

# Habitat Regulations Assessment

## Screening Report

### Draft County Durham Minerals and Waste Policies and Allocations Document

ECOLOGY TEAM

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## Summary

Habitats Regulations Assessment (HRA) is the step by step process of ensuring that a plan or project being undertaken by, or permitted by, a public body will not adversely affect the ecological integrity of key wildlife sites, referred to as European sites.

European legislation, which is transposed into domestic legislation and policy, affords European sites the highest levels of protection. This report accompanies the draft County Durham Minerals and Waste Policies and Allocations Development Plan Document (M&WDPD). A complete HRA will be finalised alongside the submission version of the M&WDPD and therefore at this earlier stage the report provides an initial screening and consideration of appropriate assessment topics, in particular highlighting where further information or evidence will be necessary to inform the next iteration of the HRA.

The initial screening has highlighted likely significant effects alone in relation to:

- Disturbance and displacement of golden plover on potentially functionally linked land for the North Pennine Moors SPA from the proposed extension of Hulands quarry (site 10). In the event that a decision is made to allocate the proposed extensions to the quarry in future iterations of the Plan.

We identify that prior to submission, if this site and proposals are to be progressed, the following will be required:

- Adequate supporting information to enable an Appropriate Assessment of site M10, in relation to the identified risks as detailed in the screening report, to conclude no adverse affect on the integrity of the North Pennine Moors SPA. The appropriate assessment must contain complete, precise and definitive findings and conclusions to ensure that there is no reasonable scientific doubt as to the effects of the proposed plan. The applicant is required to provide such information as may reasonable be required to undertake the assessment<sup>1</sup>.

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<sup>1</sup> <https://www.gov.uk/guidance/appropriate-assessment>

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## 1: Introduction

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.

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, brick making raw materials and surface mined coal.

The four main types of waste produced and managed in County Durham include:

- non-hazardous waste,
- hazardous waste,
- inert or construction, demolition and excavation waste (CDEW); and
- agricultural waste

Non-hazardous waste includes householder 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. 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. Whilst there are currently five landfill sites in County Durham dealing primarily with inert waste, one of these is in the process of restoration and the agreed end date for tipping will be exceeded for all but one site by 2030. Waste which cannot otherwise be recycled as part of the Council's kerbside recycling scheme, and operation of the Council's Household Waste Recycling Sites, is exported to the Suez energy form 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.

As a Development Plan Document, once adopted the M&WDPD will form part of the statutory development plan for County Durham along with the County Durham Plan (CDP) and any adopted Neighbourhood Plans. Once adopted the Minerals & Waste DPD will complement the strategic minerals and waste policies of the County Durham Plan, and will replace/supersede the existing Minerals Local Plan (Dec 2000) and Waste Local Plan (April 2005). It will:

- Set out specific policies for a number of minerals and potentially waste management processes not addressed by the CDP;
- contain detailed development management policies for minerals and waste which will work with the minerals and waste policies set out within the Local Plan; and
- Where needed and justified allocate additional non-strategic<sup>2</sup> minerals and waste sites.

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<sup>2</sup> Non-strategic sites are sites which were not considered fundamental to the delivery of the strategy of the County Durham Plan, for example for minerals such as building stone, surface mined coal sites or small-scale waste management facilities. In addition, through the development of the M&WDPD there may be justification for seeking to allocate further larger mineral working or waste management facilities where a need can be identified, which was not anticipated during the preparation of the County Durham Plan.

## **Habitats Regulations Assessment and the planning system**

Habitats Regulations Assessment is required under the European Directive 92/43/EEC on the 'conservation of natural habitats and wild fauna and flora' for plans that may have an impact on the UK's national site network<sup>3</sup>.

Habitats Regulations Assessment is the assessment of the impacts of implementing a plan or policy on a national site network site. Its purpose is to consider the impacts of a land-use plan against conservation objectives of the site and to ascertain whether it would adversely affect the integrity of the site. Where significant negative effects are identified, alternative options should be examined to avoid any potential damaging effects. Where it is deemed that adverse effects cannot be ruled out, a plan or project must not proceed, unless exceptional tests are met. This is because European legislation, which is transposed into domestic legislation and policy, affords European sites the highest levels of protection in the hierarchy of sites designated to protect important features of the natural environment.

Habitats Regulations Assessment is applicable to both plans and projects, and is subsequently required for relevant components of County Durham's M&WDPD.

## **Relationship to the HRA of the CDP**

A full HRA of the CDP was undertaken and concluded in 2020 when the Plan was adopted. The HRA considered strategic policies regarding safeguarding and supply of both mineral and waste sites.

## **Purpose of this report**

The purpose of this current report is to present the HRA of the selected plan options (known as the Draft County Durham Minerals and Waste Policies and Allocations Document) to address key planning issues and manage development in County Durham. This report accompanies the M&WDPD and is intended to inform the planning decision making process.

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<sup>3</sup> Formerly referred to as Natura 2000 sites.

## 2. Guidance and Approach To HRA

### *Methodology*

The method adopted for the Habitats Regulations Assessment is based on the 'Assessment of Plans and projects Significantly Affecting Natura 2000 Sites. Methodological guidance on the provision of Article 6(3) and 6(4) of the 'Habitats' Directive 92/43/EEC' (European Commission, November 2001). Other relevant guidance taken into consideration during the assessment includes:

- Planning for the protection of European sites: Appropriate Assessment. Guidance for Regional Spatial Strategies and Local Development Documents (2006);
- Habitats regulations guidance notes (English Nature);
- <https://www.gov.uk/guidance/habitats-regulations-assessments-protecting-a-european-site>
- Circular 06/2005 – Biodiversity and conservation.

In accordance with the guidance, the precautionary principle has and will continue to be adopted throughout the HRA. In practice it means that harmful effects are assumed unless they can be excluded on the basis of available information. The table below outlines the iterative stages of HRA. These stages will be revisited as necessary in response to the development of the Plan.

*Table 1: Four Stage approach to HRA*

Stage		Description
1	Evidence Gathering	Collecting information on relevant SAC & SPA sites, their conservation objectives and characteristics and other plans and projects
2	Likely Significant Effects (Screening)	Identifying whether a plan is 'likely to have a significant effect' on a national site network site
3	Ascertaining the effect on site integrity (Appropriate Assessment)	Assessing the effects of the plan on the conservation objectives on any of the designated sites 'screened in 'during Stage 2
4	Mitigation measures and alternative solutions	Where adverse effects are identified during stage 3, avoidance measures, followed by mitigation measures should be considered. Where adverse effects are still identified, the Plan should be altered until adverse effects are cancelled out fully.

The 'screening' stage examines the likely effects of a project or plan, either alone or in combination with other projects or plans, upon a national site network site and considers whether it can be objectively concluded that these effects will not be significant.

This assessment comprises four steps:

1. Determining whether the project or plan is directly connected with or necessary to the management of the site;
2. Describing the project or plan and the description and characterisation of other projects or plans that in combination have the potential for having significant effects on the national site network site;
3. Identifying the potential effects on the relevant designated site; and
4. Assessing the significance of any effects on the site.

In April 2018, the Court of Justice of the European Union delivered its judgment in [Case C-323/17 People Over Wind & Peter Sweetman v Coillte Teoranta \('People over Wind'\)](#). The judgment clarified that when making screening decisions for the purposes of deciding whether an appropriate assessment is required, competent authorities cannot take into account any mitigation measures.

As a result, a competent authority may only take account of mitigation measures intended to avoid or reduce the harmful effects of a plan or project as part of an appropriate assessment itself.

This is a departure from the approach established by domestic case law, which had permitted mitigation measures to be taken into account at the screening stage.

### 3. Overview of Evidence Gathering Stage

Prior to screening the emerging M&WDPD for likely significant effects, it was first necessary to understand:

- How land use plans can affect Natura 2000 sites;
- Which Natura 2000 sites are likely to be affected by the emerging Plan and should be included in the screening assessment. This includes an understanding of why Natura 2000 sites have been designated, their current condition, vulnerabilities and conservation objectives; and
- If there are any other plans or projects that may act in combination with the Plan to affect relevant Natura 2000 sites.

An overview of the information collated in relation to each of these important considerations is provided as follows.

#### *Impact Pathways*

It is necessary to gain an understanding of the various ways in which land use plans can affect sites included in our national site network through different types of impact pathways. Impact pathways are routes by which a change in activity can lead to an affect upon a designated site. The impact

pathways which have been considered throughout this assessment are outlined in the following table.

Table 2: Impact pathways

Type	Description	Potential effects of land use plans	Specific screening considerations
Air quality	A change in the composition of air that disperses in the vicinity of a national site network site can change conditions, damage habitat, and harm species. The main pollutants of concern for our sites are oxides of nitrogen (NO <sub>x</sub> ), sulphur dioxide (SO <sub>2</sub> ) and ammonia (NH <sub>3</sub> ).	Land use plans can contribute to atmospheric pollution through; increased traffic linked to minerals working and waste management (i.e. dust generation, landfill gas or incinerator emissions).	In relation to impacts of atmospheric pollution from traffic on the County's SAC's & SPA's, the appropriate assessment of the former North East Regional Spatial Strategy (RSS) states that 'English Nature's (now Natural England) advice to Runnymede Borough Council on traffic related air pollution, based on interim guidance from the Department for Transport (2005), was that NO <sub>2</sub> emissions only needed to be considered if there is a road carrying a significant proportion of new traffic related to the plan within 0.2km of a European site.' Beyond 0.2km, the contribution of vehicle emissions from the roadside to local pollution levels is not considered significant. This is therefore the distance that will be used throughout the screening assessment for determining whether our designated sites are likely to be significantly affected by increased traffic.
Water Quality	Poor water quality can have a range of environmental impacts: <ul style="list-style-type: none"> <li>• At high levels, toxic chemicals and metals can result in immediate death of</li> </ul>	Minerals and waste development could lead to discharges and leachate of pollutants to surface and groundwater sources. Sites in close proximity to watercourses also have the potential to	This impact pathway will need to be taken into account for water dependant and hydrologically linked designated sites in particular.

