

Derbyshire and Derby Minerals Local Plan (2022-2038)

Pre-submission Draft Plan
January 2023



Derby City Council



DERBYSHIRE
County Council

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Part 1:

Introduction and Background,
Spatial Overview and Strategic Priorities



CHAPTER 1: Introduction and Background

INTRODUCTION

- 1.1 Derbyshire County Council and Derby City Council have jointly prepared a minerals local plan that covers the period from 2022 to 2038. It is called the Derbyshire and Derby Minerals Local Plan and covers the geographical county of Derbyshire, excluding that part which falls within the Peak District National Park (PDNP).

WHY PREPARE A JOINT PLAN?

- 1.2 Planning authorities are required by law to prepare local development documents¹ setting out strategic priorities for the development and use of land in their area and strategic policies to address those priorities.² Derbyshire County Council and Derby City Council are mineral and waste planning authorities, with Derby City also having responsibility for all other types of development within its area.
- 1.3 There is recognition that mineral (and waste) planning issues often affect larger than local areas and can best be planned for at a wider than local level. This was recognised previously by the two authorities, resulting in the agreement to prepare the current Minerals and Waste Local Plans jointly. In addition, one of the key changes to the planning system under the [Localism Act 2011 \(legislation.gov.uk\)](https://legislation.gov.uk/ukpga/2011/25/contents/enacted) has been the introduction of the ‘duty to co-operate’, which seeks to enhance the way planning authorities work together to consider preparing joint plans. As a result, the two authorities have decided to continue this arrangement and prepare new joint plans. In addition to jointly preparing a minerals local plan, the two authorities are also preparing a waste local plan which is the subject of separate consultation.
- 1.4 Derby City Council has also prepared the Derby City Local Plan – Part 1 Core Strategy (DCLP1), adopted on 25th January 2017, setting out the long-term strategy for the spatial development of the City area to 2028 for matters other

¹ Planning and Compulsory Purchase Act 2004, Section 17 (as amended by the Planning Act 2008)

² Planning and Compulsory Purchase Act 2004, Section 19 (as amended by the Neighbourhood Planning Act 2017)

than minerals and waste. Work has now begun on a new Local Plan for the City that will cover the period up to 2039.

HOW IS THE PLAN PREPARED JOINTLY?

- 1.5 Derbyshire County Council leads on the preparation of the Plan with support from Derby City Council as appropriate. The Development Plans Joint Advisory Committee, consisting of members from both Authorities, provides a co-ordinating role in steering the preparation of the Plan. Approval to engage and consult on key stages in the preparation of the Plan is sought separately by the County and City Councils through their respective Cabinet members. The Plan will be adopted as Council policy separately by the Full Council members of both Councils.

WHAT IS THE PURPOSE OF A LOCAL PLAN?

- 1.6 Planning law³ requires that planning applications for development that accords with an up-to-date ‘development plan’ should be approved unless ‘material considerations’ indicate otherwise. The principal document that will be used to assess proposals for mineral development and mineral related development will be the Minerals Local Plan.
- 1.7 The ‘development plan’ for the plan area will also include the Waste Local Plan and any City/Borough/District prepared local plans on non-mineral and waste matters and neighbourhood plans. Where relevant, policies from these plans will also be taken into account.
- 1.8 The National Planning Policy Framework (NPPF)⁴ sets out that local planning authorities may give weight to relevant policies in emerging plans according to:
- The stage of preparation of the plan;
 - The extent of unresolved objections to relevant policies; and
 - The degree of consistency with the NPPF.
- 1.9 The Pre-submission Draft Plan has been prepared in conformity with the latest NPPF. It is a Regulation 19⁵ consultation and as such represents the Plan that the MPA intends to submit to the Planning Inspectorate for examination. The MPA considers it to be a ‘sound’ Plan and advanced sufficiently in its

³ Planning and Compulsory Purchase Act 2004, Section 38(6)

⁴ NPPF July 2021, Paragraph 48

⁵ Town and Country Planning (Local Planning) (England) Regulations 2012 as amended

preparation to be ‘material’ in assessing planning applications. Further information on the way in which planning applications are considered can be found on the County Council’s and City Council’s websites at the following links:

[Processing planning applications - Derbyshire County Council](#)

[Planning procedures and performance - Derby City Council](#)

HOW WILL THE PLAN DELIVER SUSTAINABLE MINERALS DEVELOPMENT?

- 1.10 The purpose of the planning system is to contribute to the achievement of ‘sustainable development’. The term is not defined as such, but the NPPF states that it can be summarised as meeting the needs of the present without compromising the ability of future generations to meet their own needs.⁶ Additionally, members of the United Nations, including the UK, have agreed to pursue 17 Global Goals for Sustainable Development in the period to 2030, which address social progress, economic well-being and environmental protection.⁷
- 1.11 In order to achieve sustainable development, local plans are required to deliver three overarching and interrelated economic, social and environmental objectives. The economic objective is to provide sufficient land for the right type of development, in the right place at the right time to support growth, innovation and improved productivity. The social objective is to support strong, vibrant and healthy communities by providing well designed beautiful and safe places with accessible services and open spaces which meet the needs of the community. The environmental objective is to protect and enhance our natural, built and historic environment, including making effective use of land, improving biodiversity, using natural resources prudently, minimising pollution and mitigating and adapting to climate change including moving to a low carbon economy.
- 1.12 Local Plans are required to apply a presumption in favour of sustainable development, which for plan making means that they should promote a sustainable pattern of development that seeks to: meet the development needs of their area; align growth and infrastructure; improve the environment; mitigate climate change and adapt to its effects.

⁶ Resolution 42/187 of the United Nations General Assembly

⁷ Transforming our World: the 2030 Agenda for Sustainable Development.

- 1.13 The NPPF makes it clear that local plans should deliver ‘sustainable development’ that reflects the vision and aspirations of people and organisations with an interest in the local area. The Plan therefore sets out the overall vision and strategic objectives which encompass the agreed economic, social and environmental priorities of the area in relation to minerals (including strategic cross-boundary issues). It includes a framework of strategic policies aimed at addressing those priorities together with non-strategic development management policies aimed at avoiding, minimising and mitigating the adverse impacts of minerals development.

HOW IS A LOCAL PLAN PREPARED?

- 1.14 There is a range of legislation, guidance and policies at the international, national and local level which the Plan must take into account. In some cases, the Plan must be consistent with them and in others, help to deliver their strategies. Some set out requirements that the Plan must meet, in terms of its content, for example, it must include policies to address strategic priorities and climate change. Others are about the way it is produced, including the need to ensure adequate engagement with members of the public and other interested stakeholders. It also has to address strategic cross boundary planning issues by cooperating with other local authorities and relevant bodies. Additionally, the Plan must be based on a robust and credible, but proportionate, evidence base, which is as up to date as practicable.
- 1.15 Preparation of a local plan is a lengthy process and typically involves several stages of public engagement and consultation culminating in the submission of the ‘publication’ plan to the Department for Levelling Up, Housing and Communities (DLUHC). A Planning Inspector, on behalf of the Department, will examine firstly, whether the plan satisfies the ‘duty to co-operate’ requirements and other legal requirements and, if that is the case, whether the plan is ‘sound’ before it can be adopted as Council policy.
- 1.16 When considering whether the Plan meets its legal and ‘Duty to Cooperate’ requirements, the Inspector will consider a number of issues including:
- **Local Development Scheme:** has the plan been prepared in accordance with the timetable set out in the Local Development Scheme?
 - **Statement of Community Involvement:** has consultation on the plan been in accordance with the Council’s Statement of Consultation and have the appropriate bodies been consulted?

- **Duty to Cooperate:** has the plan been prepared in cooperation with other local planning authorities and prescribed bodies, such as the Environment Agency, Natural England and Historic England.
- **Sustainability Appraisal:** has an adequate Sustainability Appraisal been carried out?
- **Appropriate Assessment:** has an Appropriate Assessment under the Habitats Regulations Assessment been carried out?
- **National Policy and Legislation:** does the Plan comply with national policy and relevant legislation e.g. T&CP (Local Planning) (England) Regulations 2012

1.17 When considering the soundness of the plan there are four tests to meet. It must be:

Positively prepared - provides a strategy which, as a minimum, meets the area's objectively assessed needs informed by agreements with other authorities;

Justified – an appropriate strategy, taking into account reasonable alternatives and based on proportionate evidence;

Effective – deliverable over the plan period and based on effective joint working on strategic cross boundary issues as evidenced in the Statement of Common Ground;

Consistent with national policy – enabling the delivery of sustainable development in accordance with the NPPF⁸ and other statements of national planning policy, where relevant.

1.18 The Councils have already undertaken a number of stages of plan preparation and consultation so far. These are shown below along with the anticipated stages of further production in italics.

- Stakeholder Workshop July 2009
- Key Issues and Options Consultation 2010
- Sand and Gravel Sites Consultation 2012
- Emerging Approach 2015/2016
- Hard Rock Sites Consultation 2016/2017

⁸ NPPF July 2021 Paragraph 35

- Proposed Approach 2018
- Sand and Gravel Sites Consultation 2020
- Proposed Draft Plan 2021
- Pre-Submission Draft Plan (Publication Plan) 2022 (the current stage)
- *Submission to Planning Inspectorate*
- *Examination in Public*
- *Modification Stage*
- *Adoption*

WHAT OTHER DOCUMENTS ARE REQUIRED TO SUPPORT THE PREPARATION OF THE PLAN?

