 30% deprived nationally, the continued use of the quarry for mineral extraction safeguards and supports employment in a deprived area.

Economic Effects

5.4.18 Positive economic effects are predicted as allocating the proposed northern extension to Crime Rigg Quarry would extend the operational life of the quarry, thereby prolonging its contribution to the local economy. The northern extension will also contribute to safeguarding existing direct and indirect employment opportunities and potentially create new jobs, predominantly in the short to medium term.

Environmental Effects

5.4.19 In relation to SA objective 5 (Travel), the SA recognised that a northern extension to Crime Rigg Quarry is likely to ensure that new working is served by good access to the A1(M) for onward transportation to markets. In addition, the policy requirement to relocate existing site processing storage, plant and other infrastructure to the extension area is likely

to minimise the distance travelled associated with the storage and processing of minerals. Whilst the reduction in the distance travelled between the existing and relocated location of such infrastructure is likely to be minimal, there could be a positive cumulative effect in reduced trip distances over the operation life of the extension area.

5.4.20 However, negative short and medium term effects were predicted overall against SA objective 5 (Travel) as the working of the site is likely to increase vehicle movements over and above existing levels. In addition, to access the required Basal Permian Sand, the overlying magnesian limestone will need to be extracted first. The Local Aggregate Assessment has advised no further provision of magnesian limestone is required in the long term and therefore the working of the northern extension increases HGV movements over and above the working of other sand and gravel resources where overburden removal would not be required. However, whilst the County Durham Plan is clear that no further provision of magnesian limestone is required over the Plan period, policy 47 is permissive towards the concurrent working of minerals.

5.4.21 An increase in vehicle movements and need to extract magnesian limestone first will increase greenhouse gas emissions associated with minerals working. The extension would also extend the operation life of the quarry and will continue the greenhouse gas emissions associated with its working. The SA recognised that in the longer term, restoration proposals could contribute towards offsetting the emissions generated e.g. if native woodland is planted. However, the opportunities for offsetting emissions through tree planting may be more limited if the restoration needs to focus on providing a replacement geological SSSI because of further waste infilling at Crime Rigg Quarry. As the M&WDPD seeks to allocate further waste infilling at Crime Rigg Quarry it is considered more likely that the future restoration of the northern extension could be focused towards providing a replacement geological SSSI. Longer term effects are therefore assessed as negative as opposed to neutral. Planning applications should be supported by an assessment of greenhouse gas emission and an evaluation of their significance against net zero targets where EIA development.

5.4.22 In relation to impacts to biodiversity and geodiversity, the site is not overlain by any international, national or local nature conservation designations and is remote from and not connected to European Protected sites. The proposed site allocation also lies outside of the Nutrient Neutrality catchment area within County Durham as defined by Natural England for the protection of Teesmouth and Cleveland Coast SPA and Ramsar. However, the site is adjacent to Crime Rigg Quarry SSSI (designated for its geological importance) and within 1.5km of Sherburn Hill SSSI (one of the few surviving sites on the escarpment supporting semi-natural Magnesian Limestone vegetation). Further assessment would be required to determine effects at the planning application stage, including the presence/absence of protected species.

5.4.23 The policy requirement that 'planning applications are accompanied by an acceptable scheme of phased working and a high quality restoration and aftercare scheme which provides biodiversity net gain, enhances and improve ecological linkages to adjacent and

nearby designated sites and support coherent ecological networks and maximises geodiversity benefits' should contribute to positive longer term effects.

5.4.24 Whilst the northern extension area lies outside of the Crime Rigg Quarry SSSI there may be opportunity to restore the extension in a way which exposes and creates features of geodiversity interest. This potential opportunity has since been confirmed by Natural England in their consultation response. The supporting text to the policy recognises that geological features could be created on restoration along with the potential for the northern extension to become the replacement geological SSSI (subject to demonstrating viability) if further waste infilling within the existing Crime Rigg Quarry takes place.

5.4.25 In relation to landscape and visual impacts, the working of reserves in this area would be unlikely to result in significant landscape and visual effects subject to detailed design and particularly in respect of the use of screening landforms. Please note, the policy requires that the proposal includes such advance and preparatory works as deemed necessary (such as screening landforms) in order to safeguard landscape and visual impacts. These will also need to take account of measures to screen the re-location of existing site processing, storage, plant and other infrastructure to the extension area.

5.4.26 Recognition in the supporting text that a range of attractive geological features and habitats could be developed through site restoration could contribute to longer term landscape enhancement. However, the opportunities for landscape enhancement may be more limited if the restoration needs to focus on providing a replacement geological SSSI because of further waste infilling at Crime Rigg Quarry. As the M&WDPD seeks to allocate further waste infilling at Crime Rigg Quarry it is considered more likely that the future restoration of the northern extension could be focused towards providing a replacement geological SSSI. Longer term landscape and visual effects are therefore assessed as neutral as opposed to positive.

5.4.27 In relation to cultural heritage and the historic environment, effects were previously assessed as neutral and the Heritage Impact Assessment (HIA) which has since been undertaken (February 2022) confirms this assessment outcome. The heritage assets that were included within the scope of the assessment were:

- Ludworth Tower (scheduled monument)
- Listed buildings
- Shadforth Conservation Area
- Key non-designated heritage assets

5.4.28 The HIA concludes that the proposed northern quarry extension would not have any direct effect on the significance (physical fabric) of any identified heritage asset. The impact upon the setting(s) of the heritage assets identified would be either nil, or minor with the magnitude of effect neutral. As no harm has been identified those settings would be conserved. In 2018, the Council's archaeological team also confirmed that the archaeological potential at the site is also likely to be limited. However, through the planning application process any site more than 1ha in size would need evaluation with subsequent mitigation (generally excavation and recording) if anything found.

5.4.29 In relation to air, water and soil resources, the main impact of significance is to water resources. The site lies on the Magnesian Limestone Escarpment which is a principal aquifer and within groundwater Source Protection Zone 3. The site also lies in a groundwater nitrate vulnerable zone (NVZ). The Environment Agency have identified a high risk of pollution to groundwater in the Magnesian Limestone principal aquifer (including the Basal Permian Sands) from poor quality water in the underlying Coal Measures. Planning applications will need to be supported by hydrogeological assessment and site-specific information to demonstrate that the risks of working the area are acceptable and can be mitigated. The Environment Agency also highlighted that the northern extension is close to a pond and that mitigation measures will be required to prevent pollution of the surrounding water environment at every stage of the works.

5.4.30 The proposed northern extension is grade 3 agricultural land and may therefore be best and most versatile agricultural land depending upon whether it is grade 3a or grade 3b land. Further assessment of the land quality is likely to be required to support a planning application. There will be less opportunity to reinstate the extension area to its original or better agricultural land quality if a replacement geological SSSI needs to be created as part of restoration proposals. Good management of soils will also be required whilst the site is operational.

5.4.31 Emissions to air will occur because of the likely increase in vehicle movements. In addition, dust emissions are likely to increase because of blasting and further assessment will need to be made of the effects of the development on emissions to air. Appropriate conditions are likely to be required as part of any planning application to ensure dust is suppressed. A dust mitigation strategy may be required.

Summary

5.4.32 Whilst the working of the northern extension is likely to have limited impacts upon landscape, heritage and biodiversity it would require the extraction of magnesian limestone where no further provision of this mineral is required. In addition to extending the operational life of the quarry this could increase HGV's movements in the short to medium term and impact negatively on groundwater resources. The delivery of a variety of longer-term benefits may be limited if the northern extension needs to become a replacement geological SSSI. How the site is restored depends upon the scheme which is developed.

Significant Issues

High risk to groundwater resources identified

Recommendations / Mitigation

5.4.33 Please note that the references used below relate to the specific social (SOC), economic (ECO) and environmental (ENV) mitigation measure proposed in the detailed matrix for this policy as presented in Appendix C.