	<p>aquatic life, and can have detrimental effects including increased vulnerability to disease and change in wildlife behaviour. Loss of aquatic life can also have a direct knock on effect on other qualifying species such as birds and otters.</p> <ul style="list-style-type: none"> <li>• Eutrophication increases plant growth and consequently results in oxygen depletion. Algal blooms, which commonly result from eutrophication, increase turbidity and decrease light penetration.</li> <li>• Some pesticides, industrial chemicals, and components of sewerage effluent are suspected to interfere with the functioning of the endocrine system, possibly having negative effects on the reproduction and development of aquatic life.</li> </ul>	affect sedimentation levels.	
Hydrology	Changes in hydrology can result in drought or	Some mineral sites require de-watering	This impact pathway will need to be taken into

	flooding of sites that can damage habitat and harm species in designated areas.	which can affect hydrological systems.	account for water dependant and hydrologically linked sites in particular.
Habitat and Species Destruction or Fragmentation	<p><b>Land Take</b></p> <p>The direct loss of land from a designated site or functional land could incur a significant loss of qualifying habitat and species and/or impact upon the structure and functioning of habitats and population of species.</p>	Direct land take from designated sites (or functional land) could potentially result if land use plans direct new mineral and/or waste sites, or extensions to existing sites within the designated boundary or to land which is considered to act as functional land to the designated site.	<p>In County Durham ongoing consents which may have been approved within designated site boundaries prior to designation can be linked to minerals development which often have long permissions. Durham County Council completed a Review of relevant existing minerals decisions and consents (November 2015) which determined:</p> <ul style="list-style-type: none"> <li>• Which consents could be affirmed as having no likely significant effects either alone or in combination with other plans or projects upon designated sites; and</li> <li>• Which consents have been flagged as having the potential to have a likely significant effect either alone or in combination with other plans and projects upon designated sites in the event that working is recommenced in inactive or dormant sites.</li> </ul> <p>The review can therefore be used to</p>

			inform the screening assessment in relation to which mineral sites are likely to pose a risk to designated sites in relation to land take and other impact pathways.
	<p><b>Urbanisation</b></p> <p>The main impacts of urbanisation are:</p> <ul style="list-style-type: none"> <li>• Invasive species can be spread through inappropriate disposal of garden waste. Plant pathogens may also be spread as a result of working of non-inert landfill sites.</li> <li>• Increased predation due to waste sites increasing the populations of rats and other predatory species (gulls foxes).</li> </ul>	Mineral and waste sites could increase the risk of these impacts if sited within close proximity to a sensitive site.	
Habitat and Species Disturbance	Disturbance can affect species behaviour in respect of feeding, roosting and may ultimately affect breeding success which could lead to significant adverse effects in respect of breeding pairs of qualifying species.	The operation of Mineral and Waste sites could contribute to increased levels of disturbance, noise, vibration and lighting from sites located within close proximity to sensitive sites/qualifying features.	

### *Functional land*

In addition to the designated sites it is also important to consider potential impacts to functional land. Functional land is essentially land that forms an essential part of a species lifecycle, i.e. land used for roosting, foraging or shelter but not necessarily designated or protected.

In relation to potential areas functionally linked to the North Pennine Moors SPA the following information and research on the qualifying features and their breeding habits will be used to consider any effects of the plan:

- Golden Plover (*Pluvialis apicaria*) – Research has determined that breeding of this species occurs almost exclusively outside of enclosed land.<sup>4</sup> However *Time budgets and foraging of breeding golden plover* (2001, Whittingham, M.J et al) noted the relative importance to breeding adult golden plover of enclosed fields up to 4km from the nest and up to 2km from the moorland boundary in County Durham.<sup>5</sup> These fields are thought to provide better foraging sites than moorland habitat particularly during the incubation stage, with higher densities of earthworms, as well as ensuring that predators aren't attracted to active nesting sites. Applying the precautionary principle, a 2km buffer from the boundary of the North Pennine Moors SPA has therefore been applied in order to identify potential functionally linked land for this species.
- Hen harrier (*Circus cyaneus*), Merlin (*Falco columbarius*) and Peregrine falcon (*Falco peregrinus*) are all included as qualifying features, however due to their relatively low populations (high persecution rates) and large territories, it is considered inappropriate to attempt to calculate the functional requirements of the species outside of the designated site boundary. Indeed it is apparent that with respect to Hen harrier – due to the relatively high success rates of foraging within moorland, that populations breeding within this habitat type are unlikely to stray outside for foraging purposes. (Redpath, S. et al 2001)<sup>6</sup>

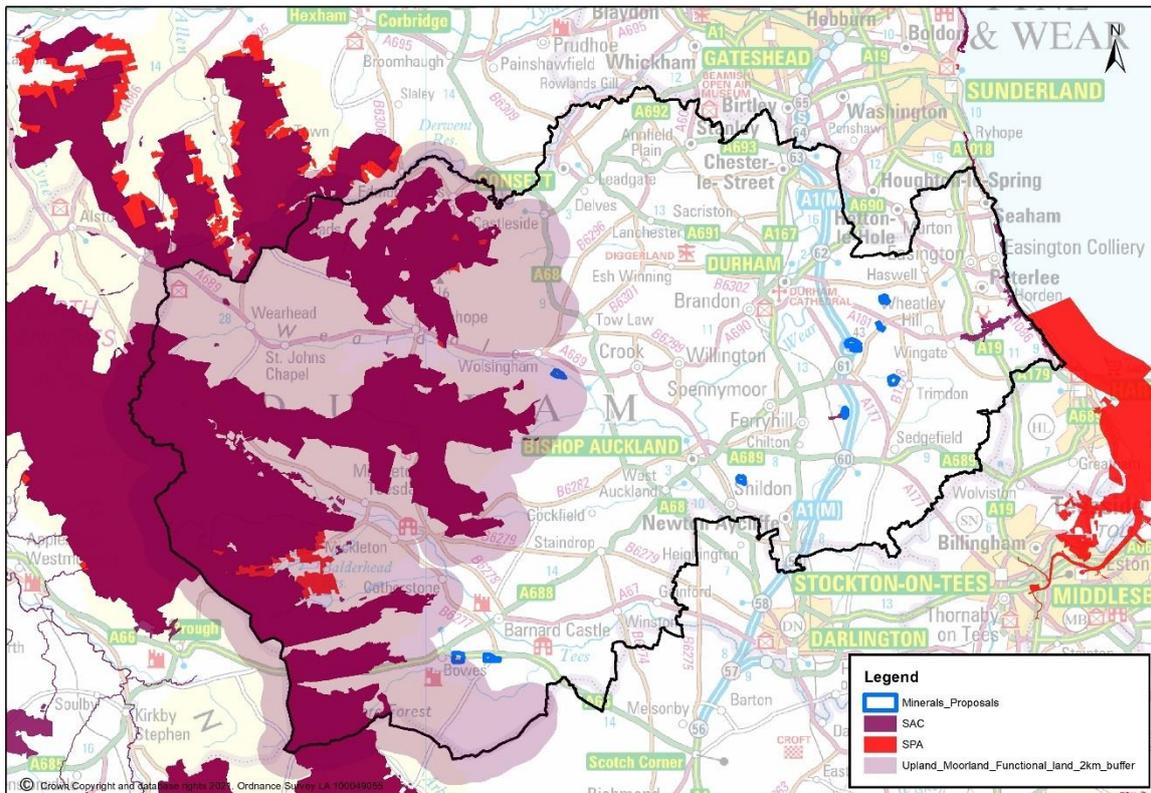
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<sup>4</sup> Whitfield, D.P&Thomas, C.J.(2006) [Analysis of a survey of golden plover around the Caithness and Sutherland Peatlands Special Protection Area](#). Scottish Natural Heritage Commissioned Report No.181 (ROAME No. F01LB205/5). Whittingham, M.J et al. (2002) [Nest-site selection by golden plover: why do shorebirds avoid nesting on slopes?](#) Journal of Avian Biology. Whittingham, M.J et al (2001) [Habitat selection by golden plover \*Pluvialis apicaria\* chicks](#) Journal of Basic and Applied Ecology. Whittingham MJ et al. (2000) [Time budgets and foraging of breeding golden plover \*Pluvialis apicaria\*](#). Journal of Applied Ecology. Dr Derek A. Ratchliffe (1976) [Observations on the Breeding of Golden Plover in Great Britain](#) Bird Study 23:2, 63-116.

<sup>5</sup> [Time budgets and foraging of breeding golden plover \*Pluvialis apicaria\* - Whittingham - 2000 - Journal of Applied Ecology - Wiley Online Library](#)

<sup>6</sup> Redpath, S et al. (2001) [Hen harrier foraging success in relation to land use in Scotland](#).

Fig. 2: Map of the county showing the European designated sites and associated 2km buffer which identifies potential functional land for the North Pennine Moors SPA.



The precautionary principle will be applied to these areas and they will be considered as functionally linked land to the North Pennine Moors SPA.

