

**Non-Technical Summary:
Sustainability Appraisal of the
Minerals and Waste Policies
and Allocations Document**

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Introduction

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

The following sections of this NTS:

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

What is the M&WDPD?

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

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.

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.

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

1. Begin evidence gathering, engagement and document preparation
2. Preparation and consultation on the draft M&WDPD (Regulations 18)
3. Preparation and consultation on the Publication version of the M&WDPD (Regulation 19)

4. Submissions of the M&WDPD to the Secretary of State and Examination in Public
5. Adoption of the M&WDPD

The Council is currently at stage 2 of preparation. Once adopted (stage 5), the policies and provisions of the M&WDPD will replace the remaining saved policies of the County Durham Minerals Local Plan and the saved policies of the County Durham Waste Local Plan.

What is Sustainability Appraisal?

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.

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.

What does Sustainability Appraisal Require?

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

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

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

In 2018, a further Minerals and Waste Scoping Report Synopsis was published for comment in order to support the forthcoming development of the M&WDPD. This report highlighted the minerals and waste information contained within the County

Durham Plan Scoping Report and affirmed the relevance and continued application of the SA framework to the M&WDPD. This is in line with guidance which states that one SA Scoping report can be produced for several Local Development Documents. Both the 2016 SA Scoping Report and 2018 Minerals and Waste Scoping Report Synopsis can be viewed in full at [County Durham Plan Evidence Library](#) Please see documents referenced C22 and MW10 respectively.

2. **Stage B – Assessment:** The tasks involved with Stage B can be collectively referred to as 'Assessment'. Within this stage, Plan objectives, policies and their reasonable alternatives are assessed (through impact prediction and evaluation) against the SA Framework and associated sustainability objectives and decision-making criteria. This NTS report provides an overview of the outcomes of stage B.
3. **Stage C – Report:** The main SA report, along with this NTS have been produced to present the outcomes of the SA of the M&WDPD to date.
4. **Stage D – Consultation:** The SA report is made available alongside the M&WDPD for comment from statutory consultees i.e. Natural England, The Environment Agency and Historic England, other stakeholders and members of the public. Following consultation, preparation of the Publication version of the M&WDPD will commence which will require the pre-mentioned stages of SA to be revisited as necessary.
5. **Stage E – Post Adoption and Monitoring:** Following Examination in Public, and subject to any significant changes to the M&WDPD that may require appraisal, the Council will issue a Post Adoption Statement as soon as reasonably practicable after the adoption of the M&WDPD. This will set out how the recommendations of the SA process have been incorporated into the M&WDPD. During the implementation period of the M&WDPD, the Council will monitor any significant social, economic and environmental effects.

How has the M&WDPD been Appraised?

To support the appraisal of the M&WDPD, an SA Framework was utilised. The framework consists of the following SA objectives. The relevant considerations to minerals and waste development are also identified under each objective:

1. **To provide everybody with the opportunity to live in a decent and affordable home**
 - 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 relative to housing location /demand.
2. **To promote strong, secure communities**

- Safety and security of sites and infrastructure
- Avoiding/minimising haulage impacts of minerals/waste on communities
- 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 because of minerals and waste development
- Supporting community led waste management schemes
- Understanding and responding to the waste management requirements of an ageing population

3. To improve education, training and life-long learning, and maintain a healthy labour market

- 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
- Impacts of minerals and waste development on educational facilities

4. To reduce health inequalities and promote healthy lifestyles

- 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

- Encouraging proximity between minerals and waste sites and processing facilities/markets/sources
- Provision and 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

6. To alleviate deprivation and poverty

- Potential impact of minerals and waste development on social, economic and environmental conditions in deprived areas
- Potential opportunities for site restoration and afteruses 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

- 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 creating saleable products from them
- 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

- 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 promoting the use of recycled, recyclable and secondary resources

9. To respond and enable adaptation to the inevitable impacts of climate change

- 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.