- SOC1 – Proposals are to be accompanied by a Traffic and Transport Assessment and details of the measures which will be put in place to ensure site security and community safety.
- SOC2, SOC4, SOC5 – The SA previously recommended that wording be included which required the extension area to deliver community benefits.
- SOC3 – Detailed assessments on the impact of working the northern extension both concurrently with the existing quarry and on separately on human health and wellbeing will be required to inform the planning decision.
- ENV1, ENV2 - Proposals are to be accompanied by a Traffic and Transport Assessment. Planning applications should also be supported by an assessment of greenhouse gas emission and an evaluation of their significance against net zero targets where EIA development.
- ENV3, ENV7 – Proposals should be accompanied by a hydrogeological assessment and an outline of measures which avoid or minimise air and water pollution. The assessment would also need to take into account the cumulative impacts of minerals working and other activities on the Principal Aquifer. If unacceptable impacts (individual and cumulative) cannot be avoided, then permission should be refused.
- ENV4 - Proposals should be supported by ecological assessments in order to identify the presence or absence of protected/priority species and any associated mitigation measures.
- ENV5 – The advance and preparatory works deemed included within the proposal to minimise landscape and visual impacts will also need to relate to the relocation of existing site processing, storage plant and other infrastructure.
- ENV6 – Proposals should be accompanied by an appraisal of impact on cultural heritage along with an archaeological evaluation
- ENV8 - Further assessment of the impact on surface water resources will be required to support any future planning application along with the identification of suitable mitigation measures to prevent pollution.
- ENV9 - Through the preparation of a planning application an agricultural land classification statement would be required to assess the quality of the agricultural land.

Residual Impacts

- The proposal would extend the operational life of the quarry (and associated greenhouse gas emissions etc)
- The requirement to extract Magnesian Limestone in order to access Basal Permian sand is a residual effect
- Increased vehicle movement associated with working the existing site concurrent with the northern extension
- Permanent change to natural topography
- Loss of part of the principle aquifer

Response to SA Recommendations

5.4.34 The suggested change to the policy wording regarding community benefits was not accepted as Policy MW3 (Benefits of Minerals Extraction) and Policy MW22 (Mineral Site Restoration, Landfill and Landraise) will both apply. Spatial Policy note the other SA recommendations.

5.4.35 Policy MW23 will be used in conjunction with other relevant development plan policies to determine any future planning application that is submitted to the Council. The SA recommendation/mitigation refers to a range of assessments to inform the planning decision. In accordance with policy requirements and the Council's existing Planning Application Validation Checklist a range of detailed assessments would be required at the planning application stage.

5.4.36 An Environmental Impact Assessment should be required and separate assessments on a range of matters will also be needed including but not limited to a transport assessment, visual and landscape assessment, heritage assessment/statement, ecological assessment, noise, dust, vibration from blasting, lighting assessment, an agricultural land classification report and a Hydrogeological Risk Assessment. Should planning permission be granted it is intended that the permission will require that suitable groundwater monitoring and mitigation measures are in place or can be implemented. When necessary, all planning permissions will be subject to a periodic review.

Conclusion and Outstanding Issues

5.4.37 The SA has identified the need for further detailed assessment to support the planning application stage and identify specific mitigation measures. It will not be possible to qualify the significance of effects to groundwater resources further until a hydrogeological assessment is undertaken in support of a planning application. This is an outstanding issue.

5.4.38 Please note that the need to deal with uncertainties is not uncommon to the SA process. The appraisal of development plans is rarely straightforward and the outcome may include considerable levels of uncertainty. SA is not Environmental Impact Assessment (EIA), so detailed site-specific information about the environmental qualities of sites is often not available to determine effects more precisely.

5.5 Policy MW23: Site Specific Allocation Inert Waste Disposal at Crime Rigg Quarry

5.5.1 Crime Rigg Quarry lies on the Magnesian Limestone Escarpment and is located approximately 4 km to the east of Durham. The site allocation extends to 11 hectares and lies on a low ridge between the shallow valleys of the Sherburn Hill Burn and the Shadforth Beck. It is the eastern part of the current operational quarry made up of an open void with perimeter soil mounds and structure planting.

5.5.2 Potentially, the site allocation would enable approximately 200,000 tonnes (133,000 cubic metres) of inert waste to be imported per annum which is commensurate with the

existing scale of inert waste disposal. Depending on acceptability, the policy provides flexibility and could support either:

- A low level restoration scheme, providing 1,541,000 net cubic metres capacity. This is akin to the scenario 2 option that was subject to assessment; or
- A high level restoration scheme, providing 3,226,000 net cubic metres capacity. This is akin to the scenario 3 option that was subject to assessment.

Reasonable Alternatives

5.5.3 Please see section 5.2 of this report.

Appraising Significant Changes

5.5.4 Not applicable. This is a new policy which has been included in the M&WDPD and has not been previously assessed.

Policy Assessment Outcome

5.5.5 The following table illustrates the mixture of short, medium and long term effects predicted against each SA objective relating to the policy. The table also shows where there are differences in the effects predicted depending on whether a low level or high level restoration is forthcoming and permitted by the policy. Please also see the supporting SA matrix in Appendix C which shows further detail, including the predicted breakdown of short, medium and long term effects.

Table 36 Summary Assessment: Policy MW23

	1. Decent Affordable Homes	2. Strong Secure Communities	3. Education, Training & Lifelong Learning	4. Health: Inequalities & Lifestyles	5. Need to Travel & Sustainable Transport	6. Alleviate Deprivation	7. Economy & Employment	8. Climate Change: Mitigation	9. Climate Change: Adaptation	10. Biodiversity & Geodiversity	11. Landscape & Townscape	12. Historic Environment	13. Resources: Air, Water & Soil	14. Waste & Use of Materials	15. Minerals Extraction & Impacts
2022 Assessment (Low Level Restoration)	0	0	✓	?	✗	✓	✓	✗	?	✗	✓/✗	0	✓/✗	?	✗
2022 Assessment (High Level Restoration)	0	✗	✓	?	✗✗	✓	✓✓	✗✗	?	✗	✓/✗	0	✓/✗	?	✗

5.5.6 Please note that no short-term effects were predicted as the inert waste disposal associated with the allocation would not occur until towards the end of the Plan period. Overall, the SA predicted less adverse social and environmental effects if a low level restoration scheme is permitted in accordance with the policy but better economic effects if a high level restoration scheme is permitted.

Social Effects

5.5.7 Potentially the site allocation would enable approximately 200,000 tonnes (133,000 cubic metres) of inert waste to be imported per annum. This is commensurate with the existing scale of inert waste disposal within the quarry so any adverse effects to communities in the mid to longer term may not increase over and above existing levels.

5.5.8 However both restoration schemes are predicted to have negative effects as they will extend the operational life of the quarry and associated HGV movements near to settlements (Sherburn Hill, Ludworth and Shadforth) until either 2041 as part of a low level restoration scheme or 2054 as part of high level restoration scheme. This equates to between 17-30 more years beyond the current 2024 restoration date, 12-25 years beyond the anticipated exhaustion date and a further 9-22 years beyond the 2032 timescale that planning is intended to be sought for.

5.5.9 Minor negative effects are predicted with a low level restoration scheme whereas negative effects are predicted with a high level restoration scheme as it will significantly extend the duration of site operations until the 2050s.

5.5.10 Positive effects are however, predicted against SA objective 3 (education) and 6 (deprivation) as the allocation would safeguard existing employment and training at the quarry until either 2041 or 2054 depending on which restoration proposal is submitted and found acceptable.

5.5.11 In terms of impacts to health and wellbeing, the area within Crime Rigg quarry where the proposed infilling with inert waste is proposed is within 0.5km of Ludworth, 1.2km east of Sherburn Hill and within 0.6km of residential properties at Churchill Terrace. Given the distances involved, inert waste could potentially be imported without any significant impacts to health and wellbeing (e.g. as a result of dust, noise, odour etc). Further detailed assessments would be required to support this at the planning application stage, including an assessment of cumulative impacts.