### Determination of sites

Following the identification of potential impact pathways, it was necessary to compile a comprehensive list of the sites that could potentially be affected by the emerging Plan. The sites included within the screening assessment includes:

- Durham Coast SAC
- Teesmouth & Cleveland Coast SPA/Ramsar
- Northumbria Coast SPA/Ramsar
- Thrislington SAC
- Moor House-Upper Teesdale SAC
- North Pennine Dales Meadows SAC
- North Pennine Moors SPA/SAC

Fig. 2: Map of the county showing location of designated sites included in the screening assessment

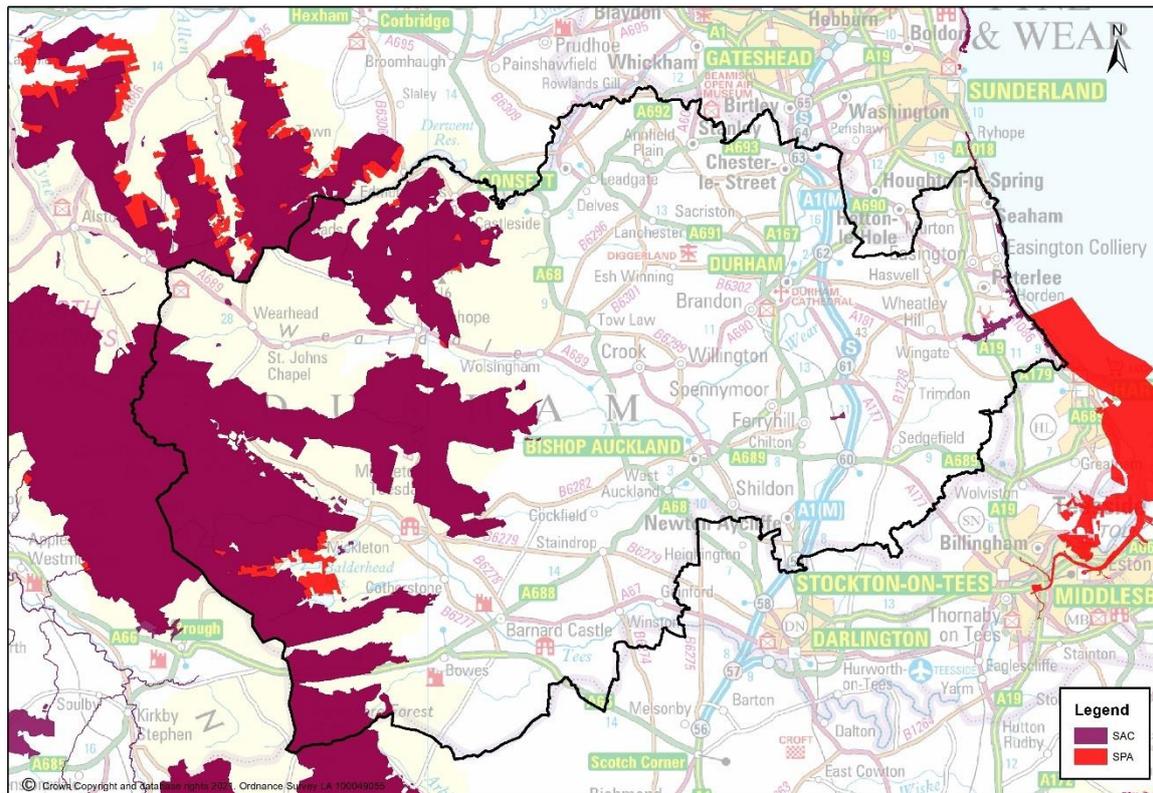


Table 3: European site sensitivities for consideration

Durham Coast SAC	Changes to hydrology in the event that dewatering is a factor in relation to a mineral or waste site.
Northumbria Coast SPA/Ramsar	Potential loss of functional land to a mineral or waste site
	Disturbance to qualifying features
	Potential for increased levels of predation/urbanisation impacts
Teesmouth and Cleveland Coast SPA/Ramsar site	Potential loss of functional land to a mineral or waste site
	Disturbance to qualifying features
	Potential for increased levels of predation/urbanisation impacts
Thrislington SAC	Increased traffic and potential changes to existing minerals practice to impact upon air quality and associated deposition levels.
North Pennine Moors SPA & SAC	Increased traffic and potential changes to existing minerals practice to impact upon air quality and associated deposition levels to qualifying habitats.
	Impact of dewatering on hydrology

	Impact of new mineral working on land take and loss of functional land for qualifying features.
	Increased disturbance to qualifying species potentially as a result of mineral working.
Moor House-Upper Teesdale SAC	Increased traffic and potential changes to existing minerals practice to impact upon air quality and associated deposition levels to qualifying habitats.
	Impact of dewatering on hydrology
	Impact of new mineral working on land take
North Pennine Dales Meadows SAC	Increased traffic and potential changes to existing minerals practice to impact upon air quality and associated deposition levels to qualifying habitats.
	Impact of dewatering on hydrology
	Impact of new mineral working on land take.

#### 4. Initial Screening of Potential Site Allocations to Determine Likely Significant Effects (LSE)

##### *Potential site allocations*

##### *Locations for minerals and waste development*

The preparation of the M&WDPD is a commitment that the Council made during the preparation of the County Durham Plan and to demonstrate its intent in June 2018 the Council published both a Scoping Report and a Sustainability Appraisal Scoping Report for the M&WDPD. The M&WDPD is now being prepared in accordance with the timetable for its adoption as set out in the Council's latest Local Development Scheme (September 2021). The Local Development Scheme can be accessed here: <https://www.durham.gov.uk/article/7440/What-is-the-County-Durham-Plan->

Initial consultation under Regulation 18 was undertaken between Friday 15th January 2021 and Friday 26th February 2021 when the council consulted for six weeks on its Regulation 18 Statement - Notice of Intention to Prepare a Local Plan Development Plan Document. A call for new minerals and waste sites was also undertaken at this time.

The County Council wishes to emphasise that the identification of potential sites and areas for minerals and waste development in the Draft County Durham Minerals and Waste Policies and Allocations Document does not imply support by the County Council, neither does it equate to sites having passed requirements for planning permission to be granted.

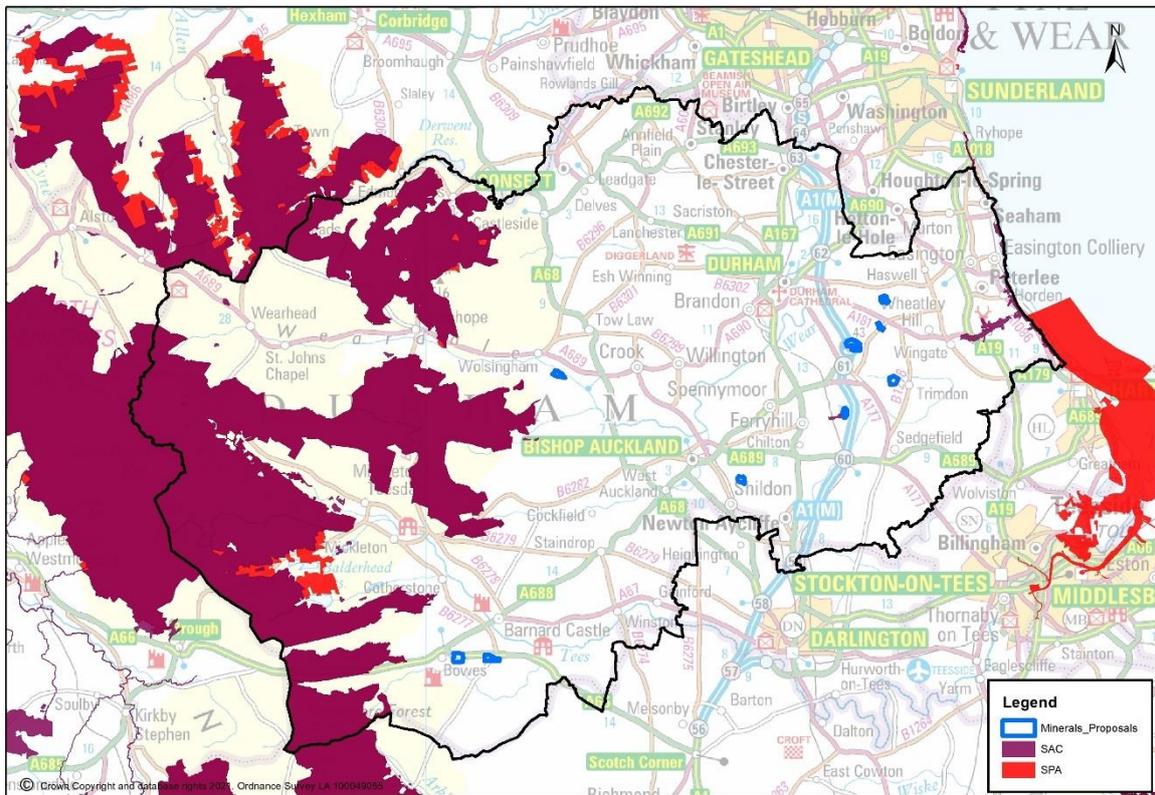
#### Proposed mineral site allocations

- Site M1: Witch Hill Eastern Extension
- Site M2: Raisby Quarry Eastern Extension
- Site M3: Crime Rigg Quarry Northern Extension
- Site M4: Boldron Cross lanes (new site)
- Site M5: Low Harperley Western Extension
- Site M6: Thrislington Basal Permian Sand
- Site M7: Thrislington East Quarry Magnesian Limestone
- Site M8: Cold Knuckle
- Site M9: Old Quarrington Quarry
- Site M10: Hulands Quarry Eastern Extension
- Site M11: Eldon Quarry
- Site M12: Coal Preferred Area
- Site M13: Sand and Gravel AOS

#### Proposed waste site allocations

- Site W1: Crime Rigg Quarry Waste (eastern part of the site)
- Site W2: Cold Knuckle
- Site W3: Old Quarrington Quarry
- Site W4: Eldon Quarry

Fig. 3: Locations of proposed mineral and waste sites



As can be seen in the map above, none of the sites included in the assessment fall within the boundary of a designated site. Site's M6 & M7 (Thrislington Basal Permian sand, and Thrislington east quarry magnesian limestone) lie within the existing Thrislington quarry, which is sited immediately adjacent to Thrislington SAC. The proposals do however not result in any land take.