- 1.19 The preparation of the Minerals Local Plan also requires the preparation of a number of other supporting technical documents and assessments.

Development Plan Scheme (DPS): Sets out the current programme for the preparation of the Plan.

Statement of Community Involvement (SCI): Sets out, amongst other matters, how we will involve members of the public and other interested stakeholders in the preparation of the Plan.

Sustainability Appraisal (SA) – the purpose of the SA is a way of promoting sustainable development through the better integration of sustainability considerations throughout the preparation of the Plan. The Appraisal involves testing the impact of the Plan against a series of Sustainability Objectives and incorporating improvements to the Plan where they are recommended.

Strategic Flood Risk Assessment (SFRA) – The purpose of a SFRA is to assess and map the different levels and types of flood risk to inform the development of the Minerals Local Plan. In addition to the work carried out, all allocated sites will require a site-specific Flood Risk Assessment at the planning application stage.

Habitats Regulation Assessment (HRA) – The purpose of HRA is to identify any aspects of the Plan that could cause a likely significant effect on the

integrity of any European Sites⁹, which include Special Areas of Conservation (SACs), candidate SACs, Special Protection Areas (SPAs) and potential SPAs (pSPAs) and Ramsar sites, both in isolation and in combination with other plans and projects. The Assessment also determines whether appropriate assessment (AA) would be required in order to identify potential adverse effects on the integrity of any European sites.

Health Impact Assessment (HIA) – The purpose of a HIA is to examine the Plan’s policies and proposals to identify any potential health impacts and assess how any negative impacts can be minimised and potential positive benefits maximised.

Equalities Impact Assessment (EqIA) – The purpose of an EqIA is to assess the impact of the Plan’s policies and proposals on groups of individuals with protected characteristics. This ensures the needs of these groups and individuals have been considered and that the Plan does not discriminate against any particular individuals or groups. It demonstrates the Councils have met their Public Sector Duty, as required by the [Equality Act 2010](https://www.legislation.gov.uk/ukpga/2010/151/section/1) ([legislation.gov.uk](https://www.legislation.gov.uk)) .

Strategic Transport Assessment (STA) – The purpose of a STA is to provide evidence to support the development of policies and proposals in the Plan and to assess the impact of the Plan’s policies and proposals on the transport network.

Local Aggregates Assessment (LAA) – The NPPF requires Mineral Planning Authorities (MPAs) to plan for a steady and adequate supply of aggregates through the preparation of an annual LAA. The LAA should be based on an average 10 years sales data and other relevant local information and include an assessment of all supply options. The County and City Councils prepare the LAA jointly with the Peak District National Park Authority (PDNPA).

Monitoring Report - The purpose of a Monitoring Report, which should be produced at least annually, is to show how the Councils are progressing with preparing the Minerals Local Plan and how well its current adopted policies are being implemented.

Duty to Co-operate (DtoC): Introduction and Overview Report – The purpose of the DtoC requirement is to enable the effective planning for

⁹ Protected by the Conservation of Habitats and Species Regulations 2017 (known as the Habitats Regulations)

strategic issues that cross administrative boundaries. The Report sets out the background and requirements of the Duty to Co-operate and the way in which the Councils have sought to meet their obligations.

Duty to Co-operate: Statement of Common Ground (SoCG) – The purpose of the SoCG is to document the cross-boundary matters being addressed in preparing the Minerals Local Plan and the progress in cooperating with the relevant policy making bodies to address them.

Report of Publicity and Consultation – The purpose of this Report is to set out the consultation stages that have been undertaken in preparing the Plan, together with a brief summary of the issues raised in response to the consultations at each stage. It also provides a note of the issues raised at any Drop-in sessions which the Councils held to engage with members of the public.

Report of Representations – The purpose of this Report is to set out in detail the representations that have been received at each stage of plan preparation. It includes the Councils' response to those representations together with the proposed outcomes for the Plan.

- 1.20 The Councils have prepared a number of other documents to assist them in preparing the Plan and which form part of the evidence base.

Background Papers – The purpose of these papers is to provide more detailed information on the 'subject area' than is possible in the Plan. There are Papers for each of the important minerals and important topics within the Plan area.

Development Papers – The purpose of these papers is to show how the Plan has been developed over time through the stages of consultation, taking into account changes to the NPPF and Planning Policy Guidance (PPG), duty to co-operate, representations and the findings of Plan assessments including interim sustainability appraisals.

Site Selection Methodology – The purpose of the methodology is to assess promoted sites for their potential allocation in the Plan. Both promoted sand and gravel and hard rock sites have been assessed in preparing the Plan.

- 1.21 Not all of the supporting documents are required to be prepared at every stage of Plan preparation. The supporting documents that form part of this Consultation are listed at Appendix E. Information on the documents that formed part of previous Consultation stages can be found by visiting [New](#)

[Minerals Local Plan - Derbyshire County Council](#) .There is a link to this page from the City Council's website.

WHAT EXISTING POLICIES WILL THE NEW MINERALS LOCAL PLAN REPLACE?

- 1.22 The new Derbyshire and Derby Minerals Local Plan when adopted will replace the 'saved'¹⁰ policies of the current Derbyshire and Derby Minerals Local Plan adopted in 2000 with a first alteration adopted in 2002. A list of these policies is set out at Appendix D.

WHAT IS THE PRE-SUBMISSION DRAFT PLAN CONSULTATION STAGE?

- 1.23 The consultation is the presentation of a draft version of the Plan that the MPA intends to submit to the Planning Inspectorate for examination. It sets out:
- The spatial overview of the Plan area in terms of population, economic and social conditions, transport, natural, built and historic environment, and a profile of the minerals industry;
 - A long-term vision for mineral development to 2038;
 - Strategic priorities/objectives to deliver the vision;
 - A Key Diagram showing a geographical picture of the strategic priorities;
 - Strategic Policies addressing the strategic priorities including policies to enable the supply of important minerals to 2038 and site allocations, where appropriate, to meet demand;
 - Non-Strategic Other Mineral Related Issues policies and Development Management Policies to avoid, control and mitigate the impacts of mineral development;
 - A Monitoring Framework to monitor the effects of the Plan's policies and proposals and inform the need for Plan review;
 - The Principal Planning Requirements that need to be addressed by any planning application to work a proposed allocation site.

A Policies Map which presents the Plan's policies geographically is provided separately to the Plan.

¹⁰ Paragraph 1(3) of Schedule 8 to the Planning and Compulsory Purchase Act 2004

- 1.24 At this stage the Councils are seeking views, from interested parties and the people of Derbyshire and Derby, particularly on whether the Plan is legally compliant and meets the tests of soundness.

HOW IS THE PRE-SUBMISSION DRAFT PLAN SET OUT?

- 1.25 The NPPF¹¹ requires the Plan to be explicit in which policies are strategic and necessary to deliver the strategic priorities of the area and any cross-boundary issues. The NPPF¹² requires that strategic policies should set out an overall strategy for the pattern, scale and design quality of places and make sufficient provision for, amongst other matters, the supply of minerals and the conservation and enhancement of the natural, built and historic environment, and planning measures to address climate change mitigation and adaptation.
- 1.26 The Plan is set out in the following way:
- **Part One** - Introduction, Spatial Overview and Strategic Priorities;
 - **Part Two** - Strategic Policies (prefixed SP);
 - **Part Three** - Other Mineral Related Issues (prefixed OM) and Development Management Policies (prefixed DM);
 - **Part Four** - Monitoring and Implementation Policies (prefixed MO).
- 1.27 Each of the Chapters of Plan is set out in the following way:
- **Introduction and Background** – there is a short introduction to the topic/mineral which gives a context for each of the policies;
 - **Policies** – Policies are written in bold and are contained within a text box.
 - **Reasoned Justification** – This sets out in detail an explanation of the policy, including justification for the approach taken and what the policy seeks to achieve.
- 1.28 Within the Chapters reference is made to the Mineral Planning Authority (MPA) which applies to the relevant Planning Authority that is determining a planning application for mineral or mineral related development i.e. Derbyshire County Council or Derby City Council.

¹¹ NPPF July 2021, Paragraph 21

¹² NPPF July 2021, Paragraph 20

1.29 The NPPF requires that land use designations and allocations should be identified on a policies map. Most of the policies apply plan-wide apart from the following:

SP5 Allocation of Sites for Sand and Gravel Extraction

SP11 Allocation of Site for Industrial Limestone Extraction

SP17 Mineral Resources Safeguarding and Consultation Areas

SP18 Safeguarding Mineral Related Infrastructure.

CHAPTER 2: Spatial Overview

INTRODUCTION

- 2.1 In order to plan for delivering sustainable minerals development, it is important that the Councils are aware of the spatial economic, social and environmental characteristics of the Plan area and particularly the significance and characteristics of the minerals industry. Figure 2.1 shows the Plan area of Derbyshire and Derby¹³ and other key geographical features.
- 2.2 The majority of the Plan area is governed via a two-tier local authority system by the County Council and eight District/Borough councils; Amber Valley Borough, Bolsover District, Chesterfield Borough, Derbyshire Dales District, Erewash Borough, High Peak District, North East Derbyshire District and South Derbyshire District. In terms of planning, the County Council determines proposals for minerals and waste development and ‘County Council’ development such as schools, libraries and care homes in its area, whilst the district/borough councils determine all other development proposals. Derby City is a Unitary Authority and, as such, determines proposals for all development within its area.
- 2.3 Derbyshire’s¹⁴ estimated population in 2021¹⁵ was approximately 1.06 million people with around 0.26 million living in Derby City¹⁶ and 0.8 million living in the rest of Derbyshire¹⁷. The Plan area is one of contrast. The western part, surrounding the PDNP, is mainly rural in character whilst the eastern part is of a more urban nature containing the majority of the main towns. Derby City, by far the largest urban area, lies in the south of the Plan area. The Plan area is characterised by market towns which include Glossop and Buxton in the north-west, Chesterfield and Bolsover in the north-east, Matlock, Alfreton, Ripley in the central area and Ashbourne, Ilkeston, Long Eaton and Swadlincote towards the south.