5.5.12 Criteria within the policy will also contribute towards safeguarding health and wellbeing i.e.:

- That the planning application includes any further preparatory works as are deemed necessary. This could include for example, the creation of noise barriers
- Existing plant and infrastructure is utilised, minimising the need for new facilities which could affect health and wellbeing through noise, dust etc

- That applicants demonstrate that there will be no unacceptable adverse impacts on the environment, human health or the amenity of local communities.

5.5.13 Policy MW1, also requires that the potential cumulative effects of proposals are taken into account.

Economic Effects

5.5.14 Both a lower level restoration scheme and a high level restoration scheme are predicted to have positive economic effects. However, a high restoration scheme is predicted to have very positive effects although this is dependent on providing an alternative geological Site of Special Scientific Interest (SSSI).

5.5.15 A lower level restoration scheme could extend the operational life of the inert landfilling operations at the quarry until 2041 i.e a total of 12 years and a further 9 years beyond the 2032 timescale that planning is intended to be sought for. This scenario therefore ensures continued inert landfilling operations and safeguards associated employment throughout the plan period and for 6 years beyond this.

5.5.16 A high level restoration scheme involves the complete restoration of the quarry void with inert waste to surrounding land levels, increasing capacity by approximately 3,226,000 cubic metres net. This scheme could extend the operational life of the inert landfilling operations at the quarry until 2054 i.e a total of 25 years and a further 22 years beyond the 2032 timescale that planning is intended to be sought for. This scenario therefore ensures continued inert landfilling operations and safeguards associated employment throughout the plan period (to 2035) and for 19 years beyond this.

5.5.17 However, it is acknowledged that for both restoration schemes, the number of years worked beyond the Plan period would depend on several factors including start date and actual disposal rates. The allocation should provide for both direct and indirect employment associated with disposal of inert waste. There would also be opportunities for businesses, including local companies to supply goods and services throughout the life of the site allocation.

Environmental Effects

5.5.18 Both a lower level restoration scheme and a high level restoration scheme will increase total vehicle movements associated with infilling waste at Crime Rigg Quarry. Very negative effects are predicted if a high level restoration proposal is proposed as this will significantly increase the duration of infilling operations and vehicle movements and associated emissions.

5.5.19 Accordingly, negative and very negative impacts to climate change are predicted depending upon which scheme is submitted. A high level restoration scheme could significantly increase transportation requirements and will commit to greenhouse gas emissions associated with inert waste landfilling for longer within the county until 2054 i.e. 9 years beyond the period that carbon neutrality within the county needs to be achieved. However, in predicting longer term negative effects, the SA recognises that the Government

has announced phase out dates to ensure all new HGV's are zero emissions by 2040 at the latest. From 2040 onwards there may therefore be a declining quantity of HGV related emissions as older HGV's are phased out. Longer term effects are therefore predicted to reduce from very negative to negative if a high level restoration scheme is approved in accordance with the policy. If residual emissions from landfilling activity are not offset through for example restoration/afteruses e.g. woodland creation or voluntary measures undertaken by the operator, these would need to be compensated for by other offsetting activity and climate positive actions (i.e. where more carbon is removed than emitted) taking place within the county. Monitoring would be required to ensure this is happening in line with the milestones towards net zero.

5.5.20 In terms of impacts to geodiversity, negative medium term impacts are predicted with the potential for possible longer term positive effects. Crime Rigg Quarry is situated within Crime Rigg Quarry Site of Special Scientific Interest (SSSI). The SSSI has been identified as of national importance in the Geological Conservation Review. The key risk to the SSSI from infilling with waste would be the concealment of existing exposed faces.

5.5.21 The contours for the low level restoration within the eastern void would fall to the 'toe' of the northern quarry wall and should protect the integrity of Crime Rigg Quarry SSSI, although this will need to be demonstrated. However, the presence of notable Schedule 1 listed species at the quarry have been identified and additional infilling with waste compared to the previously approved restoration profile may increase levels of disturbance. Suitable mitigation measures may need to be identified to ensure their continued protection

5.5.22 A high level restoration scheme would result in the burial of the SSSI and potential loss of habitat for protected species. These impacts are unlikely to be avoided and would need to be compensated for. Natural England have advised the Council that if a northern extension to the quarry is worked (as allocated within the Plan), they anticipate that the geological exposures within this extension area could potentially be comparable with the existing SSSI. Criterion d of the policy would require a high level restoration scheme to demonstrate 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. This requirement provides comfort that if a high level restoration scheme is forthcoming, it will not be permitted if compensation cannot be achieved. Negative effects as opposed to very negative effects are therefore predicted.

5.5.23 The policy requirement that 'planning applications are accompanied by an acceptable scheme of phased disposal and a high quality restoration and aftercare scheme which delivers a range of appropriate environmental enhancements including but not limited to biodiversity net gain which enhances and improves ecological linkages to designated sites and supports the coherence of ecological networks, whilst also supporting the delivery of the Local Nature Recovery Strategy is likely to contribute to positive longer term effects, compared to the existing approved restoration. It is recognised that restoring the quarry to either a lower level or high level restoration scheme provides greater opportunities for the creation of a range of habitats with a high ecological value compared to the existing

approved restoration. A high level restoration scheme would provide the greatest benefits and criterion e of the policy requires that disposal is phased with restoration. However, it would take approximately 13 more years to complete restoration compared to a lower level scheme.

5.5.24 In terms of impacts to landscape character/quality medium term effect could be positive or negative depending on implementation and longer term effects could be positive. The allocation is not located within a local or nationally designated landscape. The site lies within an area identified in the County Durham Landscape Strategy (2008) as a Landscape Improvement Priority Area (LIPA) with a strategy of 'enhance'. The landscape assessment of the site has advised that the importation of waste would be unlikely to result in significant landscape and visual effects subject to detailed design. The policy requires that the planning application includes any further preparatory works as are deemed necessary to safeguard the local landscape.

5.5.25 Both a lower and high level restoration scheme could provide further benefits to landscape character and quality than the existing approved restoration as the highest level of landscape mitigation is likely to arise from restoration to something close to original levels and to an enhanced agricultural value with a high nature conservation value: limestone grassland, native woodland and species rich hedges. Restoration of the site through the use of inert waste could compensate for the loss of agricultural land due to mineral working. A high level restoration is therefore likely to provide the greater benefits and criterion e of the policy requires that disposal is phased with restoration. However, it would take approximately 13 more years to complete restoration compared to a lower level scheme.

5.5.26 Impacts to heritage are assessed as neutral. The Council has undertaken a Heritage Impact Assessment (HIA) for Crime Rigg Quarry and inert waste disposal (February 2022). The allocation is not located within a Conservation Area and will have no direct impact on heritage assets. The Heritage Impact Assessment undertaken of Crime Rigg Quarry concluded that the impact on the setting of a scheduled monument (Shadforth Tower), listed buildings and Shadforth Conservation Area would be either nil or neutral. As an operational quarry void, the proposed scenarios would have no archaeological potential.

5.5.27 The quarry is situated on the Magnesian Limestone Escarpment which is a principal aquifer and is fully situated within groundwater Source Protection Zone 3. The site also lies in a groundwater nitrate vulnerable zone (NVZ). There is therefore a high risk of pollution to groundwater. However, no dewatering is undertaken within the current quarry and the operator have advised that the base of the current sand extraction and inert landfill lies above the water table. In addition, the SA recognises that infilling with inert waste compared to other waste types is a lower risk to groundwater. Nonetheless, planning applications will need to be supported by hydrogeological assessment and site-specific information to demonstrate that the risks of working the area are acceptable and can be mitigated.

5.5.28 Whilst the policy is concerned with allocating capacity for the disposal of inert waste, the SA was able to predict possible positive effects against reducing waste and encouraging the sustainable and efficient use of materials if a low level restoration scheme is proposed and permitted in accordance with the policy. This is explained as follows.