Screening Tables

Table 4: Summary Screening for Likely Significant Effect

Site Name	Durham Coast
Site Designation	SAC
Description of site	<p>Durham Coast SAC was designated in April 2005 and covers an area of approximately 394 hectares. Durham Coast SAC is the only example of vegetated sea cliffs on magnesian limestone exposures in the UK. These cliffs extend along the North Sea coast for over 20 km from South Shields southwards to Blackhall Rocks. Their vegetation is unique in the British Isles and consists of a complex mosaic of paramaritime, mesotrophic and calcicolous grasslands, tall-herb fen, seepage flushes and wind-pruned scrub. Within these habitats rare species of contrasting photogeographic distributions often grow together forming unusual and species-rich communities of high scientific interest.</p> <p>The communities present on the sea cliffs are largely maintained by natural processes including exposure to sea spray, erosion and slippage of the soft magnesian limestone bedrock and overlying glacial drifts, as well as localised flushing by calcareous water.</p> <p><b>Qualifying Features</b></p> <ul style="list-style-type: none"> <li>• Vegetated sea cliffs of the Atlantic and Baltic coasts</li> </ul>
Conservation Objectives of Site	<p>With regard to the SAC and the natural habitats and/or species for which the site has been designated and subject to natural change;</p> <p>Ensure that the integrity of the site is maintained or restored as appropriate; and</p> <p>ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:</p> <ul style="list-style-type: none"> <li>• The extent and distribution of qualifying natural habitats</li> <li>• The structure and function (including typical species) of qualifying natural habitats, and</li> <li>• The supporting processes on which the qualifying natural habitats rely.</li> </ul>
Component SSSI	<p>61.92% of the component SSSI is classified as 'area favourable' and 38.08% is classified as 'area unfavourable recovering.' Whilst the reasons for designating the SSSI differ to the SAC, some of the reasons for 'unfavourable recovering' status of the units include:</p> <ul style="list-style-type: none"> <li>• Scrub encroachment</li> <li>• Rank grassland and presence of other negative indicator species</li> <li>• Erosion</li> <li>• Evidence of human disturbance including litter, remains of fires and vehicular use</li> </ul>

Aspects of the plan which could impact on the site	<ul style="list-style-type: none"> <li>• Land bank/need</li> <li>• Restoration and after-use</li> <li>• Transport</li> <li>• Cumulative Impact</li> <li>• Minerals Safeguarding</li> <li>• Waste Safeguarding</li> <li>• Location of Development (construction aggregates, waste management facilities, landfill)</li> </ul>	<ul style="list-style-type: none"> <li>• Specialist Waste Management</li> <li>• Temporary infrastructure (waste, construction aggregate)</li> <li>• Permanent construction aggregate infrastructure</li> </ul>
Potential Causes of Significant Effects	Vulnerability of International site	Details
Fragmentation	N	No land take from European and Ramsar sites will be required to deliver the objectives set out in the M&WDPD.
Predation/Urban impacts	Nutrient increase/fertilisers Y	This hazard is considered to have no likely significant effect on the SAC, because the designated site is some distance from any potential sites, therefore, any potential hazards are unlikely to reach the SAC.
	Vermin N	
	Invasive species Y	This hazard is considered to have no likely significant effect on the SAC, because the designated site is some distance from any potential sites, therefore, any potential hazards are unlikely to reach the SAC.
Hydrology	Leachate N	
	Water Use N	
	Water Pollution N	
	Groundwater Y	Natural England's site improvement plan for the Durham Coast SAC <sup>7</sup> does not identify any issues relating to water supply. The supplementary conservation objectives for

<sup>7</sup> <http://publications.naturalengland.org.uk/publication/5113930540122112>

			<p>the Durham Coast SAC set a target relating to a site, unit and/or catchment level, to restore natural hydrological processes to provide the conditions necessary to sustain the H1230 (the vegetated sea-cliffs) feature within the site. Supporting text describes how defining and maintaining the appropriate hydrological regime is a key step in moving towards achieving the conservation objectives for this site and sustaining this feature. Changes in source, depth, duration, frequency, magnitude and timing of water supply can have significant implications for the assemblage of characteristic plants and animals present. It goes on to identify that further site-specific investigations may be required to fully inform conservation measures and/or the likelihood of impacts. There are a number of small wetlands within the SAC, but no detailed work has been done on their hydrology and so the water supply mechanisms are not known. Given this uncertainty, Natural England have set a restore target because it is likely that some wetlands have been affected by local agricultural drainage.</p>
Disturbance	Noise	N	
	Lighting	N	
	Vibration	N	
	Trampling	Y	This hazard is considered to have no likely significant effect on the SAC, because

			the designated site is some distance from any potential sites, therefore, any potential hazards are unlikely to reach the SAC.
Air Pollution	Traffic (NoX)	Y	The APIS website states that ' <i>Based on the NBN Habitats Dictionary there is no nitrogen EUNIS class for which a critical load has been set, which is comparable to the habitat feature</i> '. <sup>8</sup> Likely risk on this impact pathway by the proposed sites has therefore been screened out.
	Dust	Y	This hazard is considered to have no likely significant effect on the SAC, because the designated site is some distance from any potential sites, therefore, any potential hazards are unlikely to reach the SAC.
Inappropriate management		Y	The proposals will not impact on or change the current management of the site.
Other plans and projects			LSE is screened out therefore no in-combination assessment required.
Are the potential impacts of the plan likely to be significant?			
Alone?	No		
In combination?	No		

Site Name	Northumbria Coast
Site Designation	SPA & Ramsar
Description of site	Northumbria Coast SPA & Ramsar was designated in February 2000 and covers an area of approximately 1,108 hectares. The site comprises several discrete stretches of the coastline in North East

<sup>8</sup> <http://www.apis.ac.uk/src/select-a-feature?site=UK0030140&SiteType=SAC&submit=Next>

	<p>England between Spittal in the north of Northumberland to Crimdon Dene in County Durham. The site consists of rocky shore with associated bolder and cobble beaches. These support a rich algal flora and associated fauna and form an important feeding area for wading birds. The areas of sandy beach within the site support a flora which includes <i>Ammophila arenaria</i> and <i>Honkenya peploides</i>. A diverse range of recreational activities takes place along the coast including walking, camping, sea angling, bird watching, water sports and general use of amenity beaches. As well as attracting a large number of day trippers, a sizable population of summer visitors stay in caravan sites and other accommodation along the coast. The site also includes parts of three artificial pier structures and a small section of sandy beach. The site is also referred to as a European Marine Site (EMS) as it consists of areas continuously or intermittently covered by tidal waters or any part of the sea in or adjacent to Great Britain up to the limit of territorial waters.</p> <p>The designated stretches in Durham consist of approximately 55 hectares and broadly pertain to Seaham's coastal area and harbour in the north east of the County and the area of coastline between Blackhall Rocks and Crimdon Dene in the south east of the County. The habitat of the SPA is predominantly classified as Shingle, Sea Cliffs and Islets.</p>
<p>Conservation Objectives of Site</p>	<p>With regard to the SPA (and Ramsar) and the individual species and/or assemblage of species for which the site has been designated and subject to natural change;</p> <p>Ensure that the integrity of the site is maintained or restored as appropriate; and</p> <p>ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:</p> <ul style="list-style-type: none"> <li>• The extent and distribution of the habitats of the qualifying features</li> <li>• The structure and function of the habitats of the qualifying features</li> <li>• The supporting processes on which habitats of the qualifying features rely</li> <li>• The population of each of the qualifying features; and</li> <li>• The distribution of the qualifying features within the site.</li> </ul>
<p>Component SSSI</p>	<p>61.92% of the component SSSI is classified as 'area favourable' and 38.08% is classified as 'area unfavourable recovering.' Whilst the reasons for designating the SSSI differ to the SPA/Ramsar, some of the reasons for 'unfavourable recovering' status of the units include:</p> <ul style="list-style-type: none"> <li>• Evidence of human disturbance including litter, remains of fires and vehicular use.</li> </ul>

Aspects of the plan which could impact on the site	<ul style="list-style-type: none"> <li>• Land bank/need</li> <li>• Restoration and after-use</li> <li>• Transport</li> <li>• Cumulative Impact</li> <li>• Minerals Safeguarding</li> <li>• Waste Safeguarding</li> <li>• Location of Development (construction aggregates, waste management facilities, landfill)</li> </ul>	<ul style="list-style-type: none"> <li>• Specialist Waste Management</li> <li>• Temporary infrastructure (waste, construction aggregate)</li> <li>• Permanent construction aggregate infrastructure</li> </ul>	
Potential Causes of Significant Effects	Vulnerability of International site	Details	
Fragmentation		N	No land take from European and Ramsar sites will be required to deliver the objectives set out in the M&WDPD.
Predation/Urban impacts	Nutrient increase/fertilisers	Y	This hazard is considered to have no likely significant effect on the SPA/Ramsar, because the designated site is some distance from any potential sites, therefore, any potential hazards are unlikely to reach the site.
	Vermin	Y	This hazard is considered to have no likely significant effect on the SPA/Ramsar, because the designated site is some distance from any potential sites, therefore, any potential hazards are unlikely to reach the site.
	Invasive species	Y	This hazard is considered to have no likely significant effect on the SPA/Ramsar, because the designated site is some distance from any potential sites, therefore, any potential hazards are unlikely to reach the site.
Hydrology	Leachate	Y	This hazard is considered to have no likely significant

			effect on the SPA/Ramsar, because the designated site is some distance from any potential sites, therefore, any potential hazards are unlikely to reach the SPA/Ramsar.
	Water Use	N	
	Water Pollution	Y	This hazard is considered to have no likely significant effect on the SPA/Ramsar, because the designated site is some distance from any potential sites, therefore, any potential hazards are unlikely to reach the SPA/Ramsar.
	Groundwater	Y	The site improvement plan for the Northumbria Coast SPA <sup>9</sup> does not identify water supply as a current issue or threat for the SPA. The supplementary conservation advice does not set a target relating to water supply for the site.
Disturbance	Noise	Y	This hazard is considered to have negligible potential to cause a likely significant effect on the SPA/Ramsar, because the designated site is some distance from any potential sites, therefore, any potential hazards are unlikely to reach the SPA/Ramsar.
	Lighting	N	
	Traffic	Y	This hazard is considered to have no likely significant effect on the SPA/Ramsar, because the designated site is some distance from any potential sites, therefore, any potential

<sup>9</sup> <http://publications.naturalengland.org.uk/publication/5340976100933632>

			hazards are unlikely to reach the SPA/Ramsar.
	Vibration	Y	This hazard is considered to have no likely significant effect on the SPA/Ramsar, because the designated site is some distance from any potential sites, therefore, any potential hazards are unlikely to reach the SPA/Ramsar.
	Trampling	Y	This hazard is considered to have no likely significant effect on the SPA/Ramsar, because the designated site is some distance from any potential sites, therefore, any potential hazards are unlikely to reach the SPA/Ramsar.
Air Pollution	Traffic (NoX)	Y	This hazard is considered to have no likely significant effect on the SPA/Ramsar, because the designated site is some distance from any potential sites, therefore, any potential hazards are unlikely to reach the SPA/Ramsar.
	Dust	Y	This hazard is considered to have no likely significant effect on the SPA/Ramsar, because the designated site is some distance from any potential sites, therefore, any potential hazards are unlikely to reach the SPA/Ramsar.
Inappropriate management		Y	The proposals will not impact on or change the current management of the site.
Other plans and projects			LSE is screened out therefore no in-combination assessment required.