¹³ Derbyshire and Derby refers to the geographical county of Derbyshire excluding that part which lies within the PDNP

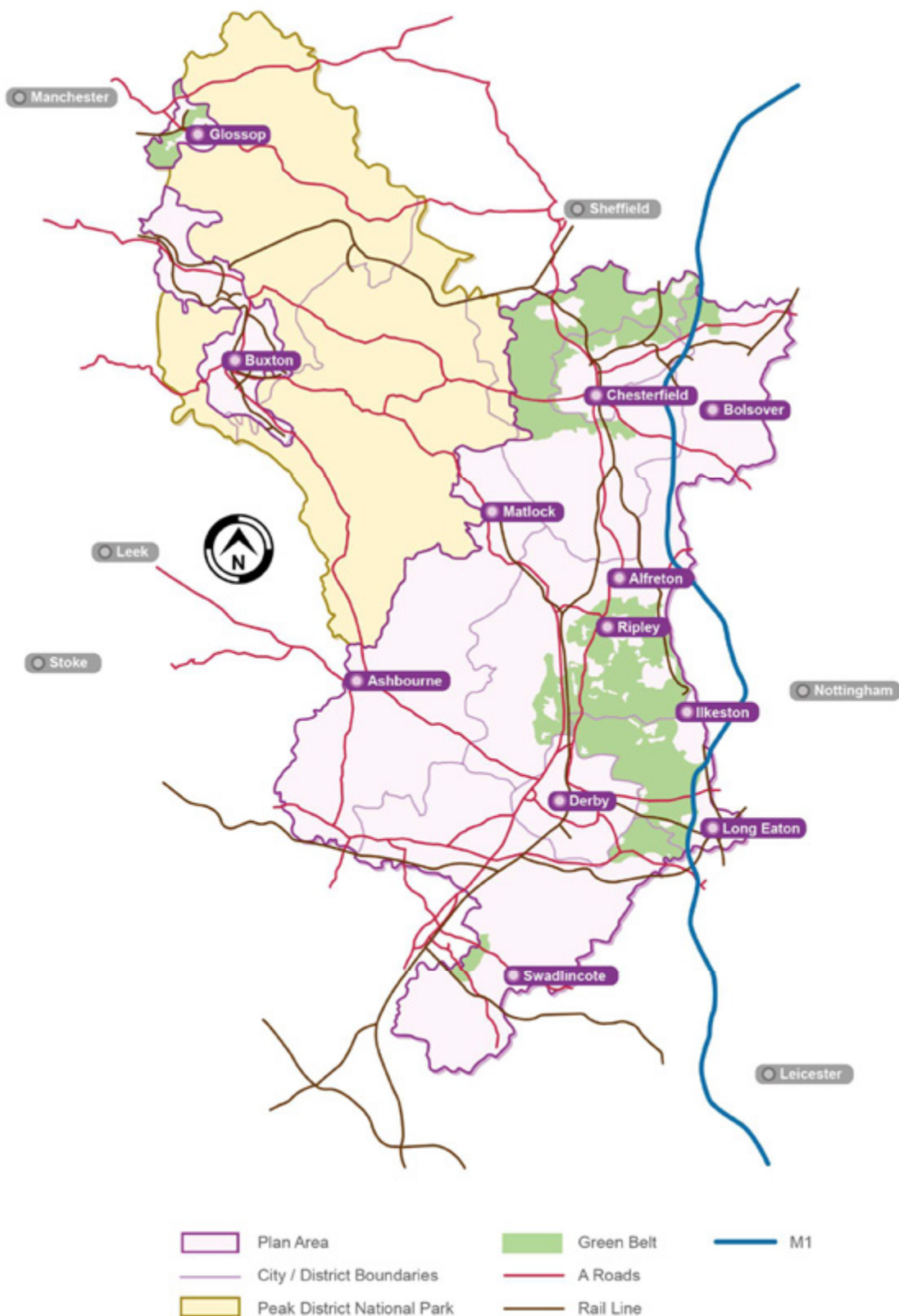
¹⁴ Derbyshire refers to geographical county of Derbyshire including the PDNP

¹⁵ Population and Household estimates for England and Wales Census 2021

¹⁶ The administrative area of Derby City Council

¹⁷ The administrative area of Derbyshire County Council

Figure 2.1 Plan area and key geographic features



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- 2.4 Derbyshire and Derby occupy a central location in England and lie at the northern most point of the East Midlands region. The Plan area lies close to the city of Nottingham and other large scale urban conurbations of Greater Manchester, South Yorkshire and the West Midlands, which have an important influence on the local economy and are important markets for many of the Plan area's minerals.
- 2.5 Figure 2.1 illustrates several green belt areas established to prevent coalescence with neighbouring cities such as Manchester, Sheffield, Nottingham and Burton-on-Trent; to prevent the urban sprawl of the largest settlements within the Plan area, namely Derby and Chesterfield, and to demarcate the individual smaller market towns.

THE SIGNIFICANCE OF THE MINERALS INDUSTRY IN DERBYSHIRE AND DERBY

Introduction

- 2.6 The majority of mineral resources in the Plan area lie within the area administrated by Derbyshire County Council (referred to hereon as Derbyshire). There are limited resources of sand and gravel in Derby City but these have not been worked for many years. Derbyshire is one of the Country's leading producers of minerals and the exploitation of Derbyshire's mineral resources bring significant benefits to both the local and national economy.
- 2.7 The most significant mineral worked is limestone which accounts for 91% of annual mineral production from the Plan area, the next is sand and gravel accounting for 8%. Minerals currently extracted in smaller quantities include sandstone and brick clay which account for less than 1% of total plan area's annual production. Other minerals that are currently worked on a small scale or which have been worked in the recent past include coal, oil and gas and vein minerals (fluorspar and barytes).