10. To protect and enhance biodiversity and geodiversity

- Location and effects of minerals and waste development on biodiversity/geodiversity
- Potential opportunities for enhancement and biodiversity 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

11. To protect and enhance the quality and character of landscape and townscape

- 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

12. To protect and enhance cultural heritage & the historic environment

- Location and effects of minerals and waste development on the historic environment
- Industrial heritage and cultural identity of County Durham because 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

- Reducing emissions to air, including dust from minerals and waste development.
- 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

14. To reduce waste and encourage the sustainable and efficient use of materials

- 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
- Encourage the community to take responsibility for reducing its own waste
- Promote the maintenance, sensitive adaptation and re-use of buildings

15. To improve the sustainability of minerals extraction and use and reduce adverse impacts on communities and the environment

- 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

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

- Very positive effects – symbolised by two ticks on a dark green background
- Positive effects – symbolised by one tick on a light green background
- Very negative effects – symbolised by two crosses on a red background
- Negative effects – symbolised by one cross on an orange background
- Potential for positive and negative effects depending on implementation – symbolised by a tick and a cross on a blue background
- Uncertain effects or insufficient information to determine effect – symbolised by a question mark on a grey background
- Minor or no effect / no clear link with SA objective – symbolised by a zero on a white background

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

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

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

What were the Findings of the SA?

M&WDPD Objectives

The M&WDPD includes a number of non-strategic objectives in order to set the direction for the policies that it seeks to deliver. With the exception of M&WDPD objective 3 (Other Minerals of Local and National Importance) and 4 (Disposal and Other Recovery of Inert Waste) no areas of potential conflict between the M&WDPD and SA objectives were identified.

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

- Proved the context / background as to why the future working of minerals not currently worked in the County cannot be discounted
- Provide the context / background as to why inert waste disposal schemes are required
- M&WDPD policies should also:
 - Ensure that waste cannot be managed at a higher 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.

The SA also recommended that M&WDPD objective 4 should be renamed to Other Recovery and Disposal of Inert Waste in order to better reflect the waste hierarchy. All SA recommendations regarding the M&WDPD objectives were accepted.

Reasonable Alternatives

Reasonable alternatives to meeting the Plan objectives have been considered by the SA throughout the development of the M&WDPD. However, none were identified for assessment largely due to the fact that many of the strategic alternatives relating to minerals and waste development had already been assessed as part of the SA of the County Durham Plan and the approach outlined within the policies of the M&WDPD are considered to be in conformity with the approach established by the County Durham Plan and requirements set out in the National Planning Policy Framework (NPPF), National Planning Policy for Waste (NPPW) and Planning Practice Guidance (PPG).

M&WDPD Policies

The M&WDPD includes 24 policies which are briefly described as follows:

1. General Criteria – establishes the general criteria which should be considered when determining minerals and waste development proposals.
2. Mineral Exploration – establishes safeguards to minimise any impacts to communities and the environment associated with mineral exploration activity which is not classed as permitted development.
3. Benefits of Minerals Extraction – provides greater detail on what type of social, economic and environmental benefits will be taken into account when determining minerals proposals.

4. Noise – establishes the requirements around noise elimination and reduction.
5. Dust – requires operators to demonstrate that dust emissions will be acceptable.
6. Blasting – establishes the thresholds for ground vibration linked to blasting activity.
7. Traffic and Transport – encourages the sustainable and safe transportation of minerals and waste.
8. Mineral Rail Handling Facilities – Permissive policy towards facilities that enable the transfer of minerals from road to rail where certain criteria are met.
9. Borrow Pits – establishes the criteria and associated social and environmental safeguards by which borrow pit proposals will be determined.
10. Onsite Mineral Processing – Encourages proximity between mineral extraction and processing activity where certain criteria can be met to demonstrate acceptability.
11. Storage of Minerals – establishes the criteria relating to the storage of minerals at existing minerals sites to help ensure their availability for use.
12. Periodic Review of Mineral Planning Permissions – sets out the Council’s expectations in relation to the periodic review process.
13. Local Liaison Groups – establishes the role of liaison groups and the Council’s expectations of minerals operators in relation to their administration.
14. Oil and Gas Exploration, Appraisal and Production – establishes criteria to determine oil and gas proposals against if they are forthcoming over the M&WDPD period.
15. Transport of Oil and Gas – establishes a sequential approach to the transportation of oil and gas from production wells along with specific criteria to safeguard communities and the environment from pipelines.
16. Vein Minerals, Lithium, Silica Sand/Moulding Sand and Ganister – ensures that particular regard will be given to the protection of designated areas in West Durham in the event that proposals for these minerals which are not currently worked are forthcoming over the M&WDPD period. Also gives recognition to meeting national demand for lithium.
17. Peat – establishes that commercial peat extraction will not be permitted in County Durham.
18. Inert Waste ‘Other Recovery’ – establishes the criteria by which other recovery of inert waste to land will be permitted and seeks to ensure that proposals are genuine waste recovery proposals.
19. Inert Waste Disposal via Landfill – establishes the criteria by which proposals to create new inert waste disposal capacity will be permitted.
20. Non-Hazardous Waste Landfill – establishes the criteria by which proposals for the disposal of non-hazardous waste by landfill will be permitted if new energy recovery and treatment capacity does not come on stream as expected.
21. Water Resources – Directs Landfill and Landraise proposals away from Groundwater Source Protection Zones and establishes the criteria by which permission is granted for sludge disposal.
22. Mineral Site Restoration, Landfill and Landraise – Sets out the Council’s expectations in relation to the restoration, after-use and aftercare of minerals sites and temporary waste development.