Are the potential impacts of the plan likely to be significant?			
Alone?	No		
In combination?	No		

Site Name	Teesmouth & Cleveland Coast
Site Designation	SPA/Ramsar
Description of site	<p>This site was designated in August 1995 and covers an area of approximately 1,247 hectares. Teesmouth and Cleveland Coast comprises intertidal sand and mudflats, rocky shore, saltmarsh, freshwater marsh and sand dunes. The Tees estuary has been much-modified by such activities as land-claim, construction of breakwaters and training walls, and deep dredging. The remaining intertidal areas within the estuary are composed of mud and sand, with some Enteromorpha beds in sheltered areas. Outside the estuary mouth, sandflats predominate, but with significant rocky foreshores and reefs at both Redcar and Hartlepool and anthropogenic boulder beds at South Gare. Moderately extensive sand dune systems flank the estuary mouth, while a smaller dune system lies north of Hartlepool. Surviving saltmarsh is very limited in extent. Behind the dunes and sea-defences a number of significant areas of grazing marsh are found. The site is also referred to as a European Marine Site (EMS) as it consists of areas continuously or intermittently covered by tidal waters or any part of the sea in or adjacent to Great Britain up to the limit of territorial waters.</p> <p>The designated stretch within County Durham's administrative boundary is approximately 1km in length and covers an area of approximately 22 hectares. The area is located between Crimdon Dene and Hartlepool Borough Council's administrative boundary and predominantly consists of coastal sand dunes and sand beaches.</p>
Conservation Objectives of Site	<p>With regard to the SPA (and Ramsar) and the individual species and/or assemblage of species for which the site has been designated and subject to natural change;</p> <p>Ensure that the integrity of the site is maintained or restored as appropriate; and ensure that the site contributes to achieving the aims of the Wild Birds Directive, by maintaining or restoring:</p> <ul style="list-style-type: none"> <li>• The extent and distribution of the habitats of the qualifying features,</li> <li>• The structure and function of the habitats of the qualifying features,</li> <li>• The supporting processes on which the qualifying natural habitats rely,</li> <li>• The population of each of the qualifying features, and</li> <li>• The distribution of the qualifying features within the site.</li> </ul>
Component SSSI	Teesmouth and Cleveland Coast SPA comprises six component SSSI's, Durham Coast SSSI being the only site within County Durham's

	<p>administrative boundary. During the most recent Condition Assessment process, 31% of the component SSSI's combined were classified as 'area favourable'; 38% were classified as 'area unfavourable recovering'; 9% were classified as 'unfavourable no change'; 21.3% were classified as 'declining' and 0.7% were classified as area 'destroyed/part destroyed'. Units 2 and 7 of Seal Sands have been classified as destroyed due to the presence of built development and no possibility of habitat reinstatement. Whilst the reasons for designating the SSSI differ to the SPA/Ramsar, some of the reasons for 'unfavourable recovering' status of the units which may relate to the SPA/Ramsar include:</p> <ul style="list-style-type: none"> <li>Evidence of human disturbance including litter, remains of fires and vehicular use</li> </ul>		
Aspects of the plan which could impact on the site	<ul style="list-style-type: none"> <li>Land bank/need</li> <li>Restoration and after-use</li> <li>Transport</li> <li>Cumulative Impact</li> <li>Minerals Safeguarding</li> <li>Waste Safeguarding</li> <li>Location of Development (construction aggregates, waste management facilities, landfill)</li> </ul>	<ul style="list-style-type: none"> <li>Specialist Waste Management</li> <li>Temporary infrastructure (waste, construction aggregate)</li> <li>Permanent construction aggregate infrastructure</li> </ul>	
Potential Causes of Significant Effects		Vulnerability of International site	Details
Fragmentation		N	No land take from European and Ramsar sites will be required to deliver the objectives set out in the M&WDPD.
Predation/Urban impacts	Nutrient increase/fertilisers	Y	This hazard is considered to have no likely significant effect on the SPA, because the designated site is some distance from any potential sites, therefore, any potential hazards are unlikely to reach the SPA.
	Vermin	Y	This hazard is considered to have no likely significant effect on the SPA, because the designated site is some distance from any potential sites, therefore, any potential hazards are unlikely to reach the SPA.
	Invasive species	Y	This hazard is considered to have no likely significant

			effect on the SPA, because the designated site is some distance from any potential sites, therefore, any potential hazards are unlikely to reach the SPA.
Hydrology	Leachate	N	
	Water Use	N	
	Water Pollution	N	
	Groundwater	N	
Disturbance	Noise	N	
	Lighting	N	
	Vibration	N	
	Trampling	N	
	Public Access/Disturbance	Y	This hazard is considered to have no likely significant effect on the SPA, because the designated site is some distance from any potential sites, therefore, any potential hazards are unlikely to reach the SPA.
Air Pollution	Traffic (NoX)	Y	The APIS website states that ' <i>Based on the NBN Habitats Dictionary there is no nitrogen EUNIS class for which a critical load has been set, which is comparable to the habitat feature</i> '. <sup>10</sup> Likely risk on this impact pathway by the proposed sites has therefore been screened out.
	Dust	N	
Inappropriate management		Y	The proposals will not impact on or change the current management of the site.
Other plans and projects			LSE is screened out therefore no in-combination assessment required.
Are the potential impacts of the plan likely to be significant?			
Alone?	No		

<sup>10</sup> <http://www.apis.ac.uk/src/select-a-feature?site=UK0030140&SiteType=SAC&submit=Next>

In combination?	No	
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Site Name	North Pennine Moors
Site Designation	SPA and SAC
Description of site	<p>North Pennine Moors SPA was designated in February 2001 and covers an area of approximately 147,246 hectares across the administrative boundaries of Cumbria, Durham, North Yorkshire and Northumberland. Approximately 46,736 hectares of the designation (31.74%) is within County Durham, across the former district areas of Teesdale and Weardale.</p> <p>North Pennine Moors SAC was designated in April 2005 and covers an area of approximately 103,109 hectares across the administrative boundaries of Cumbria, Durham, North Yorkshire and Northumberland. Approximately 29,293 hectares of the designation (28.41%) is within County Durham's boundary across the former district areas of Teesdale and Weardale.</p> <p>The North Pennine Moors (along with the North York Moors) hold much of the upland heathland of northern England. At higher altitudes and to the wetter west and north of the site complex, the heaths grade into extensive areas of blanket bogs. The site is considered as supporting the major area of blanket bog in England. A significant proportion remains active with accumulating peat, although these areas are often bounded by sizable zones of currently non-active bogs, albeit on deep peat. The habitat of North Pennine Moors SAC supports breeding pairs of Hen Harrier, Merlin, Peregrine falcon, European Golden plover, Dunlin and Eurasian curlew.</p> <p><b>Qualifying Features (SPA)</b></p> <ul style="list-style-type: none"> <li>• Hen harrier (reproducing)</li> <li>• Merlin (reproducing)</li> <li>• Peregrine falcon (reproducing)</li> <li>• European golden plover (reproducing)</li> </ul> <p><b>Qualifying Features (SAC)</b>  <i>Annex I habitats that are a primary reason for site selection</i></p> <ul style="list-style-type: none"> <li>• European dry heaths</li> <li>• Juniperus communis formations on heaths or calcareous grasslands</li> <li>• Blanket bogs</li> <li>• Petrifying springs with tufa formation (<i>Cratoneurion</i>); Hard-water springs depositing lime</li> <li>• Siliceous rocky slopes with chasmophytic vegetation; Plants in crevices on acid rocks</li> <li>• Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles; Western acidic oak woodland</li> </ul>

	<p><i>Annex I habitats present as a qualifying feature but not a primary reason for site selection</i></p> <ul style="list-style-type: none"> <li>• Northern Atlantic wet heaths with <i>Erica tetralix</i>: Wet heathland with cross-leaved heath</li> <li>• Calamanarian grassland of the <i>Violetalia calaminariae</i>; Grassland on soils rich in heavy metals</li> <li>• Siliceous alpine and boreal grasslands; Montane acid grasslands</li> <li>• Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>); Dry grasslands and scrublands on chalk or limestone</li> <li>• Alkaline fens; Calcium-rich springwater-fed fens</li> <li>• Siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galepsietalia ladani</i>); Acidic scree</li> <li>• Calcareous rocky lopes with chasmophytic vegetation; Plants in crevices in base-rich rocks</li> </ul> <p><i>Annex II species present as a qualifying feature but not a primary reason for site selection</i></p> <ul style="list-style-type: none"> <li>• <i>Saxifraga hirculus</i>; Marsh saxifrage</li> </ul>
<p>Conservation Objectives of Site</p>	<p>With regard to the SAC and SPA and the natural habitats and the individual species and/or assemblage of species for which the site has been designated and subject to natural change;</p> <p>Ensure that the integrity of the site is maintained or restored as appropriate; and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:</p> <ul style="list-style-type: none"> <li>• The extent and distribution of qualifying natural habitats and habitats of qualifying species</li> <li>• The structure and function (including typical species) of qualifying natural habitats</li> <li>• The structure and function of the habitats of qualifying species</li> <li>• The supporting processes on which the qualifying natural habitats rely</li> <li>• The populations of qualifying species; and</li> <li>• The distribution of qualifying species within the site.</li> </ul>
<p>Component SSSI</p>	<p>The North Pennine Moors SAC and SPA comprises sixteen component SSSI's. 28.36% of the component SSSI's combined are classified as 'area favourable', 68% are classified as 'unfavourable recovering', 3% are classified as 'unfavourable no change' and 0.14% are classified as unfavourable declining.</p> <p>From examination of the UK Air Pollution Information System datasets it is evident that critical ranges for air pollutants and sensitive qualifying species of the North Pennine Moors SAC and SPA have largely been exceeded. The main sources of NO<sub>2</sub> and SO<sub>2</sub> forecast to 2020 are livestock production: UK (all sources including</p>