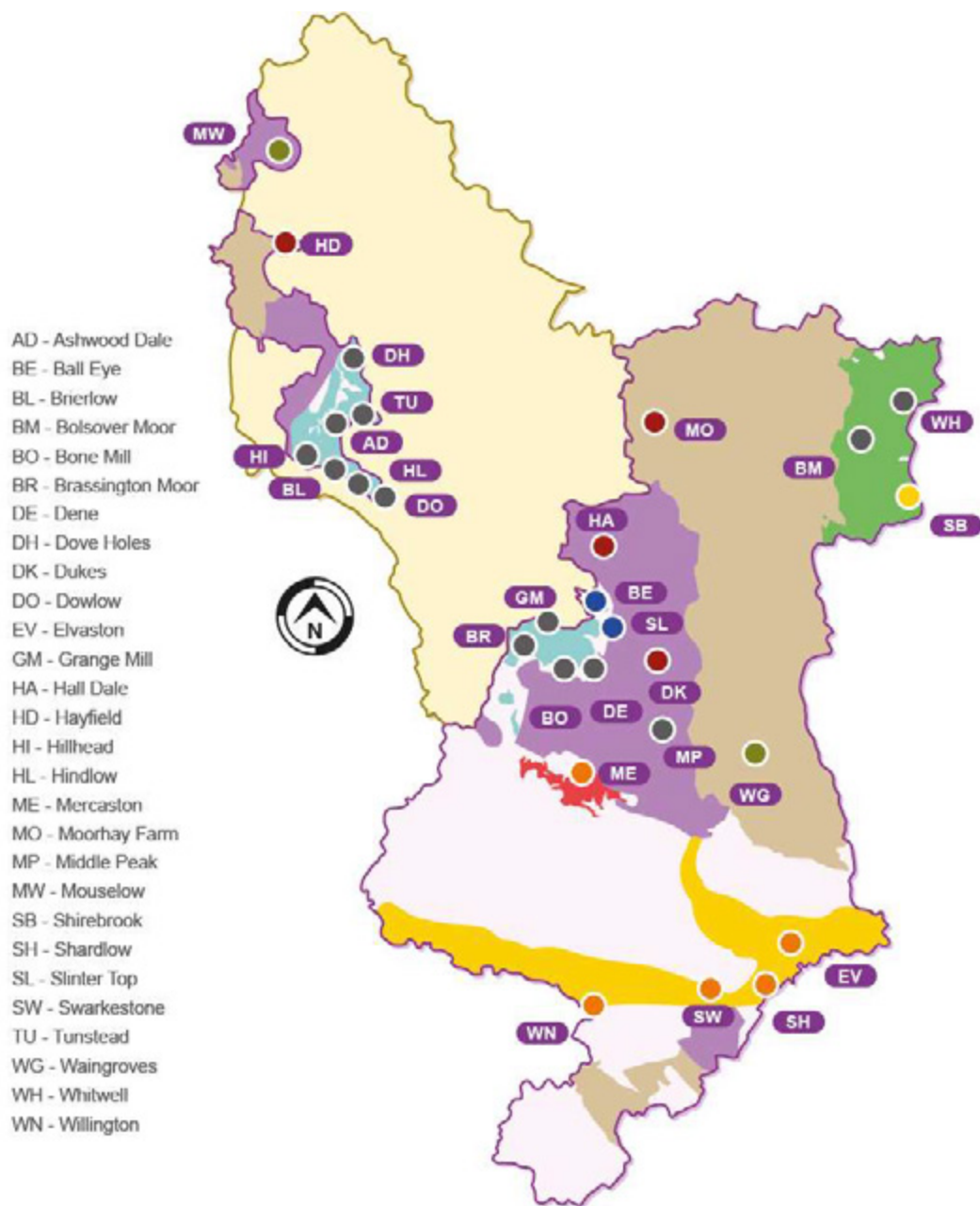
Distribution of Mineral Resources

- 2.8 Figure 2.2 depicts permitted mineral sites and important mineral resources; it shows that large areas of the Plan area have some potential for the extraction of a wide variety of valuable mineral resources.
- 2.9 The most important mineral resource within Derbyshire is limestone. The Carboniferous Limestone resource is located mainly in the north-west of the county, in the Buxton and Matlock/Wirksworth areas whilst the Permian Limestone resource is located in the north-east area of the county, east of Bolsover.
- 2.10 Sand and gravel resources are concentrated along the river valleys, the most important being the Trent Valley to the south of Derby, as well as the adjoining river

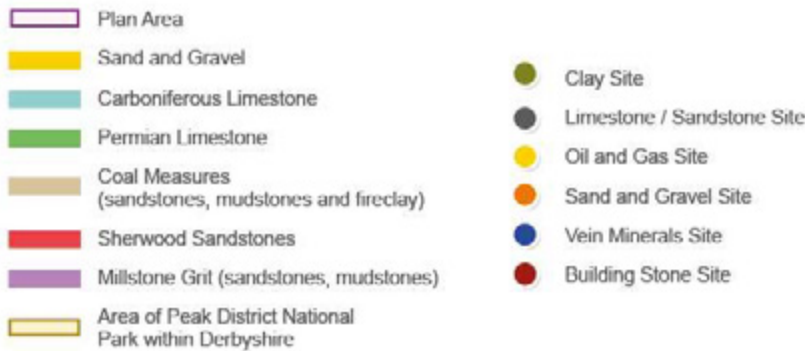
deposit in the hard rock formation of the Sherwood Sandstones found in a small area around Mercaston, between Ashbourne and Belper.

- 2.11 Building stone (mostly sandstone and gritstone but including some limestone) is produced mainly from small quarries in the central part of Derbyshire around Matlock and Darley Dale, and also from the north-west of the county around Hayfield and Glossop.
- 2.12 Workable deposits of vein minerals, such as fluorspar and barytes are found exclusively in mineralised veins and related deposits in the Carboniferous Limestone. Fluorspar occurs only in the northern Pennines and the southern Pennines. Commercial production in the northern area ceased in 1999, leaving the southern area as the remaining source. However, production is limited, with extraction opportunities arising mainly from the quarrying of limestone.
- 2.13 The most important economic resources of clay and shales are of Carboniferous age and are associated with the Millstone Grit and the coal measures, the latter also being a potential source of fireclays.
- 2.14 There are substantial coal resources, particularly in the North Derbyshire Coalfield. Whilst some surface coal resources remain in South Derbyshire Coalfield, they are largely exhausted. There is a remaining resource of deep coal in north-east Derbyshire contiguous with the surface coal resource shown on Figure 2.2 and dipping beneath the Permian Limestone to the east.
- 2.15 There are conventional and unconventional oil and gas deposits in Derbyshire, mainly associated with the coal measures in the north-east of the county. In the recent past abandoned mine methane has been extracted from the former coal mines at Markham, Whitwell and Shirebrook. However, production is presently minimal and the potential for further extraction is considered to be low. Potential unconventional gas deposits associated with the Bowland Hodder shale have also been identified in the north-east of the Plan area and to the east of Derby. This resource has not been exploited to date and potential is considered to be low.

Figure 2.2 Mineral Resources and Permitted Mineral Sites



Note: Permitted sites classified as "dormant" under the 1995 Environment Act are not included



Mineral Production

- 2.16 The majority of limestone and sandstone produced within the Plan area is for aggregate purposes used in building and construction, for example, in road making, house construction, in the manufacture of concrete and as railway ballast. In 2021, the Plan area produced approximately 8.95 million tonnes of aggregate crushed rock¹⁸. Figures show that 34% of this total was used within Derbyshire, Derby and the PDNP;¹⁹ with a further 6% consumed within the remaining East Midlands region. A significant proportion of Derbyshire's production was exported to the North West (21%) and 15% to the Yorkshire/Humber Region. The West Midlands and East of England together also take a significant amount (10% and 7% respectively) and the South East, London, Home Counties, Wales and the South West 7% between them. In 2021, there were a total of thirteen operational quarries within Derbyshire extracting limestone, of which twelve exploit the Carboniferous resource and one the Permian resource.
- 2.17 Derbyshire makes an important national contribution to the supply of minerals used for industrial processing and manufacturing purposes supplying 85% of the country's industrial limestone for animal feedstuffs, glass, sealants and adhesives. Annual production of around 3 million tonnes is supplied from the Plan area and used in applications such as cement manufacture, flue gas desulphurisation, water purification, steel making, agricultural improvement and in the production of a diverse range of products, for example, animal feedstuffs, glass, paints, plastics, sealants, pharmaceuticals etc. All of the quarries that produce industrial minerals also produce aggregates as well. At 2021, Whitwell, Tunstead, Brierlow, Dowlow, Hindlow, Longcliffe and Grangemill quarries were the major suppliers of industrial mineral. Tunstead Cement works, near Buxton is one of only 11 cement works in the UK fed from its adjacent quarry. Whitwell Quarry is only one of only two sources of specialist industrial dolomitic limestone in the country. It supplies the adjacent Whitwell Works which produces refractory products for use in the manufacture of steel; a large percentage of the products are exported.
- 2.18 Sand and gravel produced in the Plan area is also used for aggregate purposes primarily in ready mixed concrete, precast concrete products and as a bulk filler. In Derbyshire, a high percentage is used to make concrete. Sand is used mainly in making mortars and asphalt or building sand. In 2021 Derbyshire produced 0.99 million tonnes of sand and gravel from four active quarries, three located along the Trent Valley and one at Mercaston on the Sherwood Sandstone resource. Most active quarries have ready mixed concrete plants on site, producing concrete for

¹⁸ Local Aggregate Assessment 2022

¹⁹ Mainly within Derbyshire and Derby due to development restrictions in the PDNP

precast concrete plants. Most is used within 10 – 15 miles from where it is quarried, mainly because of the high cost of transport and competition from other sources of aggregate in the area.

- 2.19 Building stone is important for the repair and restoration of historic buildings, the repair/extension of existing properties or for new buildings in areas of high environmental value, such as conservation areas. It is not only of great importance for the conservation of Derbyshire's historic and built environment, but it is also valued nationally. In Derbyshire, in 2021, there are five quarries that produce stone specifically for building purposes. Larger quarries, producing mainly aggregate as their principal product, also produce some quantities of building stone to order, as an ancillary product.
- 2.20 There are two operational brick clay quarries supplying material to brick making plants that lie outside of the Plan area. Mouselow Quarry at Glossop supplies Denton brickworks in Tameside. It also produces sandstone for building purposes as an ancillary product. Waingroves Quarry near to Ripley produces brick clay for export to Kirton brickworks in Nottinghamshire and Desford brickworks in Leicestershire for blending purposes. Total annual production from the Plan area is around 100,000 tonnes.
- 2.21 Historically, Derbyshire was an important supplier of deep mined and opencast coal principally used in industrial processing, for domestic fuel and to produce electricity. In the recent past a small drift mine was in operation at Eckington producing about 20,000 tonnes per annum but this closed in 2019. At present there are no coal mining sites in operation. Oil and gas are used to produce energy and are also used as a raw material by the petro-chemicals industry to produce drugs and plastics. There is currently one site in Derbyshire producing a small quantity of gas (abandoned mine methane) at the former Whitwell Colliery. In view of the climate change agenda and the move away from the use of carbon rich fossil fuels for energy production the future importance of the coal and oil and gas resources in the Plan area is uncertain.
- 2.22 The Plan area also produces secondary and recycled aggregates and there are a number of permanent, dedicated recycled aggregates production facilities (e.g. Chaddesden Sidings and Cotes Park Industrial Estate) in the area together with other, smaller sites which incorporate recycled aggregate production as part of their wider waste management operations. There are also a number of temporary mobile recycling operations within the county, some at quarry sites.

Restoration and the Legacy of Mineral Working

- 2.23 Mineral working can have large scale impacts on the landscape and uses of land, and whilst extraction is temporary in nature, impacts can be long term and even permanent. It is important that worked out sites are restored at the earliest

opportunity. The after use of mineral working depends to some extent on the nature of working and the availability of fill material which dictates whether the site can be restored to its original levels or to new innovative landscapes. Nevertheless, in general the restoration of mineral sites provides great opportunities to restore land to a wide range of after uses which can benefit both the local and wider community including employment, nature conservation, recreation, forestry/woodland, agriculture, water storage as well as increasing public access.