23. Site Specific Allocation, land at Thrislington West Quarry – Allocates an area of land within the existing quarry void to extract Basal Permian sand subject to meeting policy requirements.
24. Site Specific Allocation, Northern Extension to Crime Rigg Quarry – Allocates an area of land to the north of Crime Rigg Quarry for the extraction of Basal Permian Sand subject to meeting policy requirements.

The drafts of each of these policies was subject to an individual SA which highlighted their predicted social, economic and environmental effects along with ways in which the policy could be redrafted or other mitigating measures applied to either avoid or minimise negative effects, enhance positive effects or reduce uncertainty. Table 8 within the main SA report provides an overview of how SA recommendations were incorporated within the M&WDPD and how its alignment with the principles of sustainable development has improved as a result.

The only area of uncertainty remaining, and potentially significant adverse effect relates to the impact to groundwater resources which could occur because of the site allocations (policies 23 and 24). The extraction of Basal Permian Sands at Thrislington West Quarry and to the north of Crime Rigg Quarry will individually and cumulatively incur a partial loss of the underlying Magnesian Limestone and yellow sands Principal Aquifer. Obtaining the view of the Environment Agency in respect of the impact to the Principal aquifer will be key when the M&WDPD is made available for consultation to qualify the significance of likely effects further. The SA has also identified the need for further detailed, hydrogeological assessment to support any planning proposals that are forthcoming over the M&WDPD period.

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. Obtaining the view of the Environment Agency during the consultation process should help to overcome this issue and enable a more precise prediction of impacts on groundwater resources to be made at the next stage of M&WDPD development and its SA.

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

Overall, the SA predicted that the implementation of the M&WDPD policies would have positive cumulative effects against the social and economic SA objectives. Positive cumulative effects were also predicted against all bar three environmental SA objectives (9, 13 and 15) due to the issue relating to the Principal Magnesian Limestone Aquifer. The predicted cumulative effects against each SA objective are listed as follows:

1. To provide everybody with the opportunity to live in a decent and affordable home – **Minor Positive**

Minor positive cumulative effects are predicted as the two site allocations at Thrislington and Crime Rigg Quarries will supply Basal Permian sand which is a source of building sand used for housebuilding and other construction projects.

2. To promote strong, secure communities – **Positive**

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. In addition, the M&WDPD will help to foster community engagement on minerals development through the provision of local liaison groups.

3. To improve education, training and life-long learning, and maintain a healthy labour market – **Positive**

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 training linked to the minerals and waste industry in County Durham.

4. To reduce health inequalities and promote healthy lifestyles – **Positive**

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 main 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.

Whilst it is not possible to predict the effects of the potential site allocations with any greater certainty until a detailed health impact assessment is undertaken to support any planning application, it is likely that sand can be extracted from the proposed area within the void of Thrislington Quarry and from a northern extension to Crime Rigg quarry without any significant impacts to health and wellbeing.

5. To reduce the need to travel and promote use of sustainable transport options – **Positive**

Whilst mineral exploration and the extraction of minerals from the proposed extension to Crime Rigg Quarry may increase vehicle movements over and above existing levels in

the short to medium term, positive cumulative effects overall can be predicted. Together the policies within the M&WDPD establish the planning framework to ensure:

- The benefits of minerals extractions are secured, such as the enhancement of the public rights of way network;
- Promotes the use of sustainable transport for the movement of minerals, including the establishment of rail handling facilities;
- Close proximity between mineral extraction and processing, through the co-location of plant and equipment, reduces transportation distances;
- New or updated conditions for working and restoring minerals sites through the Review of Minerals Permissions (ROMP) process could reduce vehicle movement or lead to the enhancement of the public rights of way network;
- The sequential approach to the transportation of oil and gas reduces the need to travel through the use of pipelines in the first instance;
- Inert or non-hazardous landfill proposals do not create an over-provision of landfill capacity which could increase the importation (and associated transportation) of waste into County Durham;
- Inert Waste Landfill proposals are located as close as possible to waste arisings; and
- The best use of onsite materials are used in restoration of mineral sites, avoiding the need to transport materials to site for this purpose.