	IPPC installations) (40.9%) and imported emissions (e.g. Emissions from Europe, Ireland, and other countries (44.2%) respectively.		
Aspects of the plan which could impact on the site	<ul style="list-style-type: none"> <li>• Land bank/need</li> <li>• Restoration and after-use</li> <li>• Transport</li> <li>• Cumulative Impact</li> <li>• Minerals Safeguarding</li> <li>• Waste Safeguarding</li> <li>• Location of Development (construction aggregates, waste management facilities, landfill)</li> </ul>	<ul style="list-style-type: none"> <li>• Specialist Waste Management</li> <li>• Temporary infrastructure (waste, construction aggregate)</li> <li>• Permanent construction aggregate infrastructure</li> </ul>	
Potential Causes of Significant Effects	Vulnerability of International site	Details	
Fragmentation	N	No land take from European and Ramsar sites will be required to deliver the objectives set out in the M&WDPD.	
Predation/Urban impacts	Nutrient increase/fertilisers	Y	This hazard is considered to have no likely significant effect on the SAC/SPA, because the designated site is some distance from any potential sites, therefore, any potential hazards are unlikely to reach the SAC/SPA.
	Vermin	N	
	Invasive species	Y	This hazard is considered to have no likely significant effect on the SAC/SPA, because the designated site is some distance from any potential sites, therefore, any potential hazards are unlikely to reach the SAC/SPA.
Hydrology	Leachate	N	
	Water Use	N	
	Water Pollution	N	
	Groundwater	N	
Disturbance	Noise	Y	Low Harperley and Hulands Quarry Eastern Extension lie within the area identified as potential functional land based on

			an 2km buffer. Further assessment is therefore required.
	Lighting	N	
	Traffic	Y	This hazard is considered to have no likely significant effect on the SAC/SPA, because the designated site is some distance from any potential sites, therefore, any potential hazards are unlikely to reach the SAC/SPA.
	Vibration	Y	Low Harperley and Hulands Quarry Eastern Extension lie within the area identified as potential functional land based on an 2km buffer. Further assessment is therefore required.
	Trampling	Y	This hazard is considered to have no likely significant effect on the SAC/SPA, because the designated site is some distance from any potential sites, therefore, any potential hazards are unlikely to reach the SAC/SPA.
Air Pollution	Traffic (NoX)	Y	This hazard is considered to have no likely significant effect on the SAC/SPA, because the designated site is some distance from any potential sites, therefore, any potential hazards are unlikely to reach the SAC/SPA.
	Dust	Y	This hazard is considered to have no likely significant effect on the SAC/SPA, because the designated site is some distance from any potential sites, therefore, any potential hazards are unlikely to reach the SAC/SPA.

Inappropriate management		Y	The proposals will not impact on or change the current management of the site.
Other plans and projects			Not considered at this stage.
Are the potential impacts of the plan likely to be significant?			
Alone?		Possible	
In combination?			

Site Name	Moor House Upper Teesdale
Site Designation	SAC
Description of site	<p>Moor House Upper Teesdale SAC was designated in April 2005 and comprises a total area of approximately 38,796 hectares across the administrative boundaries of Cumbria and Durham. Approximately, 18,622 hectares of the designated area (48%) is within County Durham's boundary in the former district area of Teesdale.</p> <p>Moor House Upper Teesdale has the most extensive area of Alpine and Boreal Heaths south of Scotland and has the most extensive area of juniper scrub in the UK. The summit of Cross Fell has the best developed and most extensive area of Siliceous alpine and boreal grassland in England. The site includes the least damaged and most extensive tracts of typical blanket mire in England and shows this community type up to its highest altitude in England.</p> <p><b>Qualifying Features</b>  <i>Annex I habitats that are a primary reason for site selection</i></p> <ul style="list-style-type: none"> <li>• Hard oligo-mesotrophic waters with benthic vegetation of Chara spp; Calcium-rich nutrient-poor lakes, lochs and pools.</li> <li>• Alpine and Boreal heaths; Alpine and subalpine heaths</li> <li>• <i>Juniperus communis</i> formations on heaths or calcareous grasslands; Juniper on heaths or calcareous grasslands</li> <li>• Calaminarian grasslands of the <i>Violetalia calaminariae</i>; Grasslands on soils rich in heavy metals</li> <li>• Siliceous alpine and boreal grasslands; Montane acid grasslands</li> <li>• Semi-natural dry grasslands and scrubland facies: on calcareous substrates (<i>Festuco-Brometalia</i>); Dry grasslands and scrublands on chalk or limestone</li> <li>• Molinia meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinia caeruleae</i>); Purple moor-grass meadows</li> <li>• Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels</li> <li>• Mountain hay meadows</li> <li>• Blanket bogs</li> <li>• Petrifying springs with tufa formation (<i>Cratoneurion</i>); Hard-water springs depositing lime</li> </ul>

	<ul style="list-style-type: none"> <li>• Alkaline fens; Base rich fens</li> <li>• Alpine pioneer formations of the <i>Caricion bicoloris-atrofuscae</i>; High-altitude plant communities associated with areas of water seepage</li> <li>• Siliceous scree of the montane to snow levels (<i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i>); Acidic scree</li> <li>• Calcareous and calcshist screes of the montane to alpine levels (<i>Thlaspietea rotundifolii</i>); Base rich scree</li> <li>• Calcareous rocky slopes with chasmophytic vegetation; Plants in crevices in base-rich rocks</li> <li>• Siliceous rocky slopes with chasmophytic vegetation; Plants in crevices on acid rocks</li> </ul> <p><i>Annex I habitats present as a qualifying feature but not a primary reason for site selection</i></p> <ul style="list-style-type: none"> <li>• European dry heaths</li> <li>• Limestone pavements</li> </ul> <p>Annex II species that are a primary reason for selection of this site</p> <ul style="list-style-type: none"> <li>• <i>Vertigo genesii</i>; Round-mouthed whorl snail</li> <li>• <i>Saxifraga hirculus</i>; Marsh saxifrage</li> </ul>
<p>Conservation Objectives of Site</p>	<p>With regard to the SAC and the natural habitats and/or species for which the site has been designated and subject to natural change;</p> <p>Ensure that the integrity of the site is maintained or restored as appropriate; and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:</p> <ul style="list-style-type: none"> <li>• The extent and distribution of qualifying natural habitats and habitats of qualifying species</li> <li>• The structure and function (including typical species) of qualifying natural habitats</li> <li>• The supporting processes on which the qualifying natural habitats and the habitats of qualifying species rely</li> <li>• The populations of qualifying species, and</li> <li>• The distribution of qualifying species within the site.</li> </ul>
<p>Component SSSI</p>	<p>Moor House Upper Teesdale SAC comprises four component SSSI's. 32% of the component SSSI's combined are classified as 'area favourable', 67% are classified as 'unfavourable recovering.' 0.5% are classified as 'unfavourable no change' and 0.5% are classified as 'unfavourable declining'. Some of the reasons recorded for unfavourable condition across the sites include:</p> <ul style="list-style-type: none"> <li>• Heather dominance potentially as a result of past intense burning management and moorland gripping</li> <li>• Grazing pressure</li> <li>• Loss of extent of blanket bog habitat as a result of track development.</li> </ul> <p>From examination of the UK Air Pollution Information System (APIS) datasets it is also evident that critical ranges for air pollutants and sensitive qualifying species have been exceeded. The main sources of</p>

	NO <sub>2</sub> and SO <sub>2</sub> forecast to 2020 are Livestock production: UK (all sources including IPPC installations)(39.8%) and Alcon Primary Metal: Other industrial combustion, Ashington (38.5%) respectively.		
Aspects of the plan which could impact on the site	<ul style="list-style-type: none"> <li>• Land bank/need</li> <li>• Restoration and after-use</li> <li>• Transport</li> <li>• Cumulative Impact</li> <li>• Minerals Safeguarding</li> <li>• Waste Safeguarding</li> <li>• Location of Development (construction aggregates, waste management facilities, landfill)</li> </ul> <ul style="list-style-type: none"> <li>• Specialist Waste Management</li> <li>• Temporary infrastructure (waste, construction aggregate)</li> <li>• Permanent construction aggregate infrastructure</li> </ul>		
Potential Causes of Significant Effects		Vulnerability of International site	Details
Fragmentation		N	No land take from European and Ramsar sites will be required to deliver the objectives set out in the M&WDPD.
Predation/Urban impacts	Nutrient increase/fertilisers	Y	This hazard is considered to have no likely significant effect on the SAC, because the designated site is some distance from any potential sites, therefore, any potential hazards are unlikely to reach the SAC.
	Vermin	N	
	Invasive species	Y	This hazard is considered to have no likely significant effect on the SAC, because the designated site is some distance from any potential sites, therefore, any potential hazards are unlikely to reach the SAC.
Hydrology	Leachate	N	
	Water Use	N	
	Water Pollution	N	
	Groundwater	N	
Disturbance	Noise	N	
	Lighting	N	
	Vibration	N	
	Trampling	Y	This hazard is considered to have no likely significant

			effect on the SAC, because the designated site is some distance from any potential sites, therefore, any potential hazards are unlikely to reach the SAC.
Air Pollution	Traffic (NoX)	Y	This hazard is considered to have no likely significant effect on the SAC, because the designated site is some distance from any potential sites, therefore, any potential hazards are unlikely to reach the SAC.
	Dust	Y	This hazard is considered to have no likely significant effect on the SAC, because the designated site is some distance from any potential sites, therefore, any potential hazards are unlikely to reach the SAC.
Inappropriate management		Y	The proposals will not impact on or change the current management of the site.
Other plans and projects			LSE is screened out therefore no in-combination assessment required.
Are the potential impacts of the plan likely to be significant?			
Alone?		No	
In combination?		No	