- 2.24 The scale of limestone/sandstone quarries means that infilling is not usually an option, with final restoration influenced by the depth of the quarry and the level of the water table. Deeper remote quarries are often left to regenerate naturally, and in such cases, they can become important areas for wildlife, biodiversity and natural history. In shallower quarries, the quarry floor can be restored for agriculture or for informal leisure uses or built development e.g. housing has been developed at the former Cawdor Quarry.
- 2.25 Sand and gravel workings are much shallower and therefore easier to fill. In the past many sites were returned to agricultural use. More recently, sites have been restored to alternative beneficial nature conservation and recreational after-uses, for example, Attenborough Nature Reserve, windsurfing at Long Eaton, sailing at Swarkestone and fishing at Shardlow. In the future, the contribution that the restoration of sand and gravel sites can make to increasing our resilience to climate change and particularly the risk of flooding is likely to become more important by using the extraction area next to the river for river braiding or widening or to provide increased capacity for winter flood water storage. An example of former workings restored to water storage use is Witches Oak Water, near Elvaston.
- 2.26 Historically, the coalfield area of Derbyshire was the location of many deep mines and opencast coal workings which have been regenerated to provide new landscapes and opportunities to deliver local economic growth e.g., Markham Vale, and local recreational opportunities, e.g. Shipley Country Park, Grassmoor Country Park, Poolsbrook Country Park, Pleasley Country Park and the Five Pits Trail.

SPATIAL CHARACTERISTICS OF DERBYSHIRE AND DERBY

Population and Households

- 2.27 Almost 25% of Derbyshire's²⁰ estimated population of 1.06 million people live within Derby City²¹. Derby City displays a younger population, with approximately 19% in the 0-15 age group compared to 16% for the rest of Derbyshire²². The corresponding

²⁰ Derbyshire refers to geographical county of Derbyshire including the PDNP

²¹ The administrative area of Derby City Council

²² Population and Household estimates for England and Wales Census 2021

figure for the East Midlands and England is 17%. Similarly, Derby City has 16% of its population in the plus 65 age group compared to 22% for the rest of Derbyshire. The figure for the East Midlands is 20% and 18%. By 2043 the percentage of over 65s is anticipated to have risen to 21% in Derby City and 27%²³ in the rest of Derbyshire. An above average elderly population may be important when looking at the health impacts of mineral working.

- 2.28 The latest ONS Population Projections (2018 based) predict that by 2043 Derbyshire's population will increase by 13% whilst Derby City's population will increase by 7%. Growth is planned particularly for South Derbyshire where the population is estimated to grow by 30% over the same period.
- 2.29 In 2018 there were 350,234 households in Derbyshire. This number is expected to increase by 18% to 413,575 in 2043. Figures for Derby City estimate an 11% increase over the same period from 104,123 to 115,806. Percentage increases for households in the East Midlands and England are 20% and 16% respectively.

Economic and Social Conditions

- 2.30 Derbyshire and Derby has a diverse and thriving economy. Its central location means that residents and businesses contribute to and benefit from neighbouring economies, particularly those of Manchester, Nottingham and Sheffield. In June 2022 the percentage of 16 to 64 year olds in employment was 76% in Derbyshire, 74% in Derby City compared to 76% in England.²⁴ At September 2022, Derbyshire's unemployment rate was 2.6% compared to Derby City's 4.7%, the average for England was 3.8%.²⁵
- 2.31 The employment profile of Derbyshire and Derby differs from that of England in that manufacturing remains an important sector in both the city and the rest of the County; in 2020 it accounted for 20% of employment in Derby and 16% in Derbyshire compared to the national average for England of 8% and 12% for the East Midlands.²⁶ Another notable difference in Derby City is employees in high technology manufacturing which accounts for 10% of employment. In Derbyshire, East Midlands and England it is much lower at 0.5 %, 1.4% and 0.8% respectively.²⁷
- 2.32 Whilst there are no separate figures available for employment in the mining and quarrying industry for the Plan area, it is known to be insignificant in Derby City and

²³ ONS 2018 based subnational population projections (Derbyshire County Council Observatory) <https://observatory.derbyshire.gov.uk/>

²⁴ Source Derby City Council <https://info4derby.derby.gov.uk> and Derbyshire County Council <https://observatory.derbyshire.gov.uk>

²⁵ Source Derbyshire County Council <https://observatory.derbyshire.gov.uk>

²⁶ Derbyshire County Council <https://observatory.derbyshire.gov.uk> skills and economy headlines Oct 2022

²⁷ Derbyshire County Council <https://observatory.derbyshire.gov.uk> skills and economy headlines Oct 2022

has declined considerably in Derbyshire following the demise of the coal industry. Nevertheless, nationally Derbyshire remains an important leader in the supply of aggregate and industrial minerals and employs an above average number of employees in this sector. From the information available, a study²⁸ undertaken in 2017 estimated that in High Peak and Derbyshire Dales, (where most of the limestone quarries are located), there were 925 (full time equivalent (FTE) jobs in the mining and quarrying sector, accounting for 82% of Derbyshire's workforce in that sector and 5.4% of national jobs in that sector. The study further estimated that the sector supports an additional 1,437 FTE jobs across those two district council areas. These districts are predominantly rural areas where employment opportunities can be scarce.

- 2.33 Derbyshire and Derby is a contrasting area in terms of deprivation. The index of multiple deprivation measures deprivation based on 8 factors: Income, Employment, Health and Disability, Education Skills and Training, Crime, Barriers to Housing and Services and Living Environment at a small neighbourhood level called 'lower super output areas' (LSOAs) which have an average of 650 households. Results published in 2019 show that 16% of Derby's LSOAs were in the top 10% of England's deprived areas compared to 4.5% for Derbyshire. However, within Derbyshire, there are significant differences, Chesterfield (8.7%) and Erewash (5.5%) contain the greatest proportions of their LSOAs within the most deprived 10% nationally, followed by Bolsover (parts of Bolsover and Shirebrook), High Peak (parts of Gamesley), and Amber Valley (parts of Ironville, Riddings and Langley Mill). Derbyshire Dales and North East Derbyshire have one of their LSOAs in the most deprived 10%, whilst South Derbyshire has none.²⁹

Transport

- 2.34 The Plan area is located centrally within England and has a good strategic road network which provides important links to the large neighbouring conurbations and other areas of the country. North-south routes are provided via the M1, the A38 and the A61. The A50 links the A42, M42 and then to the M6 whilst the M42 links to the M40 and then the M5 in the south west.
- 2.35 In 2019, 79% of domestic UK freight transport was by road, 9% by rail and 13% by water.³⁰ A significant issue in the Plan area in relation to transporting minerals is the impact of heavy good vehicles on local communities and other road users. In some areas, heavy goods vehicles can account for up to 25% of traffic³¹. High volume long-

²⁸ Minerals Extraction in High Peak and Derbyshire Dales: A Sector Benefits Study 2017

²⁹ Source Derby City Council <https://info4derby.derby.gov.uk> and Derbyshire County Council <https://observatory.derbyshire.gov.uk> – English Indices of Deprivation 2019 MHCLG.

³⁰ Department of Transport Freight Statistics 2019 (table TSGB043)

³¹ Derbyshire Local Transport Plan 2011-2026.

life limestone aggregates quarries are the only quarries currently transporting mineral by rail, and this is likely to remain the case in the foreseeable future. However, the use of rail continues to increase and in 2021 approximately 50% of limestone aggregate was transported by rail. Four aggregate limestone quarries are currently rail linked namely Doveholes, Tunstead, Dowlow and Hindlow and a further permitted quarry Hillhead is anticipated to recommence production during the Plan period with the intention of using rail to transport mineral.

- 2.36 In terms of air quality, a number of areas suffer from excessive air pollution, mainly associated with traffic, and within the Plan area, nine areas are covered by Air Quality Management Areas (AQMAs) where air quality is in need of improvement. These are in Derby (2), High Peak (2), Derbyshire Dales (1), Chesterfield (1), Erewash (2) and Bolsover (1). A further one is proposed for the A61, A617 and A619 corridors through Chesterfield.³² An additional Government initiative aimed at improving air quality associated with traffic pollution is the identification of zones which are in exceedance (non-compliance) of EU limit values for annual average Nitrogen dioxides (NO²). Derby has been identified as a location of NO² non-compliance within the East Midlands zone and has now implemented a Local Roadside NO² Plan as required by the Department for Environment, Food and Rural Affairs (DEFRA) to address this.

Natural, Built and Historic Environment

- 2.37 Figure 2.3 depicts the important environmental assets that lie within Derbyshire and Derby. The Plan area contains a variety of very different landscapes, from the upland limestone plateau and gritstone moorlands in the north of the county adjacent to the PDNP, through the rolling pasture lands in the central area to the broad river valleys in the south. The landscape of the PDNP and nearby areas attracts significant numbers of tourists and day visitors, and tourism is an important part of the local economy. Many landscapes of the county, however, exhibit the legacy of large-scale mineral extraction; for example the limestone quarries in the north and west of the county, the sand and gravel workings to the south along the Trent Valley and the former coal mining areas in the east.
- 2.38 As well as lying adjacent to the PDNP, the Plan area contains many important natural, built and historic assets. Much of the county is worked as farmland, almost all of which is classified under the Agricultural Land Classification (ALC)³³ as grade 3 and 4. Some grade 2 land is located to the south of Ashbourne and in the north-east of the county to the east of Bolsover.