5.5.29 An additional 1,541,000 cubic metres is estimated to provide capacity to 2041. This estimate assumes that deposits will be 200,000 tonnes per annum and even if the rate of disposal increases it will be limited by planning conditions relating to allowable vehicle movements to and from the site. This scheme could therefore contribute towards meeting the identified capacity gap over the Plan period to 2035 but not all of the capacity provided will be used. If landfilling commences in 2030 it is estimated that by 2035, 665,000 cubic metres will be utilised leaving a remaining 876,000 cubic metres (or 57%) that could provide capacity for a further 6 years beyond the Plan period. Whilst the capacity gap would need to be reviewed to determine need beyond the Plan period it is considered unlikely that the allocation would result in the creation of excessive landfill provision in the longer term.

5.5.30 However, if a high level restoration scheme is proposed, using the same assumptions it is estimated that by 2035 2,561,000 cubic metres of capacity will be remaining which is 79% of the additional capacity provided by this restoration scheme. There is therefore a higher risk that given the quantity of remaining void space, excessive long term landfill provision could be created if other void space at Bishop Middleham and Old Quarrington also become available over the Plan period. To address this uncertainty, the SA suggests the inclusion of an additional criterion to the policy to ensure that an appropriate level of capacity can be approved, taking account of the latest situation at the planning application stage.

Significant Issues

High risk to groundwater resources identified

Recommendations / Mitigation

5.5.31 Please note that the references used below relate to the specific social (SOC), economic (ECO) and environmental (ENV) mitigation measure proposed in the detailed matrix for this policy as presented in Appendix C.

- SOC1 and ENV1: Proposals should be accompanied by a Traffic and Transport Assessment and details of the measures which will be put in place to ensure site security and community safety.
- SOC2: Detailed assessments on the impact of infilling the void with inert waste individually and cumulatively with existing minerals and waste operations at Crime Rigg Quarry and within the wider area on human health and wellbeing will be required to inform the planning decision.
- ENV2: Planning applications should be supported by an assessment of greenhouse gas emission and an evaluation of their significance against net zero targets where EIA development.

- ENV3 and ENV7: Hydrogeological assessments will be required to inform the planning decision and any associated mitigating measures and conditions. The assessment would also need to take into account the cumulative impacts of minerals working and other activities on the Principal Aquifer. If unacceptable impacts (individual and cumulative) cannot be avoided, then permission should be refused.
- ENV4: Proposals should be supported by ecological assessments in order to identify the presence or absence of protected/priority species and any associated mitigation measures. Mitigation measures may also be needed to ensure disturbance levels to protected species can be avoided or minimised to acceptable levels.
- ENV5: proposals should be supported by a detailed appraisal of impact on landscape and visual impact.
- ENV6: Proposals should be accompanied by an appraisal of impact on heritage assets
- ENV7: Proposals should be accompanied by Air quality and hydrogeological assessments and an outline of measures which avoid or minimise air and water pollution (both surface and ground waters). When submitting proposals due regard should be given to the Environment Agency's Landfill Technical Guidance: [Environmental Permitting Landfill Sector Technical Guidance](#)
- ENV8: Suggest inclusion of the following criterion to enable an assessment of need to be undertaken if a high level restoration scheme is proposed. This will allow for account to be taken of the latest situation at the planning application stage:
The proposal would not result in an over provision of capacity which would lead to excessive importation of inert waste from outside County Durham.

Residual Impacts

- The proposal would extend the operational life of the quarry (and associated travel requirements and greenhouse gas emissions etc)
- Whilst the policy aims to ensure mitigation for Crime Rigg Quarry SSSI can be achieved, even if an alternative site can be satisfactorily created it may not exactly replicate the existing SSSI.

Response to SA Recommendations

- SOC1 and ENV1 (Traffic and transport assessments): Partially Agreed - Paragraph 9.39d refers to the requirements for a Transport Assessment and this is also a requirement of Policy MW7 (Traffic and Transport). Regarding site security and community safety this is required for all minerals sites as part of the Quarries Regulations 1999.
- SOC2 (individual and cumulative assessments to health and wellbeing): Agreed – This is recognised within the provisions of Policy MW23 which states, “It can be demonstrated that there will be no unacceptable adverse impacts on the environment, human health or the amenity of local communities.” The provisions of Policy MW1 also requires detailed assessments relating to amenity and human health, including the need to consider cumulative effects. Other policies will also be relevant including Policy MW5 (Air Quality and Dust) and MW4 (Noise).

- ENV2 (climate change): Partially Agreed – Paragraph 4.35 of the M&WDPD already states, “Accordingly, all future decision-making will need to consider how development can mitigate, adapt, avoid vulnerability and increase resilience to the impacts of climate change. Where an environmental impact assessment is required, applicants will be expected to demonstrate an understanding of the impact of the project on climate change including the nature and magnitude of the likely greenhouse gas emissions of their proposal and the vulnerability of the project to climate change. This will allow the Council to determine the likely significant effects of the proposal on climate change over the life of the proposed development, both positively and negatively in accordance with the Environmental Impact Assessment Regulations. The supporting text to Policy MW3 (Benefit of Mineral Extraction) recognises the importance of mitigation and adaptation measures and states at paragraph 4.46, “...particular value will be placed upon benefits which help mitigate and adapt to climate change...”. Policy MW20 (Mineral Site Restoration, Landfill and Landraise) at criteria 3 states, “Are designed to mitigate the effects of the development and provide environmentally beneficial enhancements including where appropriate those which:” and at 3a states, “Deliver climate change adaptation and mitigation measures”. The supporting text to Policy MW20 at paragraph 8.12 States, “In preparing proposals for restoration, after-use and aftercare applicants should consider the characteristics of the site and the surrounding land uses and have regard to the requirements of all relevant plans and strategies include including but not limited to the County Durham Plan, the County Durham Landscape Strategy, the Council’s Climate Change Emergency Response Action Plan, the County Durham Local Nature Recovery Strategy (once prepared), the County Durham Geodiversity Plan and if located within the North Pennines AONB, the AONB Management Plan and North Pennines AONB Planning Guidelines.” Similarly at paragraph 8.13 states “After-uses delivered through high quality site restoration can:” at 3a states, “Assist in climate change adaptation and mitigation through a variety of measures including carbon capture through new woodland planting and by assisting in flood alleviation by providing for increased flood water storage capacity and improved conveyance of flood water;”
- ENV3 and ENV7 (Hydrogeological assessment): Agreed – Both policy MW1 General criteria for considering minerals and waste development) and Policy MW19 (Water Resources) address the requirements for the submission of hydrogeological risk assessments. It is considered not appropriate to include such explicit wording such as refused.
- ENV4 (Ecological assessment): Agreed - These matters are also addressed by the provisions of MW1 (General criteria for considering minerals and waste development) and MW20 (Mineral Site Restoration, Landfill and Landraise). Paragraph 9.35c states, “Biodiversity – A full ecological assessment of the site would be expected at the planning application stage. This should identify any notable species and habitats present within the allocation and identify and necessary mitigation.”

- ENV5 (Landscape assessment): Agreed - This is a requirement of Policy MW1 (General criteria for considering minerals and waste development). Landscape is also addressed in paragraph 9.35a.
- ENV6 (Heritage assessment): Agreed - This is a requirement of Policy MW1 (General criteria for considering minerals and waste development). The approach taken to paragraph 9.35 is to address key matters it is not intended to be exhaustive in scope.
- ENV7 (Air Quality assessment): Agreed – Air quality and Dust is addressed by Policy MW5. Paragraph 7.7 states, “The Environment Agency have published detailed guidance for landfill operators on the requirements of the Landfill Directive and technical standards required to meet environmental protection and permit conditions.”
- ENV8 (Inclusion of over-provision criterion): Disagree – This wording is currently included in Policy MW17 criterion 4. In response to this recommendation, it is considered that wording should be introduced into the supporting text to Policy MW17 to make clear that there will be no requirement for applicants to demonstrate need for an allocated inert waste disposal sites. To require such an assessment would be inconsistent with the provisions of the National Planning Policy for Waste paragraph 7 and bullet 1 which advises that ‘waste planning authorities should only expect applicants to demonstrate the quantitative or market need for new or enhanced waste management facilities where proposals are not consistent with an up-to-date Local Plan.’ A similar approach would also apply to the provisions of MW17 criteria 2 or 4 if a site was allocated. This is because allocated sites are intended to make a contribution to the waste capacity gap to 2035 and it is also considered reasonable to seek to ensure that adequate provision for waste disposal continues to be available to meet ongoing needs for a number of years thereafter. The Council also recognises that inert waste which cannot be recycled or otherwise recovered will need to be managed in the years beyond 2035. Both proposals for low and high level restoration will unavoidably provide a number of years available capacity beyond 2035. This will have the benefit of helping to avoid a disposal crises at 2035 which would occur if future planning permissions for allocated sites were restricted only to the plan period. This is in line with NPPW paragraph 3 which requires that adequate provision must be made for waste disposal.