Site Name	North Pennine Dales Meadows
Site Designation	SAC
Description of site	The North Pennine Dales Meadows SAC was proposed as a SAC in June 1995 and designated in April 2005. The SAC comprises a total area of approximately 497 hectares. Individual designated sites are located across the administrative boundaries of Cumbria, Durham, North Yorkshire, Northumberland and Lancashire. Approximately, 139 hectares of the designation (27.89%) is within County Durham's boundary and is comprised of ten individual sites across the former

	<p>district areas of Teesdale and Weardale. The sites are located as follows:</p> <ul style="list-style-type: none"> <li>• Lanehead – Weardale</li> <li>• Burnhope Reservoir – Weardale</li> <li>• Snowhope Moor – Weardale</li> <li>• Bowlees (two sites) – Teesdale</li> <li>• Dent Bank – Teesdale</li> <li>• Grassholme Reservoir – Teesdale</li> <li>• Hury Reservoir – Teesdale</li> <li>• Blackton Reservoir – Teesdale</li> <li>• Grains O’th’ Beck – Teesdale</li> </ul> <p>The series of isolated fields that comprise this SAC encompass the range of variation exhibited by Mountain hay meadows in the UK, and contains the major part of the remaining UK resources of this habitat type. The grasslands included within the SAC exhibit very limited effects of agricultural improvement and show good conservation of structure and function. A wide range of rare and local meadow species are contained within the meadows.</p> <p><b>Qualifying Features (SAC)</b>  <i>Annex I habitats that are a primary reason for site selection</i></p> <ul style="list-style-type: none"> <li>• Mountain hay meadows</li> </ul> <p><i>Annex I habitats present as a qualifying feature but not a primary reason for site selection</i></p> <ul style="list-style-type: none"> <li>• Molinia meadows on calcareous, peaty or clayey-silt laden soils (<i>Molinia Caeruleae</i>); Purple moor-grass meadows.</li> </ul>
<p>Conservation Objectives of Site</p>	<p>With regard to the SAC and SPA and the natural habitats and the individual species and/or assemblage of species for which the site has been designated and subject to natural change;</p> <p>Ensure that the integrity of the site is maintained or restored as appropriate; and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring:</p> <ul style="list-style-type: none"> <li>• The extent and distribution of qualifying natural habitats</li> <li>• The structure and function (including typical species) of qualifying natural habitats and</li> <li>• The supporting processes on which the qualifying natural habitats rely</li> </ul>
<p>Component SSSI</p>	<p>The North Pennine Dales Meadows SAC within County Durham’s boundary comprises nine component SSSI’s. 75% of the component SSSI’s combined are classified as ‘area favourable’, 24% are classified as ‘unfavourable recovering’, and 1% are classified as ‘unfavourable no change.’</p>

Aspects of the plan which could impact on the site	<ul style="list-style-type: none"> <li>• Land bank/need</li> <li>• Restoration and after-use</li> <li>• Transport</li> <li>• Cumulative Impact</li> <li>• Minerals Safeguarding</li> <li>• Waste Safeguarding</li> <li>• Location of Development (construction aggregates, waste management facilities, landfill)</li> </ul>	<ul style="list-style-type: none"> <li>• Specialist Waste Management</li> <li>• Temporary infrastructure (waste, construction aggregate)</li> <li>• Permanent construction aggregate infrastructure</li> </ul>
Potential Causes of Significant Effects	Vulnerability of International site	Details
Fragmentation	N	No land take from European and Ramsar sites will be required to deliver the objectives set out in the M&WDPD.
Predation/Urban impacts	Nutrient increase/fertilisers Y	This hazard is considered to have no likely significant effect on the SAC, because the designated site is some distance from any potential sites, therefore, any potential hazards are unlikely to reach the SAC.
	Vermin N	
	Invasive species Y	This hazard is considered to have no likely significant effect on the SAC, because the designated site is some distance from any potential sites, therefore, any potential hazards are unlikely to reach the SAC.
Hydrology	Leachate N	
	Water Use N	
	Water Pollution N	
	Groundwater Y	Natural England's Site Improvement Plan (SIP) <sup>11</sup> for this site notes that the meadows are becoming wetter due to milder winters and wet summers, this may also be leading to

<sup>11</sup> <http://publications.naturalengland.org.uk/publication/6252591004516352>

			an earlier start to the growing season having a negative impact on boreal species changes such as wood cranesbill. Soil compaction due to heavy machinery and stock is also causing hydrological changes. The proposed mineral and waste sites will not contribute to these identified impacts. Likely significant effect on this impact pathway has therefore been screened out.
Disturbance	Noise	N	
	Lighting	N	
	Traffic	Y	This hazard is considered to have no likely significant effect on the SAC, because the designated site is some distance from any potential sites, therefore, any potential hazards are unlikely to reach the SAC.
	Vibration	N	
	Trampling	Y	This hazard is considered to have no likely significant effect on the SAC, because the designated site is some distance from any potential sites, therefore, any potential hazards are unlikely to reach the SAC.
Air Pollution	Traffic (NoX)	Y	This hazard is considered to have no likely significant effect on the SAC, because the designated site is some distance from any potential sites, or likely routes used by vehicles accessing/transporting mineral/waste from the proposed sites, therefore this impact pathway has been screened out.
	Dust	Y	This hazard is considered to have no likely significant effect on the SAC, because the designated site is

			some distance from any potential sites, therefore, any potential hazards are unlikely to reach the SAC.
Inappropriate management		Y	The proposals will not impact on or change the current management of the site.
Other plans and projects			LSE is screened out therefore no in-combination assessment required.
Are the potential impacts of the plan likely to be significant?			
Alone?	No		
In combination?	No		

## 5. Identifying European Sites Potentially at Risk

The screening for likely significant effects (LSE) within Table 4 above provides the screening assessment for the County Durham Minerals and Waste preferred options DPD. Where risks are highlighted and there is a possibility of significant effects on European sites, further and more detailed assessment is required. Inevitably there will be precaution in screening elements of the plan, as the purpose of screening for likely significant effects is to identify where there is either no possibility of an effect, or where there are uncertainties. Considering the outcomes of the above screening tables, we have eliminated Thrislington SAC, Northumbria Coast SPA/Ramsar, Durham Coast SAC, North Pennine Moors SAC, North Pennine Dales Meadows SAC and Moor House-Upper Teesdale SAC as there are no credible pathways by which impacts could occur on these sites, given the distances involved/and/or lack of credible evidence of sensitivities to potential impact pathways.

### Outstanding issues requiring further assessment

#### 5.1 North Pennine Moors SPA functionally linked land

Natural England report NECR207 defines 'functional linkage' as the role or function which land or watercourses located beyond the boundaries of a Natura 2000 site fulfil in terms of supporting the populations for which the site was designated or classified. Such an area of land or watercourse is, therefore, considered 'linked' to the site in question because it provides a potentially important role in maintaining or restoring a protected population at favourable conservation status.

*Time budgets and foraging of breeding golden plover (2001, Whittingham, M.J et al)* noted the relative importance to breeding adult golden plover of enclosed fields up to 4km from the nest and up to 2km from the moorland boundary in County Durham.<sup>12</sup> These fields are thought to provide better foraging sites than moorland habitat particularly during the incubation stage, with higher densities of earthworms, as well as ensuring that predators aren't attracted to active nesting sites. Applying the precautionary principle, a 2km buffer from the boundary of the North Pennine Moors SPA has therefore been applied in order to identify potential functionally linked land for this species.

Two of the proposed sites lie within the identified 2km<sup>13</sup> potential functionally linked land to the North Pennine Moors SPA. Site M5 (Low Harperley) and site M10 (Hulands quarry).

- Site M5: Low Harperley

The proposed extension to the above site, lies to the north of the River Wear, and south east of Wolsingham. The site area extends to approximately 20ha and is made up of two areas of open arable farmland. Considering research on the use of fields by foraging adults where upland grazed pasture (in particular those fields with high levels of earthworms) was favoured by the species, the

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<sup>12</sup> [Time budgets and foraging of breeding golden plover \*Pluvialis apricaria\* - Whittingham - 2000 - Journal of Applied Ecology - Wiley Online Library](#)

<sup>13</sup> <https://besjournals.onlinelibrary.wiley.com/doi/full/10.1046/j.1365-2664.2000.00519.x>

use of the habitats on the Low Harperley site, which represents much more intensively farmed arable fields, can reasonably be screened out.

- Site M10: Hulands quarry

The proposed allocation lies to the east of Hulands Quarry, an established carboniferous limestone quarry which lies to the west of Boldron, 2km east of Bowes. The allocation lies within grazed pasture which is considered suitable habitat for foraging golden plover.

#### *Disturbance to birds due to noise and vibration*

An increase in ambient noise levels may disturb birds (e.g. provoking a flight response and anxiety behaviour), reducing the roosting and feeding opportunities in the area. In particular, studies undertaken by the Environment Agency have shown that peak levels of sound such as very loud noise (greater than 70 dB) and percussive noises can have an impact on bird species at a distance of up to 300m.<sup>14</sup> Disturbance to roosting and feeding areas can effectively cause a loss of available habitat as birds may respond by decreasing activities at the disturbed site and may relocate to an alternative less favoured site or one which is already occupied, increasing competition with a larger number of birds dependant on a food source.