³² DEFRA Air Quality Management Areas

³³ Natural England - Agricultural Land Classification Maps

- 2.39 The Plan area contains one of the five biggest areas of interconnected ancient woodland in the country focused within the Peak Fringe and the Lower Derwent Valley. Part of the Plan area around Swadlincote and Melbourne, lies within the National Forest, an environmental project aimed at creating 200 square miles of mixed habitat forest.
- 2.40 The three main rivers in the Plan area are the Trent, the Derwent and the Dove. As well as their importance for informal leisure, recreational activities and wildlife, all of the rivers have important flood defence regimes, including functional flood plains, which need to be protected and managed effectively, especially in relation to the potential effects of climate change. Within the south of the Plan area, restoration schemes associated with sand and gravel sites can provide opportunities towards reducing the risk and scale of flooding. There are five canals within the Plan area, Peak Forest, Chesterfield, Cromford, Erewash and Trent and Mersey which are important for informal leisure and recreational activities and wildlife.
- 2.41 The Plan area possesses an extensive network of statutory and non-statutory sites designated for their biodiversity and/or geodiversity interest. The most significant of these, the ‘European sites’ (previously known as Natura 2000 sites), are designated at an international level. European sites are considered to be of exceptional importance in respect of rare, endangered or vulnerable natural habitats and species and include Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). Within the Plan area there are three European sites – Peak District Dales SAC, Peak District Moors SPA and South Pennine Moors SAC, with a further two (Bees Nest & Green Clay Pits SAC and Gang Mine SAC) located within the PDNP. The River Mease SAC is located on the Derbyshire/Staffordshire border. The Birklands and Bilhaugh SPA and the Sherwood Forest potential Special Protection Area (pSPA) are in Nottinghamshire.
- 2.42 Targets for the creation of priority habitats are set out in the Government’s ‘Biodiversity 2020’ strategy according to different National Character Areas (NCAs) as identified by Natural England. These are then sub-divided into landscape character types (excluding the PDNP). These are detailed in the Derbyshire County Council publication the Landscape Character of Derbyshire (2013).
- 2.43 The Derwent Valley Mills World Heritage Site, between Matlock Bath and Derby, is of international importance and a significant tourist attraction. The reason for this international designation is that the valley saw the birth of the factory system, spearheaded by Richard Arkwright, when new types of buildings were erected to house new technology for spinning cotton. The need to provide housing and other facilities resulted in the creation of the first modern industrial settlement at Cromford. Creswell Crags in the north-east of the county is a candidate World Heritage Site,

having the only Upper Palaeolithic cave art found in Britain.³⁴ The archaeological heritage is derived from the underlying geology, influencing the character and type of the remains.

- 2.44 The Plan area has 53 Sites of Special Scientific Interest (SSSIs); 1 National Nature Reserve (at Calke Abbey); around 1200 local wildlife sites and 101 Regionally Important Geological Sites, half of which lie within the Derbyshire Dales.³⁵ There are 9,500 entries on the Sites and Monuments Record; 476 Scheduled Monuments; 5,941 Listed Buildings and 486 Conservation Areas. Registered Historic Parks and Gardens include Calke Abbey, Hardwick Hall, Bolsover Castle, Kedleston Hall and Melbourne Hall.

³⁴ Derbyshire County Council Historic Environment Record

³⁵ [Magic.defra.gov.uk](https://magic.defra.gov.uk),

Figure 2.3 Key Environmental Assets



CHAPTER 3: Strategic Priorities

INTRODUCTION

- 3.1 The NPPF³⁶ requires that local plans provide ‘a positive vision for the future of each area; a framework for addressing economic, social and environmental priorities for the area and a platform for local people to shape their surroundings.’ The Vision and Objectives are central to the Plan, setting out the high level, strategic priorities for future mineral development. The Vision sets out what the Plan area will be like in terms of mineral development by the end of the Plan period, at 2038, if the Plan’s objectives have been achieved and its policies have been successfully implemented. The Objectives set out the key goals that will need to be attained in order to make the Vision a reality.
- 3.2 The Vision and Objectives are based on the strategic priorities that were identified by the ‘Stakeholder Workshop’ held at the start of the preparation of the plan. They also take account of national planning policy requirements, other relevant national and local strategies and factors identified by the Plan’s ‘Spatial Overview’. They have been updated and refined as Plan preparation has progressed, taking into account changes to national planning policy and other strategies, representations received, duty to co-operate requirements and Plan assessments and appraisals.

The Vision

- 3.3 Over the Plan period to 2038, the Plan will continue to deliver sustainable minerals development ensuring that the supply of minerals from Derbyshire and Derby will continue to reflect the importance of the minerals industry in the Plan area, and will continue to make a positive contribution to delivering sustainable economic growth, supporting the health, well-being, safety and amenity of local communities, protecting, conserving and enhancing the natural, built and historic environment and mitigating and adapting to the impacts of climate change.
- 3.4 The supply of minerals will have the support of those who live and work in the area through the close co-operation between the minerals industry, local communities, local authorities within and adjacent to the Plan area and all other interested parties.

³⁶ NPPF July 2021, Paragraph 15

- 3.5 Mineral development will provide a steady and adequate supply of minerals to meet national, sub-national and local needs, supporting growth, regeneration and economic development and contributing to the prosperity of the local and national economy. A compensatory supply of minerals from the Plan area will assist in achieving a progressive reduction of minerals supplied from sites within the PDNP and help protect the special quality and characteristics of the National Park area.
- 3.6 Mineral development will adopt a holistic approach to natural resource protection, conservation and enhancement, taking into account the value of 'natural capital' to society. In relation to minerals, development will maximise the use of substitute, secondary, recycled and re-used minerals and mineral wastes in order to minimise the need for primary minerals and ensure their conservation in the long term. The locally and nationally important known mineral resources and mineral related infrastructure of the Plan area will continue to remain available for future use, having been safeguarded against sterilisation from non-minerals development. In relation to other natural resources, such as water supply and quality, soils, best and most versatile agricultural land, tranquil areas mineral development will protect, conserve and enhance such assets.
- 3.7 Whilst minerals can only be worked where they are found, in order to protect the amenity, health, safety and well-being of local communities and to protect, conserve and enhance the natural, built and historic environment, mineral development will be located, designed and operated to ensure that any adverse impacts, including cumulative impacts, will be mitigated to an acceptable level through good design and the imposition and monitoring of planning conditions and obligations. Mineral development will support the high-quality restoration and aftercare of sites at the earliest opportunity, to the most appropriate after use taking into account aviation safety, providing maximum local and strategic benefits to the area and local communities including benefits that will contribute towards emissions reduction and climate change adaptation and resilience.
- 3.8 Mineral development will be located, designed and operated in ways which maximise sustainable associated transport, reduce flood risk, optimise on-site water and energy use, maximise energy provision from renewable and low-carbon sources and mitigate and adapt to the impacts of climate change, including a reduction in greenhouse gas emissions in line with national and local carbon targets as we move towards the national 'zero carbon emissions' target of 2050.

The Objectives

Objective 1 - Ensuring a Steady and Adequate Supply of Minerals

- 3.9 To bring forward sufficient land, in the right location and at the right time, to enable the provision of a steady and adequate supply of aggregates and other important minerals, over the Plan period, to meet national, sub-national and local needs and to support sustainable economic growth and local and national economic prosperity.

Objective 2 – Ensure the Prudent use of Primary Mineral and other Natural Resources

- 3.10 To ensure the prudent use of all natural resources and in relation to minerals, the prudent use of primary resources to enable their long-term conservation through minimising waste, maximising levels of secondary and recycled aggregates, re-using minerals, re-working tipped waste material and controlling the end-use of minerals.

Objective 3 – Safeguarding Mineral Resources and Mineral Related Infrastructure

- 3.11 To ensure that known important mineral resources, existing quarry operations, and the infrastructure that is used to process and transport extracted minerals are safeguarded from inappropriate development on or in the proximity to such operations/resources that would impair their availability and use for future generations.

Objective 4 – Ensuring the Sustainable Transport of Minerals

- 3.12 To minimise the potential adverse impacts of minerals development by road-based transport, including emissions, and maximise the use of alternatives to road transport including rail, water, conveyor and pipeline.

Objective 5 – Protecting Local Communities

- 3.13 To protect the existing amenity, health, safety and well-being of local communities from visual impacts, noise, dust, vibration, emissions to air, light pollution, land instability, ground contamination and transport impacts by avoiding, minimising and mitigating potential adverse impacts, including any cumulative impacts of minerals development, taking into account the legacy of the minerals industry and other industrial development in the Plan area.

Objective 6 – Protecting, Conserving and Enhancing the Natural, and Built and Historic Environment

- 3.14 To protect, conserve and enhance the natural, built and historic environment, of the Plan area including its distinctive landscapes, green and blue infrastructure, habitats, wildlife, historic buildings, parks and gardens,

archaeology, ancient woodlands and veteran trees, soils and best and most versatile agricultural land, green belt, tranquil areas, dark skies and other important features and assets, by avoiding, minimising and mitigating potential adverse impacts, including any cumulative impacts, of minerals development, taking into account the legacy of the minerals industry and other industrial development in the Plan area.

Objective 7 – Protecting the Peak District National Park

- 3.15 To protect, conserve and enhance the landscape, scenic beauty, wildlife and cultural heritage of the PDNP by providing for a compensatory supply of aggregate crushed rock from the Plan area to enable a progressive reduction of those minerals supplied from sites within the PDNP, and by ensuring that any mineral development within the setting of the PDNP is sensitively located and designed to avoid adverse impacts on the designated landscape of the adjoining PDNP.