Conclusion and Outstanding Issues

5.5.32 Criterion d of the policy is considered to ensure that significant adverse effects to Crime Rigg SSSI are avoided. This was previously highlighted as a potential significant issue during the options assessment of Crime Rigg scenario 3.

5.5.33 Whilst the criteria regarding over-provision has not been included, the need for provision beyond the Plan period 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 actually be required beyond the Plan period and how existing landfill sites will be operating, further

consideration has been given to Policy MW17. This policy provides comfort that any additional proposals to those allocated in the Plan can be resisted if they constitute 'excessive void space.'

5.5.34 The SA identified the need for further detailed assessment to support the planning application stage and identify specific mitigation measures. It will not be possible to qualify the significance of effects to groundwater resources further until a hydrogeological assessment is undertaken in support of a planning application. This is an outstanding issue.

5.5.35 Please note that the need to deal with uncertainties is not uncommon to the SA process. The appraisal of development plans is rarely straightforward and the outcome may include considerable levels of uncertainty. SA is not Environmental Impact Assessment (EIA), so detailed site-specific information about the environmental qualities of sites is often not available to determine effects more precisely.

5.6 Policy MW24: Site Specific Allocation Inert Waste Disposal at Cold Knuckle Quarry

5.6.1 Cold Knuckle Quarry is located on the Magnesian Limestone Escarpment 1km to the east of Bowburn between the hamlet of Old Quarrington and Quarrington Hill. It lies immediately to the south of Old Quarrington Quarry and forms part of the larger active quarry commonly known as Old Quarrington and Cold Knuckle Quarry which through previous planning permissions are now being worked as one site.

5.6.2 The allocation at Cold Knuckle Quarry would enable the sale of 0.9 million tonnes of magnesian limestone which would otherwise be used to achieve the previously approved restoration scheme at Cold Knuckle Quarry. Alternatively, 400,000 cubic metres (625,000 tonnes) of inert waste will be imported for use in the reconstruction of the escarpment face. This will extend the existing landfill operation at Old Quarrington Quarry into Cold Knuckle Quarry.

Reasonable Alternatives

5.6.3 Please see section 5.2 of this report.

Appraising Significant Changes

5.6.4 Not applicable. This is a new policy which has been included in the M&WDPD and has not been previously assessed.

Policy Assessment Outcome

5.6.5 The following table illustrates the mixture of short, medium and long term effects predicted against each SA objective relating to the policy. Please also see the supporting SA matrix in Appendix C which shows further detail, including the predicted breakdown of short, medium and long term effects.

Table 37 Summary Assessment: Policy MW24

	1. Decent Affordable Homes	2. Strong Secure Communities	3. Education, Training & Lifelong Learning	4. Health: Inequalities & Lifestyles	5. Need to Travel & Sustainable Transport	6. Alleviate Deprivation	7. Economy & Employment	8. Climate Change: Mitigation	9. Climate Change: Adaptation	10. Biodiversity & Geodiversity	11. Landscape & Townscape	12. Historic Environment	13. Resources: Air, Water & Soil	14. Waste & Use of Materials	15. Minerals Extraction & Impacts
2022 Assessment	0	0	0	?	X	0	✓	X	?	✓	0	0	X	✓	✓

5.6.6 Please note that no short-term effects were predicted as the inert waste disposal associated with the allocation would not occur until towards the end of the Plan period. No long-term effects were predicted against SA objectives 2,3, 4,5,6,14 or 15 were predicted as infilling with inert waste within the quarry is intended to be complete by 2033.

5.6.7 Overall the SA predicted minor social effects and a mixture of positive and negative economic and environmental effects. These are described as follows:

Social Effects

5.6.8 The allocation of inert waste disposal at this site and the associated sale of the magnesian limestone (which would have otherwise been set aside on site) is likely to increase vehicle movements compared to the original proposal. However, HGV movements would in effect represent a continuation of current operations and the policy requires that the site allocation will be accessed through the existing Old Quarrington Quarry access. Minor negative effects against SA objective 2 are predicted as it would extend the duration of HGV movements for an additional 2.4 years to communities, the nearest including Old Quarrington, Bowburn and Quarrington Hill.

5.6.9 Minor positive effects are however, predicted against SA objective 3 (education) and 6 (deprivation) as the allocation would contribute towards safeguarding existing employment and training at the quarry until 2033.

5.6.10 In terms of impacts to health and wellbeing, the closest settlements to the quarry are Old Quarrington and Quarrington Hill. The access road to the quarry passes within approximately 200 metres of properties within Old Quarrington. The closest properties to the site are Quarrington Farm approximately 100 metres to the west, properties on Church

Street some 150 metres to the southwest, the Heather Lad Inn 20 metres to the east and Cassop Hill some 400 metres to the east. Given that operations are likely to be similar to existing operations taking place within the quarry, are for a relatively short duration and due to distances involved, inert waste could be potentially imported into this part of the quarry without any significant impacts to health and wellbeing (e.g. as a result of dust, noise etc).

5.6.11 Criteria within the policy will also contribute towards safeguarding health and wellbeing i.e.:

- That the planning application includes any further preparatory works as are deemed necessary. This could include for example, the creation of noise barriers
- Existing plant and infrastructure is utilised, minimising the need for new facilities which could affect health and wellbeing through noise, dust etc
- That applicants demonstrate that there will be no unacceptable adverse impacts on the environment, human health or the amenity of local communities.

5.6.12 Policy MW1, also requires that the potential cumulative effects of proposals are taken into account.

Economic Effects

5.6.13 Positive economic effects were predicted. Despite there not being a need for further magnesian limestone, the allocation would enable the sale of 0.9 million tonnes of this mineral from County Durham which will contribute towards the local economy. This resource would otherwise be sterilised through its use in site restoration. The provision of further waste disposal capacity within the quarry void adjacent to an existing inert landfill could increase capacity by 400,000 cubic metres net, supporting an estimated additional 2.4 years of related employment and contributing towards ensuring disposal operations continue at the quarry along with their associated benefits to the local economy.

Environmental Effects

5.6.14 A mixture of positive, negative and neutral environmental effects were predicted. Negatively, the allocation of Cold Knuckles Quarry requires the transportation of 0.9 million tonnes of magnesian limestone from the site and import of inert waste. Compared to the existing approved restoration that requires the use of the onsite magnesian limestone, this does not reduce the need to travel and will cause additional greenhouse gas emissions and air pollution. It is understood that if the onsite magnesian limestone is not sold, then its extraction from other parts of the quarry may be sought instead but there is uncertainty regarding this.

5.6.15 If residual emissions from landfilling activity are not offset, through for example restoration/afteruses e.g. woodland creation or voluntary measures undertaken by the operator, these would need to be compensated for by other offsetting activity and climate positive actions (i.e. where more carbon is removed than emitted) taking place within the county. Monitoring would be required to ensure this is happening in line with the milestones towards net zero.