A general increase in ambient noise throughout the operational life of the potential development may have a significant effect on sensitive species. Significant disturbances are likely to be associated with working of crushed rock (limestone requires blasting, e.g. site 10) , screening and crushing plant used for sand and gravel extraction and inert waste processing (however potential locations adjacent existing operations may not greatly increase ambient noise levels and may be of similar nature to existing background noise, e.g. site 5), as well as noise from operational plant required for waste management and haulage. Vibration may also cause disturbance to birds in a similar manner to noise. The extraction of crushed rock (limestone) from site 10 will require blasting. Air overpressure resulting from blasting is likely to cause disturbance to birds. Onsite noise and vibration control and mitigation measures as well as strategic site design and layout will assist in reducing noise levels from operational activities. Minimising the extent and duration of blasting, strategic timing of operations and site layout may help to reduce air overpressure effects. Restricting hours of operation and specific activities likely to have a significant effect on ambient noise levels during breeding periods may also assist in reducing disturbance.

No bird surveys, with particular reference to the qualifying features of the SPA, have been undertaken for Site M10 (Hulands Quarry Eastern Extension).

Applying the precautionary principle it is therefore not possible at this stage to screen out LSE from the proposals on the integrity of the North Pennine Moors SPA. Further surveys for the likely

presence of qualifying features on the site, together with an assessment of likely impacts, will be required together with appropriate mitigation measures as deemed necessary.

## 6. Screening of Preferred DPD Policies

Each of the pre-submission policies has been subject to a preliminary assessment and where necessary an LSE screening to determine effects to each of the relevant National Site Network sites.

*Table 5 Preliminary Assessment Categories*

Category	Description
A	Option/Policy will not lead to built development. For example, it is a general statement of policy, lists general criteria for testing purposes or other qualitative criteria.
B (1)	Option/Policy may lead to new development but due to either the development type under consideration, distance from National Site Network site/s and/or absence of connected impact pathways there are no conceivable effects.
B (2)	Policy may lead to new development but the policy wording includes safeguards to ensure that such development will only be delivered where no adverse effects to National Site Network sites will occur.
C	Option/Policy will lead to built development but the detail of how such development will be delivered (eg. Where and what) necessary to undertake the assessment is contained within other linked policies. Screening of the linked policies will therefore be undertaken instead.
D	Option/Policy is concerned with how to protect or enhance the natural, built or historic environment and the measures and requirements proposed are not considered to undermine Conservation Objectives.

Table 6 Preliminary Assessment of Plan Policies

Policy	Purpose	Preliminary Assessment – can the policy be eliminated from causing LSE or is further assessment required?	Preliminary Assessment Category
MW1 General criteria	Establishes the general criteria which should be taken into account when determining minerals and waste development proposals.	Eliminated – the policy states that proposals for minerals and waste development will be required to demonstrate that the proposal will not result in unacceptable adverse impacts on <u>biodiversity</u> and geodiversity, included within the main policy wording and supporting text. Minerals and waste development proposals will also be assessed against CDP Policy 42.	B(2)
MW2 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.	Eliminated. Adequate wording included within the text to negate any likely impacts.	B(2)
MW3 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.	Eliminated. Policy will not lead to any development.	A
MW4 Noise	Establishes the requirements around noise elimination and reduction.	Eliminated. This policy includes wording to ensure adequate safeguards are put in place to protect the environment.	B(2)

MW5 Dust	Requires operators to demonstrate that dust emissions are acceptable.	Eliminated. Likely impacts by proposed sites on sensitive receptors have been screened out due to distance.	B(1)
MW6 Blasting	Establishes the thresholds for ground vibration linked to blasting activity.	Eliminated. This policy includes wording to ensure adequate safeguards are put in place to protect the environment.	B(2)
MW7 Traffic and Transport	Encourages the sustainable and safe transportation of minerals and waste.	Eliminated. Likely impacts by proposed sites on sensitive receptors have been screened out due to distance.	B(1)
MW8 Mineral Rail Handling Facilities	Permissive policy towards facilities that enable the transfer of minerals from road to rail where certain criteria are met.	Eliminated. This policy does not allocate any specific sites.  CDP Policy 42 ensures that if any proposal were to arise, it would need to be properly considered with respect to any impacts on European sites (including cumulative impacts), including undertaking an HRA where necessary.	B(1)
MW9 Borrow pits	Establishes the criteria and associated social and environmental safeguards by which borrow pit proposals will be determined.	Eliminated. There are no allocations for borrow pits within the plan. Wording within the policy ensures that any impacts as a result of proposals have no unacceptable adverse impact on the environment. The plan should also be read as a whole with the County Durham Plan, and with particular reference to Policy 42 which protects Internationally designated sites and ensures HRA is undertaken where necessary.	B(2)
MW10 Onsite Mineral Processing	Encourages proximity between mineral extraction and processing	Eliminated. This policy has no impact pathway in itself.	A

	activity where certain criteria can be met to demonstrate acceptability.		
MW11 Storage of Minerals	Establishes the criteria relating to the storage of minerals at existing minerals sites to help ensure their availability for use.	Eliminated. This policy includes wording to ensure adequate safeguards are put in place to protect the environment.	A
MW12 Periodic Review of Mineral Planning Permissions	Sets out the Council's expectations in relation to the periodic review process	Eliminated. This policy includes adequate wording to ensure any adverse effect on the environment are assessed and taken into consideration.	A
MW13 Local Liaison Groups	Establishes the role of liaison groups and the Council's expectations of minerals operators in relation to their administration	Eliminated. This policy does not result in any impact pathways in itself.	A
MW14 Oil and Gas Exploration	Establishes criteria to determine oil and gas proposals against in the event that they are forthcoming over the M&WDPD period.	There are no allocations for oil or gas sites within the plan. The wording within the policy ensures that an assessment to ensure no adverse impacts on the environment will be required in support of any application.  The plan should also be read as a whole with the County Durham Plan, and with particular reference to Policy 42 which protects Internationally designated sites and ensures HRA is undertaken where necessary.	B(2)
MW15 Transport of Oil and Gas	Establishes a sequential approach to the transportation of oil and gas	There are no allocations for oil or gas sites within the plan. The wording within the policy ensures that an assessment to ensure no adverse impacts on	B(2)

	<p>from production wells along with specific criteria to safeguard communities and the environment from pipelines.</p>	<p>the environment will be required in support of any application.</p> <p>The plan should also be read as a whole with the County Durham Plan, and with particular reference to Policy 42 which protects Internationally designated sites and ensures HRA is undertaken where necessary.</p>	
<p>MW16 Vein Minerals, Lithium, Silica Sand/Moulding Sand and Ganister</p>	<p>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&amp;WDPD period. Also gives recognition to meeting national demand for lithium.</p>	<p>There are no allocations for vein minerals, lithium, silica sand/moulding sand or ganister within the plan. The wording within the policy ensures that an assessment to ensure no adverse impacts on protected sites will be required in support of any application.</p> <p>The plan should also be read as a whole with the County Durham Plan, and with particular reference to Policy 42 which protects Internationally designated sites and ensures HRA is undertaken where necessary.</p>	<p>B(2)</p>
<p>MW17 Peat</p>	<p>Establishes that commercial peat extraction will not be permitted in County Durham</p>	<p>Eliminated. Policy ensures no peat extraction within the County.</p>	<p>A</p>
<p>MW18 Inert Waste 'Other Recovery'</p>	<p>Establishes the criteria by which other recovery of inert waste to land will be permitted and seeks to ensure that proposals are genuine</p>	<p>Eliminated. This policy includes adequate wording to ensure any adverse effect on the environment are assessed and taken into consideration.</p>	<p>B(2)</p>

	waste recovery proposals.		
MW19 Inert Waste Disposal via Landfill	Establishes the criteria by which proposals to create new inert waste disposal capacity will be permitted	Eliminated. This policy includes adequate wording to ensure any adverse effect on the environment are assessed and taken into consideration.	B(2)
MW20 Non-Hazardous Waste Landfill	Establishes the criteria by which proposals for the disposal of non-hazardous waste by landfill will be permitted in the event that new energy recovery and treatment capacity does not come on stream as expected.	Eliminated. This policy includes adequate wording to ensure any adverse effect on the environment are assessed and taken into consideration.	B(2)
MW21 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.	Eliminated – The policy will not lead to any increases/impacts on existing aquifers, but will control and prevent impacts occurring.	A
MW22 Mineral Site Restoration	Sets out the Council's expectations in relation to the restoration, after-use and aftercare of minerals sites and temporary waste development.	Restoration to achieve net gains in biodiversity, as included within the policy may be beneficial to European sites by enhancing habitat networks.  In itself this policy has no impact on an internationally designated site.	A

<p>MW23 Site Specific Allocation, land at Thrislington West Quarry</p>	<p>Allocates an area of land within the existing quarry void to extract Basal Permian sand subject to meeting policy requirements.</p>	<p>This assessment is dealt with via the specific site allocation assessment below.</p>	<p>C</p>
<p>MW24 Site Specific Allocation, Northern Extension to Crime Rigg Quarry</p>	<p>Allocates an area of land to the north of Crime Rigg Quarry for the extraction of Basal Permian Sand subject to meeting policy requirements.</p>	<p>This assessment is dealt with via the specific site allocation assessment below.</p>	<p>C</p>

## 7. Conclusions and Future Assessment Requirements

The overall conclusion of the Habitat Regulations Assessment Screening Report is as follows:

The proposed sites included in the preferred options of the County Durham Minerals and Waste DPD do not have any alone (or in-combination) likely significant effects on the following sites:

- Northumbria Coast SPA/Ramsar
- Durham Coast SAC
- Thrislington SAC
- Moor House-Upper Teesdale SAC
- North Pennine Dales Meadows SAC
- North Pennine Moors SAC

However, the potential location for Hulands quarry extension has a likely significant risk of impact on North Pennine Moors SPA, when applying the precautionary principle. Hence Appropriate Assessment will be required for site M10. This will be required prior to the allocation of the site within the DPD.

The scope for the assessment should cover the potential impacts of the DPD's identified through the screening report and with adequate relevant supporting surveys, assess the implication of these to ascertain whether there will be adverse effects on the integrity of the site.