Objective 8 – Minimising the impacts on Climate Change and Flood Risk

- 3.16 To reduce the effect of mineral development on the causes of climate change and facilitate adaptation to the effects of climate change, including flood risk, mineral development will be located, designed and operated in ways which; reduce greenhouse gas emissions to meet national and local carbon targets; optimise on-site water and energy use; maximise energy provision from renewable and low-carbon sources, incorporate sustainable design and construction techniques, maximise the use of sustainable transport associated with the development, maintain or enhance water quality; reduce the risk of flooding both on site and in the wider area.

Objective 9 – Ensuring the Sustainable Restoration of Mineral Sites

- 3.17 Mineral development will support the high-quality restoration and aftercare of sites at the earliest opportunity, to the most appropriate after use, taking into account aviation safety, providing maximum local and strategic benefits to the wider area and local communities, including benefits that will contribute towards emissions reduction and climate change adaptation and resilience.

Monitoring and Implementation

- 3.18 The effectiveness of the Plan's policies towards achieving the Objectives and delivering the Vision will be monitored so that, if necessary, issues can be identified and addressed through a revision of the Plan, either in whole or part. Details of the monitoring to be undertaken are addressed in Part Four, Chapter 12.

Part 2:

Strategic Policies



CHAPTER 4: Sustainable Minerals Development

INTRODUCTION

- 4.1 The NPPF requires that the development plan must include strategic policies to address each of the local planning authority's priorities for the development and use of land in its area.³⁷ The NPPF requires that strategic policies should set out an overall strategy for the pattern, scale and quality of design of places and, amongst others, make provision for the supply of minerals, the protection, conservation and enhancement of the natural, built and historic environment, and planning measures to adapt to and mitigate against the impacts of climate change.
- 4.2 Plans should make explicit which policies are strategic policies, and those policies should look ahead over a minimum 15-year period from adoption. Strategic policies are required to provide a clear strategy for bringing sufficient land forward at a sufficient rate to meet objectively assessed needs over the plan period, in line with the presumption in favour of sustainable development. Local plans are also required to contain a key diagram setting out the broad locations for development.
- 4.3 The Councils' priorities for the development and use of land in their areas are set out in the Plan's Vision and Objectives, which reflect the Councils' desire to deliver sustainable minerals development in accordance with the NPPF. Delivering sustainable minerals development will be achieved by the combined implementation of all the policies of the Plan.
- 4.4 When considering proposals for mineral development, the MPA will take a positive approach that reflects the presumption in favour of sustainable development contained in the NPPF. The MPA will always work proactively with applicants to secure well-designed schemes and development that improves the economic, social and environmental conditions in the Plan area. Proposals that accord with the policies in this Plan (and, where relevant, with policies in other local and neighbourhood plans) will be approved without delay unless material considerations indicate otherwise.

³⁷ NPPF July 2021, Paragraph 17

- 4.5 Where there are no policies relevant to the proposal, or relevant policies are out-of-date at the time of making the decision, the proposed mineral development will be approved unless specific policies of the NPPF that protect areas or assets of particular importance provide a clear reason for refusal, or any adverse impacts of granting planning permission would significantly and demonstrably outweigh the benefits when assessed against the policies of the NPPF as a whole.
- 4.6 The Strategic Policies are set out in Part Two of the Plan. They provide a framework for addressing the strategic priorities encompassed in the Vision and Objectives of the Plan. This chapter, through Policy SP1, sets out the high-level policy requirements that development proposals will need to meet in order to deliver sustainable development relevant to the Plan area. The remaining policies in Part Two add detail to those requirements. The Key Diagram, Figure 4.1, provides a geographical picture of the strategic priorities by showing the location of important settlements and the PDNP, the principal transport network, important mineral resources and mineral sites and key patterns of crushed rock aggregate flows from the Plan area.
- 4.7 The term ‘proposals for mineral development’ includes the exploration and extraction of minerals both above and below ground, the processing and transportation of minerals and the restoration of mineral sites. It includes the location, design and operational practices of development associated with new and existing mineral sites. The term ‘minerals related development’ refers to the infrastructure, plant and vehicles used to extract, process and transport minerals and restore mineral sites.
- 4.8 Mineral development and mineral related development can often have the potential to cause adverse impacts. A key objective of the Plan is to ensure that those impacts are mitigated and controlled to ‘acceptable levels’. This term is not defined in the Plan because ‘acceptability’ will be assessed on a case-by-case basis taking into account the scale, nature and location of the proposal, the characteristics of the various environmental effects likely to arise from the development and the opportunities for mitigation measures that may be applied.
- 4.9 **It is important to note that in assessing planning proposals for mineral development and mineral related development ALL POLICIES OF THE PLAN AND THEIR CRITERIA WILL APPLY WHERE RELEVANT and therefore the Plan should be read as a whole, taking into account the scale, nature, location and type of the development proposed.**

POLICY SP1: SUSTAINABLE MINERALS DEVELOPMENT

Proposals for mineral development and mineral related development will be supported where they contribute towards achieving the economic, social and environmental objectives of sustainable development and where applicable, they:

- 1) maintain the production of minerals over the Plan period to meet a local, sub-national or national need for the mineral and support economic growth, including a compensatory supply of aggregate crushed rock to support a progressive reduction of supply from the adjoining PDNP;
- 2) are justified in that location taking into account the need for the specific mineral;
- 3) enable the continued use of existing appropriately located and designed quarry plant and infrastructure;
- 4) protect and/or provide additional local employment and support local businesses and economic prosperity;
- 5) ensure the prudent use of mineral and other natural resources, including water, soils, best and most versatile agricultural land and tranquil areas to support their long term conservation;
- 6) minimise waste and increase the level of supply of secondary and recycled aggregates, re-used minerals and re-worked minerals from tipped waste material;
- 7) involve the prior extraction of minerals to enable non-mineral development to take place;
- 8) minimise any adverse impacts from vehicles used in the extraction and transport of minerals by road, including emissions, and maximise the use of more sustainable transport modes including rail, water, conveyor and pipeline;
- 9) protect the existing amenity, health, well-being and safety of local communities by avoiding, minimising and mitigating adverse impacts;
- 10) result in an acceptable level of cumulative impacts, particularly taking into account impacts from the legacy of the minerals industry and nearby industrial/commercial development;

- 11) protect, conserve and enhance the Plan area's natural, built and historic environment by avoiding, minimising and mitigating adverse impacts and by seeking multifunctional environmental enhancements during restoration;
- 12) would deliver measurable and significant net gains for biodiversity and establish a coherent and resilient ecological network;
- 13) are sensitively located and designed to avoid or minimise adverse impacts on the adjoining PDNP, where they are located within its setting;
- 14) protect the openness of the Green Belt and do not conflict with the purposes of including land within it;
- 15) provide high quality restoration and after care at the earliest opportunity, taking into account aviation safety, and result in an appropriate after-use, providing maximum local and strategic benefits to both local communities and the wider area;
- 16) contribute towards a strategic approach to restoration within the river valleys in the south of the Plan;
- 17) reduce impacts on the causes of climate change including reducing carbon dioxide (and other greenhouse gas) emissions, and facilitate adaptation to increase resilience to the future impacts of climate change including the risk of flooding; and
- 18) improve water and energy efficiency and maximise the use of renewable and low-carbon energy sources.

REASONED JUSTIFICATION

- 4.9 For minerals, the principal requirement of the NPPF is that planning policies should enable their steady and adequate supply by providing for the extraction of mineral resources of local and national importance with the aim of sourcing mineral supplies indigenously. To ensure that sufficient land is brought forward to maintain an adequate and steady supply of minerals, Criterion 1 supports the continued production of minerals throughout the plan period to meet local, sub-national and national needs.
- 4.10 The NPPF sets out different requirements for maintaining supply depending on the type of minerals and their end uses. For aggregate minerals which are used in building and construction, supply is maintained country-wide through

the managed aggregate supply system (MASS) and through the maintenance of landbanks of permitted reserves for crushed rock and sand and gravel. At the local level, MPAs are required to prepare annual Local Aggregate Assessments (LAAs) to assess the demand for and supply of aggregates to inform plan preparation. At the sub-national level, MPAs belong to and take advice from Aggregate Working Parties (AWPs). In Derbyshire and Derby's case, this is the East Midlands AWP. They monitor demand and supply over that geographical area and a National Co-ordinating Group monitors the overall provision of aggregates in England. Derbyshire is an important supplier of aggregates, meeting both local, sub-national and national needs.