6. To alleviate deprivation and poverty – **Positive**

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 continued use of Thrislington West Quarry and the proposed extension to Crime Rigg Quarry may help to provide employment opportunities in areas of deprivation. In addition, both policies MW2 and MW22 could secure community benefits and afteruses which provide facilities or projects that contribute towards local regeneration initiatives.

7. To develop a sustainable and diverse economy with high levels of employment – **Positive**

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;
- Policies relating to the processing and storage of minerals contribute 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; and
- Allocating the proposed sand extraction area at Thrislington West Quarry and the northern extension to Crime Rigg Quarry would extend the operational life of these quarries, thereby prolonging their contribution to the local economy, safeguarding existing employment and potentially creating new jobs.

8. To reduce the causes of climate change - **Positive**

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. Overall, the M&WDPD is currently assessed as having overriding positive cumulative effect on reducing the causes of climate change despite the negative effects predicted against a few policies. The SA recognised activities relating to mineral exploration can increase greenhouse gas emissions, although such activity is likely to be short term in nature only. The SA also recognised that allocating the proposed sand extraction areas extend the operational lives of existing quarries and will continue greenhouse gas emissions associated with their working. However, in this regard there are a couple of advantages of 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.

In relation to the extension to the north of Crime Rigg Quarry, the SA recognised that in the longer term, the policy requirement for the extension to deliver a range of environmental benefits could contribute towards offsetting the emissions generated. Please note, that both allocations are well related to the main mineral markets in the north east which will help to minimise transportation distances and associated emissions.

Together, the positive cumulative aspects of the M&WDPD which are considered to outweigh negative effects include the following collective measures:

- The M&WDPD ensures that minerals and waste proposals will not significantly affect County Durham's ability to transition to a net zero future;
- 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;
- Policies work together to reduce the need to travel and promotes 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 power sectors 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;
- Recognises that the treatment methods for sludge are changing and greater emphasis is now being placed on its recovery to provide biogas;
- Requires any oil or gas proposals (in the event that they are forthcoming) to demonstrate carbon neutrality; and
- Encourages grid connections to mineral sites or local renewable energy generation with battery storage to power processing plant and equipment.

9. To respond and enable adaptation to the inevitable impacts of climate change – **Uncertain**

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 M&WDPD proposes two site allocations which would remove some of the principal Magnesian Limestone 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. Obtaining the view of the Environment Agency will be key when the M&WDPD is made available for consultation to qualify the significance of likely effects further.

10. To protect and enhance biodiversity and geodiversity – **Positive**

Overall, the M&WDPD is assessed as having positive cumulative effects towards protecting biodiversity and geodiversity.

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. 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 considered to be minimal and were screened out by the Habitats Regulations Assessment.

The positive cumulative aspects of the M&WDPD which are therefore considered to collectively outweigh temporary or negligible effects include the following measures:

- 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. 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 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, lithium, silica/moulding sand and ganister
 - 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.
 - Measures which aim to limit the impact of noise, dust, blasting and haulage will also minimise disturbance to species and protect habitats.

11. To protect and enhance the quality and character of landscape and townscape - **Positive**

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. The allocation of a northern extension to Crime Rigg 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.

The positive cumulative aspects of the M&WDPD which are therefore considered to collectively outweigh temporary or some potential negative effects and 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 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 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, lithium, silica/moulding sand and ganister
- 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.
- 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.

12. To protect and enhance cultural heritage & the historic environment – **Positive**

The M&WDPD is assessed as having positive cumulative effects towards protecting cultural heritage and the historic environment. 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 adverse impacts on the environment are likely to ensure that substantial harm to or loss of heritage assets are avoided and that the impacts of any changes to natural topography on the setting of assets can be mitigated.
 - 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 as a result of mineral working or temporary 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.
- 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.
- Measures which aim to limit the impact of noise, dust, blasting and haulage could also minimise indirect harm to heritage assets.

13. To protect and improve air water and soil resources – **Positive/Negative**

Overall, the M&WDPD has been assessed as having a cumulative mixed positive and negative effects on this objective. However, mixed effects relate only to water resources whereas positive cumulative effects can be predicted against air and soil resources.