5.6.16 The quarry is also situated on the Magnesian Limestone Escarpment which is a principal aquifer and is fully situated within groundwater Source Protection Zone 3. The site also lies in a groundwater nitrate vulnerable zone (NVZ). There is therefore a high risk of pollution to groundwater. However, no dewatering is undertaken within the current quarry and the operator have advised that the base of the current sand extraction and inert landfill lies above the water table. In addition, the SA recognises that infilling with inert waste compared to other waste types is a lower risk to groundwater. Nonetheless, planning applications will need to be supported by hydrogeological assessment and site-specific information to demonstrate that the risks of working the area are acceptable and can be mitigated.

5.6.17 Neutral effects were predicted against SA objectives 10 (biodiversity), 11 (landscape) and 12 (heritage), discussed as follows.

5.6.18 Two local biodiversity and geodiversity designations overlie the proposed allocation, these being Old Quarrington Quarry Local Geology Site (LGS) and Quarrington Hill and Coxhoe Bank Local Wildlife Site (LWS). However, the impact to these sites has already been considered and found to be acceptable in the context of the existing permitted operation at the quarry and its restoration. Substituting magnesian limestone for inert waste to achieve the restoration is considered unlikely to cause any additional harm to biodiversity or geodiversity. However, the restoration of the site should as a minimum achieve the same level of benefits to biodiversity as existing proposals that aim to provide biodiversity net gain and support ecological networks. The policy requires a high-quality restoration and aftercare scheme that delivers biodiversity net gain and improves ecological networks. There may be some opportunity to deliver further additional, longer-term benefits to ecology from this requirement, albeit this is considered limited.

5.6.19 Please note that the proposed allocation is also within 286 metres of Quarrington Hill SSSI (to the south) and 250 metres of Cassop Vale SSSI, Cassop National Nature Reserve and ancient woodland (to the north). These designations will not be impacted directly by the proposal and any indirect effects are not considered likely to cause any additional harm than existing operations and the approved restoration.

5.6.20 The proposed allocation is not covered by any national or local landscape designations. The site lies partly within an area identified in the County Durham Landscape Strategy (2008) as a Landscape Improvement Priority Area (LIPA) with a strategy of 'restore or enhance' and partly within a Landscape Conservation Priority Area (LCPA) with strategy of 'conserve & restore'. It is considered that the restoration of the site would be likely to be identical or very close to that of the approved scheme with the removal of limestone and its replacement with inert materials undertaken broadly within the balance of cut and fill provided for in the approved scheme. There would be no material effect on the final restoration. Effects are therefore assessed as neutral. It is not considered that further landscape enhancement could be achieved through restoration over and above that which is currently planned. The policy requires that planning applications include any further preparatory works as are deemed necessary to safeguard the local landscape which also contributes to ensuring neutral effects to landscape quality and character.

5.6.21 The Council has undertaken a Heritage Impact Assessment (HIA) for the Cold Knuckle Quarry and inert waste disposal (February 2022). The allocation is not within 2km of a World Heritage Site, Scheduled Monument, Protected Wreck site, Registered Historic Park and Garden or Registered Battlefield. The Heritage Impacts Assessment undertaken did however assess effects on 1 Grade II listed building, 2 Conservation Areas, 4 Historic Environment Records, non-designated heritage assets and one site included on the local list of historic parks, gardens and designated landscapes.

5.6.22 The Heritage Impact Assessment undertaken, concluded that the proposals would not have any direct effect on the significance (physical fabric) of any identified heritage asset. The magnitude of effect upon the setting(s) of the heritage assets has been identified as either nil, or minor with the level of impact neutral. As an operational quarry void, the proposed scenarios would have no archaeological potential.

5.6.23 Whilst the policy is concerned with allocating capacity for the disposal of inert waste, the SA was able to predict positive effects against reducing waste and encouraging the sustainable and efficient use of materials. This is because the allocation will avoid the sterilisation of magnesian limestone and will contribute towards meeting the capacity gap identified within the Plan period. There is unlikely to be remaining capacity beyond the Plan period and the allocation is not considered likely to result in the creation of excessive landfill provision over the medium term.

5.6.24 The policy requirement to utilise existing site plan and other infrastructure also minimises the use of resources and waste associated with its decommissioning.

5.6.25 Positive effects were also predicted against SA objective 15 (minerals) as the allocation avoids sterilisation of a mineral resource and contributes towards the restoration of a quarry which is anticipated to have minimal impacts on communities and the environment. Notwithstanding potential impacts to the magnesian limestone principal aquifer will be a key issue to overcome.

Significant Issues

High risk to groundwater resources identified

Recommendations / Mitigation

5.6.26 Please note that the references used below relate to the specific social (SOC), economic (ECO) and environmental (ENV) mitigation measure proposed in the detailed matrix for this policy as presented in Appendix C.

- SOC1 and ENV1: Proposals should be accompanied by a Traffic and Transport Assessment and details of the measures which will be put in place to ensure site security and community safety.
- SOC2: Detailed assessments on the impact of infilling the void with inert waste individually and cumulatively with existing minerals and waste operations at Old

Quarrington Quarry and within the wider area on human health and wellbeing will be required to inform the planning decision.

- ENV2: Planning applications should be supported by an assessment of greenhouse gas emission and an evaluation of their significance against net zero targets where EIA development.
- ENV3 and ENV7: Hydrogeological assessments will be required to inform the planning decision and any associated mitigating measures and conditions. The assessment would also need to take into account the cumulative impacts of minerals working and other activities on the Principal Aquifer. If unacceptable impacts (individual and cumulative) cannot be avoided, then permission should be refused.
- ENV4: Proposals should be supported by ecological assessments in order to identify the presence or absence of protected/priority species and any associated mitigation measures. The restoration of the site should also as a minimum achieve the same level of benefits to biodiversity as existing proposals that aim to provide biodiversity net gain and support ecological networks.
- ENV5: proposals should be supported by a detailed appraisal of impact on landscape and visual impact.
- ENV6: Proposals should be accompanied by an appraisal of impact on heritage assets
- ENV7: Proposals should be accompanied by Air quality and hydrogeological assessments and an outline of measures which avoid or minimise air and water pollution (both surface and ground waters). When submitting proposals due regard should be given to the Environment Agency's Landfill Technical Guidance: [Environmental Permitting Landfill Sector Technical Guidance](#)

Residual Impacts

- The proposal would extend the operational life of the quarry (and associated greenhouse gas emissions etc)
- The potential cessation of disposal activity at Old Quarrington and Cold Knuckles Quarry over the Plan period is a residual effect.

Response to SA Recommendations

- SOC1 and ENV1 (Traffic and transport assessments): Partially Agreed - Paragraph 9.39d refers to the requirements for a Transport Assessment and this is also a requirement of Policy MW7 (Traffic and Transport). Regarding site security and community safety this is required for all minerals sites as part of the Quarries Regulations 1999.
- SOC2 (individual and cumulative assessments to health and wellbeing): Agreed – This is recognised within the provisions of Policy MW23 which states, “It can be demonstrated that there will be no unacceptable adverse impacts on the environment, human health or the amenity of local communities.” The provisions of Policy MW1 also requires detailed assessments relating to amenity and human health, including the need to consider cumulative effects. Other policies will also be relevant including Policy MW5 (Air Quality and Dust) and MW4 (Noise).

- ENV2 (climate change): Partially Agreed – Paragraph 4.35 of the M&WDPD already states, “Accordingly, all future decision-making will need to consider how development can mitigate, adapt, avoid vulnerability and increase resilience to the impacts of climate change. Where an environmental impact assessment is required, applicants will be expected to demonstrate an understanding of the impact of the project on climate change including the nature and magnitude of the likely greenhouse gas emissions of their proposal and the vulnerability of the project to climate change. This will allow the Council to determine the likely significant effects of the proposal on climate change over the life of the proposed development, both positively and negatively in accordance with the Environmental Impact Assessment Regulations. The supporting text to Policy MW3 (Benefit of Mineral Extraction) recognises the importance of mitigation and adaptation measures and states at paragraph 4.46, “...particular value will be placed upon benefits which help mitigate and adapt to climate change...”. Policy MW20 (Mineral Site Restoration, Landfill and Landraise) at criteria 3 states, “Are designed to mitigate the effects of the development and provide environmentally beneficial enhancements including where appropriate those which:” and at 3a states, “Deliver climate change adaptation and mitigation measures”. The supporting text to Policy MW20 at paragraph 8.12 States, “In preparing proposals for restoration, after-use and aftercare applicants should consider the characteristics of the site and the surrounding land uses and have regard to the requirements of all relevant plans and strategies include including but not limited to the County Durham Plan, the County Durham Landscape Strategy, the Council’s Climate Change Emergency Response Action Plan, the County Durham Local Nature Recovery Strategy (once prepared), the County Durham Geodiversity Plan and if located within the North Pennines AONB, the AONB Management Plan and North Pennines AONB Planning Guidelines.” Similarly at paragraph 8.13 states “After-uses delivered through high quality site restoration can:” at 3a states, “Assist in climate change adaptation and mitigation through a variety of measures including carbon capture through new woodland planting and by assisting in flood alleviation by providing for increased flood water storage capacity and improved conveyance of flood water;”
- ENV3 and ENV7 (Hydrogeological assessment): Agreed – Both policy MW1 General criteria for considering minerals and waste development) and Policy MW19 (Water Resources) address the requirements for the submission of hydrogeological risk assessments. It is considered not appropriate to include such explicit wording such as refused.
- ENV4 (Ecological assessment): Agreed - These matters are also addressed by the provisions of MW1 (General criteria for considering minerals and waste development) and MW20 (Mineral Site Restoration, Landfill and Landraise). Paragraph 9.39c states, “Biodiversity – A full ecological assessment of the site would be expected at the planning application stage. This should identify any notable species and habitats present within the allocation and identify and necessary mitigation.” Paragraph 9.39f states, The restoration of the site allocation should as a

minimum seek to replicate or be very close to that of the approved scheme which had sought to reconstruct the escarpment face using limestone and achieve the same level of biodiversity net gain as the existing approved scheme

- ENV5 (Landscape assessment): Agreed - This is a requirement of Policy MW1 (General criteria for considering minerals and waste development). Landscape is also addressed in paragraph 9.39a.
- ENV6 (Heritage assessment): Agreed - This is a requirement of Policy MW1 (General criteria for considering minerals and waste development). The approach taken to paragraph 9.39 is to address key matters it is not intended to be exhaustive in scope.
- ENV7 (Air Quality assessment): Agreed – Air quality and Dust is addressed by Policy MW5 (Air Quality and Dust). Paragraph 7.7 states, “The Environment Agency have published detailed guidance for landfill operators on the requirements of the Landfill Directive and technical standards required to meet environmental protection and permit conditions.”

Conclusion and Outstanding Issues

5.6.27 The SA has identified the need for further detailed assessment to support the planning application stage and identify specific mitigation measures. It will not be possible to qualify the significance of effects to groundwater resources further until a hydrogeological assessment is undertaken in support of a planning application. This is an outstanding issue.

5.6.28 Please note that the need to deal with uncertainties is not uncommon to the SA process. The appraisal of development plans is rarely straightforward and the outcome may include considerable levels of uncertainty. SA is not Environmental Impact Assessment (EIA), so detailed site-specific information about the environmental qualities of sites is often not available to determine effects more precisely.

6. Cumulative effects of the M&WDPD

6.0.1 The SA process requires that the likely significant effects of the M&WDPD on the environment are identified, described and evaluated. However, in addition to the individual effects of the M&WDPD policies, the SA process also requires an assessment of cumulative effects. This is because many sustainability issues result from the accumulation of multiple, small and often indirect effects, rather than a few large, direct effects. For example, the fragmentation of wildlife corridors because of piecemeal development.

6.0.2 To record the cumulative effects, it was necessary to produce a table that summarises the effects of each policy against the SA objectives, as below. Please note that this table highlights the identified predicted cumulative effects of the M&WDPD's policies based on their overriding effects, and so in some cases, the detailed short, medium, and long-term impacts may differ. The table also shows the final predicted effects of each policy, following the acceptance of SA recommendations. The titles of the policies have been paraphrased in some instances to fit the table. Policy MW23 is repeated twice in the table to show the different predicted impacts depending upon whether a low level or high level restoration scheme is submitted to the Council as per the policy.

Table 38 Cumulative Effects

	1. Decent Affordable Homes	2. Strong Secure Communities	3. Education, Training & Lifelong Learning	4. Health: Inequalities & Lifestyles	5. Need to Travel & Sustainable Transport	6. Alleviate Deprivation	7. Economy & Employment	8. Climate Change: Mitigation	9. Climate Change: Adaptation	10. Biodiversity & Geodiversity	11. Landscape & Townscape	12. Historic Environment	13. Resources: Air, Water & Soil	14. Waste & Use of Materials	15. Minerals Extraction & Impacts
MW1: General Criteria	0	✓	0	✓	✓	0	✓	✓	✓	✓	✓	✓	✓	0	✓
MW2: Mineral Exploration	0	✓	✓	✓	✗	0	✓	✗	0	✗	✗	✗	✗	0	✓/✗
MW3: Benefits	0	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	0	✓
MW4: Noise	0	✓	0	✓	✓/✗	✓	✓	✓/✗	0	✓	✓/✗	✓/✗	✓/✗	0	✓
MW5: Air Quality & Dust	0	✓	0	✓✓	✓	✓	✓	✓	0	✓	✓	✓	✓/✗	0	✓
MW6: Blasting	0	✓	0	✓	0	✓	0	0	0	✓	✓	✓	✓	✓	✓

MW7: Traffic & Transport	0	✓	0	✓	✓	0	✓	✓	0	0	0	0	✓	✓	✓
MW8: Mineral Rail Handling	0	✓	0	✓	0	0	0	✓	✓	✓	✓/x	0	✓	✓	✓
MW9: Borrow Pits	0	✓	0	✓	✓	0	✓	✓	✓	✓	✓	✓	✓	✓	✓
MW10: Ancillary Infrastructure	0	✓	0	✓/x	✓✓	0	✓	✓	0	✓/x	✓/x	✓/x	✓/x	?	✓
MW11: Periodic Review	0	✓	0	✓	✓	0	0	✓	✓	✓	✓	✓	✓	✓	✓✓
MW12: Oil & Gas	0	✓	0	✓	✓	0	0	0	✓	✓	✓	✓	✓	✓	✓
MW13: Transport of Oil & Gas	0	✓	0	✓	✓✓	0	✓	✓	0	✓	✓	✓/x	✓/x	0	✓
MW14: Other Minerals	0	✓	✓	✓	✓	✓	✓	✓/x	✓	✓	✓	✓	✓	✓	✓
MW15: Peat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MW16: Inert Waste Recovery	0	✓	0	✓	✓	0	✓	✓	✓	✓	✓	✓	✓	✓	✓
MW17: Inert Waste Disposal	0	✓	✓	✓	✓	0	✓	✓	✓	✓	✓	✓	✓	✓	✓
MW18: Non-Hazardous Waste	0	✓	✓	✓	✓	0	✓	0	0	✓	✓	✓	✓	✓	0
MW19: Water Resources	0	0	0	✓	?	0	0	✓/x	✓	✓	✓	0	✓	0	✓
MW20: Restoration	0	✓	0	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MW21: Thrislington Quarry Sand & Gravel	0	0	✓	?	✓	✓	✓	x	?	0	0	0	x	✓	✓
MW22: Crime Rigg Quarry Sand & Gravel	0	x	✓	?	x	✓	✓	x	?	x	✓/x	0	x	x	✓/x
MW23: Crime Rigg Quarry Inert Waste (Low Level Restoration)	0	0	✓	?	x	✓	✓	x	?	x	✓/x	0	✓/x	?	x
MW23: Crime Rigg Quarry Inert Waste (High Level Restoration)	0	x	✓	?	xx	✓	✓✓	xx	?	x	✓/x	0	✓/x	?	x
MW24: Cold Knuckle Quarry Inert Waste	0	0	0	?	x	0	✓	x	?	✓	0	0	x	✓	✓
Overall Cumulative Effects	0	✓	✓	✓	✓	✓	✓	✓	?	✓	✓	✓	✓/x	✓	✓/x

6.0.3 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)

6.0.4 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)

6.0.5 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.