Air: 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 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 will protect air quality from particulate matter;
- Requirements in relation to blasting will also protect air quality from particulate matter;
- 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: 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 landfill and landraise proposals away from the most sensitive groundwater protection zones;
- 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.

Negative:

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. This is a potentially significant cumulative effect. Obtaining the view of the Environment Agency will be key when the M&WDPD is made available for consultation to qualify the significance of likely effects further.

Soil: 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;
- The flexibility included within the M&WDPD relating to the future disposal of sludge may benefit soil resources in the event that the Environment Agency's review of sludge treatment concludes that less should be spread on land due to new hazards which could contaminate it;
- 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.

14. To reduce waste and encourage the sustainable and efficient use of materials – Positive

The M&WDPD is assessed as having a positive cumulative effect on this objective despite the inclusion of policies which provide the framework for the consideration of inert waste disposal and non-hazardous landfill. In the case of these policies, this is because they requires 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 20 (**Non-Hazardous Waste Landfill**) 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.

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

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;
- Ensuring that the best use of onsite materials is made for the restoration of other minerals and temporary waste development is also directly compatible with making the efficient use of materials;
- As new or updated conditions for working and restoring minerals sites are agreed through the periodic review process these could ensure for example that soil resources are managed properly so they can be recovered through the restoration of sites as opposed to disposed of elsewhere;
- Ensuring that existing permitted, ancillary facilities and infrastructure are used to support mineral development will contribute towards the efficient use of materials and avoid waste associated with the decommissioning stages;
- Supports the efficient use of mineral resources by requiring proposals to demonstrate that the minerals will be extracted for the purposes for which their specific qualities are essential;
- The M&WDPD sets the parameters for the 'other recovery' of inert waste whilst also requiring proposals to demonstrate that the waste which is to be used cannot be managed at a higher level of the waste hierarchy and represents a genuine recovery scheme as opposed to disposal; and
- Ensures that no infilling of the proposed allocations with inert waste is proposed as part of the scheme thereby contributing towards managing waste at a higher levels of the waste hierarchy.

15. To improve the sustainability of minerals extraction and use and reduce adverse impacts on communities and the environment – **Positive / Negative**

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

Positive:

- Ensuring that social, economic and environmental benefits of minerals extraction are taken into account when determining planning proposals will contribute directly towards the sustainability of minerals development in County Durham;
- Requirements contribute to the sustainability of mineral extraction by reducing the adverse impact of the nuisance of noise pollution on communities and the environment;
- M&WDPD requirements such as covering haulage and speed limits will, reduce the adverse impact that dust emissions from relevant operations will have on communities and the environment;
- Blasting requirements in line with British Institution Standards will minimise the impacts of mineral extraction on communities and the environment;
- The positive cumulative effects relating to reducing the need to travel and promoting sustainable transport also contribute cumulatively to minimising the impact of the haulage of minerals on communities and the environment;
- The requirements in relation to the storage of minerals is likely to assist in providing a steady and adequate supply of mineral resources;
- 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 establishment of local liaison groups will help to ensure that communities are given further opportunity for engagements in minerals development taking place within their local area;
- The overarching requirement to ensure that there will be no unacceptable adverse 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 that minerals development minimises its impact upon water resources both in relation to water resources that are required, prevention of pollution and impacts upon flow rates and run off;
- Ensures the delivery of progressive, high quality restoration schemes which secure benefits for the communities and the environment; and
- In the case of the allocation of Thirslington West Quarry, this directs minerals working to an existing quarry void which should minimise impacts to communities and the environment.

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)
- 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. This is a potentially significant cumulative effect. Obtaining the view of the Environment Agency will be key when the M&WDPD is made available for consultation to qualify the significance of likely effects further.

Next Steps

The SA report will be subject to consultation alongside the M&WDPD Draft Plan for a six-week period. Following consultation, all comments will be taken into account and a further SA report will be prepared to support the Submission Draft M&WDPD. The next iteration of the SA report will:

- Consider and assess any reasonable alternatives proposed through the consultation or as a result of new evidence/information;
- Present the assessment of any new policies and their reasonable alternatives along with mitigating measures;
- Review and present the assessment of policies which have changed significantly since they were previously assessed, along with mitigating measures; and
- Confirm any significant effects of the M&WDPD and monitoring proposals.