6.0.6 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.

6.0.7 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.

6.0.8 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.

6.0.9 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. This is considered further in section 7 of this report.

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

6.0.10 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)

6.0.11 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.

6.0.12 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)

6.0.13 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.

6.0.14 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.

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

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

6.0.16 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)

6.0.17 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.

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

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

6.0.19 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.

6.0.20 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.

6.0.21 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.

6.0.22 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.⁵³ 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

⁵³ [IEMA Guide \(Feb 2022\) Assessing Greenhouse Gas Emissions and Evaluating their Significance \(2nd Edition\)](#)

presented in the Environmental Statement when determining whether planning permission can be granted.

6.0.23 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.⁵⁴ 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.

6.0.24 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 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)

6.0.25 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.

⁵⁴ 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.

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

6.0.26 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.

6.0.27 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.

6.0.28 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.

6.0.29 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)

6.0.30 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.

6.0.31 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.

6.0.32 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.

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

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

6.0.34 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)

6.0.35 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

6.0.36 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

6.0.37 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:

6.0.38 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.

6.0.39 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.⁵⁵ 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.

6.0.40 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

⁵⁵ Environment Agency Letter (26th May 2022) Reference: NA/2009/103652/OT07/PO1-L01

6.0.41 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;
- 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)

6.0.42 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.

6.0.43 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.

6.0.44 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.

6.0.45 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;
- The M&WDPD 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;
- The M&WDPD ensures no infilling of the allocated sand and gravel sites with inert waste 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)

6.10.46 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 potential impacts on groundwater resources 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 due to the allocation of 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).

7. Significant Effects and Monitoring Proposals

7.0.1 Individual and cumulative significant effects have been considered throughout this SA. Section 2.2 of the report which covers impact prediction and evaluation explains the methodology for determining significant effects. The only outstanding significant individual and cumulative effect of the M&WDPD identified is the impact to groundwater resources 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.

7.0.2 As mentioned elsewhere within this report, 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.

7.0.3 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.

7.0.4 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.

7.0.5 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 39 Monitoring Proposals

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

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

Relevant SA objective	Proposed Indicator	Source(s)
	resources associated with allocated sites	
To improve the sustainability of minerals extraction and use and reduce adverse impacts on communities and the environment	<ul style="list-style-type: none"> All indicators as outlined above 	<ul style="list-style-type: none"> As outlined above
To reduce waste and encourage the sustainable and efficient use of materials	<ul style="list-style-type: none"> Landfill capacity 	<ul style="list-style-type: none"> Annual Monitoring Report

8. How the SA has influenced the M&WDPD

8.01 The Sustainability Appraisal has been undertaken in conjunction with the development of the M&WDPD, considering and assessing reasonable alternatives and advising on the sustainability implications of preferred policies, along with mitigating measures. The following table provides an overview of the changes made to the M&WDPD wording following the acceptance of SA recommendations.

Table 40 Key changes made to the M&WDPD 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	<p>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.</p> <p>Greater recognition is also given in the supporting text to the use of sustainable transport.</p> <p>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</p>	<p>Improved compatibility of the M&WDPD with SA objectives:</p> <ul style="list-style-type: none"> 4: To reduce health inequalities and promote healthy lifestyles 5: To reduce the need to travel and promote sustainable transport options 8: To reduce the causes of climate change

Section / Policy	Key Changes	Outcome
	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.	
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	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.	Improved compatibility of the M&WDPD with SA objectives: <ul style="list-style-type: none"> • 2: To promote strong, secure communities • All environmental SA objectives namely SA objective 5, 8, 9, 10, 11, 12, 13, 14 and 15.
MW4: Noise	Movement of text relating to noise assessments from the supporting text into the policy in order to make this a specific, policy requirement.	Improved compatibility of the M&WDPD with SA objectives: <ul style="list-style-type: none"> • 2: To promote strong, secure communities • 4: To reduce health inequalities and promote healthy lifestyles • 10: To protect and enhance biodiversity and geodiversity
MW5: Air Quality and Dust	Movement of text relating to dust assessments from the supporting text into the policy in order to make this a specific, policy requirement.	Improved compatibility of the M&WDPD with SA objectives: <ul style="list-style-type: none"> • 2: To promote strong, secure communities • 4: To reduce health inequalities and promote healthy lifestyles • 10: To protect and enhance biodiversity and geodiversity
MW6: Blasting	Movement of text relating to the provision of a blasting and vibration monitoring scheme from the supporting text into the policy in	Improved compatibility of the M&WDPD with SA objectives: <ul style="list-style-type: none"> • 2: To promote strong, secure communities

Section / Policy	Key Changes	Outcome
	order to make this a specific, policy requirement.	<ul style="list-style-type: none"> • 4: To reduce health inequalities and promote healthy lifestyles • 10: To protect and enhance biodiversity and geodiversity
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"> • Provides greater clarity around the type of project, borrow pits will be considered for; • Places greater emphasis on the role of existing quarries to the economy through re-ordering of criteria; • Goes some way to clarifying what spatial scale will be applied when considering existing quarries in 'the area'; • 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; • Ensures that the social and environmental acceptability of working and restoring borrow pits is included within the decision making criteria; and 	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"> 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 	
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 account of local climate emergency targets when determining proposals and the need to ensure that these can demonstrate carbon neutrality.	Improved compatibility of the M&WDPD with SA objectives: <ul style="list-style-type: none"> 8: To reduce the causes of climate change; and 14: To reduce waste and encourage the sustainable and efficient use of materials.

Section / Policy	Key Changes	Outcome
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"> • 2: To promote strong, secure communities • 4: To reduce health inequalities and promote healthy lifestyles • 7: To develop a sustainable and diverse economy with high levels of employment • 10: To protect and enhance biodiversity and geodiversity • 11: To protect and enhance the quality and character of landscape and townscape • 12: To protect and enhance cultural heritage & the historic environment • 13: To protect and improve air, water and soil resources
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"> • 8. To reduce the causes of climate change; • 14. To reduce waste and encourage the sustainable and efficient use of materials; and • 15: To improve the sustainability of minerals extraction and use and reduce adverse impacts on communities and the environment.
MW15: Peat	Following the SA the policy helps to highlight the additional benefits of protecting peat (to water management) and clarifies how the	Improved compatibility of the M&WDPD with SA objectives:

Section / Policy	Key Changes	Outcome
	policy works in conjunction with biodiversity policies in the County Durham Plan to consider this valuable resource when making planning decisions.	<ul style="list-style-type: none"> • 10: To protect and enhance biodiversity and geodiversity • 13: To protect and improve air, water and soil resources
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"> • 5: To reduce the need to travel and promote sustainable transport options; and • 13: To protect and improve air, water and soil resources
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"> • 5: To reduce the need to travel and promote sustainable transport options; and • 8: To reduce the causes of climate change.
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"> • 13: To protect and improve air, water and soil resources
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"> • Further recognise the links between the after use of sites and their potential to contribute towards addressing climate change • Ensures that the policy does not inadvertently contradict the achievement of biodiversity net gain and 	Improved compatibility of the M&WDPD with SA objectives: <ul style="list-style-type: none"> • 8: To reduce the causes of climate change; • 10: To protect and enhance biodiversity and geodiversity; and • 15: To improve the sustainability of minerals extraction and use and reduce adverse impacts

Section / Policy	Key Changes	Outcome
	<p>reflects the preference for mitigation to be achieved on or near to site; and</p> <ul style="list-style-type: none"> 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. 	<p>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) to support the planning application stage, overcome any</p>

Section / Policy	Key Changes	Outcome
		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.

9. Conclusion and Outstanding Issues

9.0.1 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.

9.0.2 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

9.0.3 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.

9.0.4 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.

9.0.5 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

9.0.6 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.