- 4.11 MPAs are required to make provision in their local plans to ensure the supply of aggregates over the Plan period which in the case of this Plan is to 2038. Such provision should take the form of specific sites, preferred areas and/or areas of search and locational criteria as appropriate. Important aggregate minerals supplied from the Plan area include limestone and to a lesser extent sandstone which are located on the Carboniferous and Permian Limestone resources and the Millstone Grit resource respectively. A further important aggregate is sand and gravel, extracted from the river valleys of South Derbyshire and to a lesser extent the Sherwood Sandstone resource. Detailed policies enabling the supply of aggregates are set out at Chapter 6.
- 4.12 Much of the Plan area adjoins the PDNP, which as well as supplying crushed rock aggregate is also designated for its special qualities, including its landscape, scenic beauty, wildlife and cultural heritage. Derbyshire County Council and Derby City Council have a duty³⁸ to have regard to the purposes of the National Park in coming to decisions or carrying out their activities. To help protect and conserve the special qualities of the National Park, the Plan, in planning for the supply of aggregates, will make provision for a compensatory supply of aggregate crushed rock from the Plan area to enable a progressive reduction of the mineral supplied from sites within the National Park. Further information on this issue is set out in Chapter 6.
- 4.13 For non-aggregate and energy minerals, there is no managed supply system and therefore supply is maintained to meet the market demand for such minerals based on their likely use in industrial and manufacturing processes and energy production. The Plan area is an important supplier of non-

³⁸ Section 62 of the Environment Act 1995 makes it a duty for all relevant authorities (including Government departments and agencies, utility companies and parish councils) to have regard to National Park purposes when coming to decisions or carrying out their activities.

aggregate minerals, including industrial grade carboniferous limestone and industrial dolomitic limestone supplied from the Carboniferous and Permian Limestone resources respectively. Most quarries that produce industrial grade limestone also produce aggregates as well. Chapter 2, the Spatial Overview provides details of the location of mineral resources and minerals production within the Plan area. Chapters 7 and 8 set out policies to enable the continued supply of non-aggregate and energy minerals.

- 4.14 The NPPF requires that sufficient land is brought forward in the right location and at the right time to enable the provision of a steady and adequate supply of minerals. Criterion 2 requires proposals to demonstrate the need for the specific mineral to be worked in that location which may include the need for additional reserves to maintain production at a site i.e., support an extension or the need for the mineral to be worked at that location in relation to the supply of nearby markets. Additional economic factors to be supported favourably, are set out in criterion 3 and, include the continued use of plant and infrastructure provided that it is appropriately designed and located, the retention or creation of employment opportunities and other financial benefits to local businesses and the local economy. The detailed application of these criteria is set out both in the individual Mineral Supply policies at Chapters 6, 7 and 8 and in the Development Management Policies at Chapter 11.
- 4.15 A key principle of sustainability is the need to make prudent use of primary mineral resources and other natural resources to ensure their long-term conservation. Criterion 5 of Policy SP1 requires proposals to demonstrate such requirements which includes the need to restrict high grade minerals to industrial uses rather than aggregate uses. It also requires proposals to demonstrate the prudent use of other natural resources for example, soils, best and most versatile agricultural land and water. The detailed application of this policy is through Policy SP10 Industrial Limestone and through the Development Management Policies at Chapter 11.
- 4.16 To support the conservation of primary mineral resources further, the Plan will take into account the contribution that recycled and secondary aggregates will make to the total supply of aggregates over the Plan period, as part of the managed aggregates supply system, detailed in Chapter 6. Additionally, through Criterion 6, it supports proposals for the production of secondary and recycled aggregates. Secondary aggregates are aggregates from industrial wastes such as glass (cullet) incinerator bottom ash, coal derived fly ash (dry or conditioned PFA), railway ballast; and industrial and minerals by-products, notably spoil tips from mineral extraction. Recycled aggregates are produced

from the processing of inert materials previously used in construction e.g., construction and demolition waste. Policy SP3 the Supply of Recycled and Secondary Aggregates enables the production of such aggregates in appropriate locations. Criterion 6 also supports the reworking of minerals for aggregate purposes from tipped waste material and the Plan facilitates such development through Policy OM2 the re-working of Spoil Tips set out at Chapter 11.

- 4.17 An additional way of conserving primary mineral resources for use by future generations is to safeguard them from sterilisation by non-mineral development. It is important that non-mineral development, such as housing, industry or retail is not built over important mineral resources or located in close proximity to them. Similarly, minerals related infrastructure needed to handle, process or transport minerals requires protection from non-mineral related development. Chapter 9 includes policies to safeguard mineral resources and infrastructure. Where it is necessary for non-mineral development to take place Criterion 7 enables, in principle, the prior extraction of the mineral; proposals will need to satisfy Policy SP17 which sets out the detailed application of this criterion.
- 4.18 Minerals within the Plan area are predominantly transported by road, generating significant HGV movements, which can have both wider impacts on congestion and greenhouse gas emissions as well as more local impacts on amenity and health through noise, vibration and emissions. The NPPF requires planning policies to promote a pattern of development that enables the use of sustainable transport modes in order to reduce congestion and emissions and improve air quality and public health. There are, however, practical and economic limitations in applying this approach to minerals, which can only be worked where they are found. Criterion 8 therefore supports proposals that maximise the use of sustainable modes of transport including rail, water, conveyor and pipelines. Where road transport is unavoidable, adverse impacts should be minimised to acceptable levels. The Criterion also requires that any adverse impacts from vehicles used to extract the mineral should be minimised to acceptable levels. Development management policy DM3 Transport at Chapter 11 sets out detailed criteria on transport issues.
- 4.19 The NPPF recognises that mineral development can generate adverse impacts on the environment, such as noise, dust and particle emissions and blasting vibrations, which can impact on the amenity, health, well-being and safety of nearby local communities. Criterion 9 requires that local communities are protected from the adverse impacts of mineral development. The

Development Management policies at Chapter 11 and, in particular, policy DM1 Protecting Local Amenity sets out the detailed application of this criterion.

- 4.20 The NPPF requires that the cumulative impacts of mineral development is taken into account which is particularly important in former areas of significant mining, such as, the coalfields and in present day areas of significant mining, such as, the Carboniferous Limestone resource area and the River Valley sand and gravels. Criterion 10 requires that the cumulative impact of the proposal is acceptable, Development Management Policy DM15 at Chapter 11 sets out the detailed application of this criterion.
- 4.21 The Plan area and adjacent PDNP is renowned for its varied and attractive landscapes, which support an important tourist industry. Many of the important mineral resources are to be found in these areas of high landscape value, whilst other minerals are located in areas close to the main built-up areas and the historic environments they contain. Criterion 11 requires that proposals protect and enhance the Plan area's natural, built and historic environment by avoiding, minimising and mitigating the adverse impacts of mineral working. In terms of enhancement, Criterion 11 supports the provision of green and blue infrastructure resulting in multifunctional environmental enhancements during site restoration. The detailed application of these criteria is through the Development Management policies at Chapter 11 which afford the appropriate protection of environmental assets according to the hierarchy of their designation and support the creation, maintenance and enhancement of multifunctional green and blue infrastructure.
- 4.22 Mineral working can have a major impact on the biodiversity interests of a site but effective restoration offers significant opportunity to recreate and enhance those interests. It can enable the establishment or re-establishment of priority habitats, thus providing measurable net gains in biodiversity, particularly through providing linkages between fragmented blocks of specific habitat types, delivering strong and coherent ecological networks and linking to the wider green and blue infrastructure network. The Environment Act establishes the principle of environmental gain as a requirement of all development. Criterion 11 supports proposals that deliver measurable and significant biodiversity net gain; the detailed application of this policy is set out in Development Management Policy DM5 Biodiversity and Geodiversity.
- 4.23 The Carboniferous Limestone resource adjoining the PDNP is a particularly important source of limestone for both aggregate and industrial purposes. Criterion 13 requires that any mineral development within the setting of the

PDNP is sensitively located and designed to avoid or minimise adverse impacts on the designation. The detailed application of this policy is set out in Development Management Policy DM4 Landscape.

- 4.24 Green Belt policy seeks to prevent urban sprawl by keeping land permanently open and openness and permanence are key Green Belt characteristics. The general extent of Green Belts within the Plan area is established; key factors influencing their location include the prevention of coalescence with neighbouring urban conurbations such as Manchester, Sheffield, Nottingham, Burton-on-Trent; the prevention of urban sprawl from the largest settlements within the Plan area, namely Derby and Chesterfield and the demarcation of individual smaller towns. The NPPF sets out that, within the Green Belt, mineral extraction is not inappropriate provided it preserves its openness and does not conflict with the purposes of including land within it. Development Management Policy DM11 Green Belt at Chapter 11 sets out the detailed application of Criterion 14.
- 4.25 Although mineral development can have a significant impact on the landscape and characteristics of an area and in some cases may last for long periods of time, it is a temporary use of land. In accordance with criterion 15, restoration is required to take place to a high standard, at the earliest opportunity, to a beneficial after-use, taking into account aviation safety. The benefits of adopting a wider than local approach to restoration should also be taken into account. Development Management Policy DM15 Restoration, Aftercare and After-Use at Chapter 11 sets out detailed requirements for the restoration and after use of mineral sites.
- 4.26 One area has been identified where a strategic approach to restoration is considered important. The river valleys of the Trent, lower Derwent and lower Dove in the south of the Plan area where planned sand and gravel extraction coincides with planned housing growth, including a new garden village and new transport infrastructure. In accordance with Criterion 16, therefore, it is important to adopt a co-ordinated approach to the restoration of sand and gravel sites in the context of the changing landscape of this area and to consider the wider benefits that mineral restoration can contribute towards in terms of landscape character, biodiversity, recreation and public access. Chapter 10, Policy SP19 sets out policy requirements for mineral development proposals within the river valleys. These requirements have also been taken into account in Policy SP5 and in the Principal Planning Requirements at Appendix A, which have been prepared for each of the proposed sand and

gravel site allocations, all of which lie within the Trent, lower Derwent and lower Dove valleys.

- 4.27 The NPPF requires the planning system to support the transition to a low carbon future in a changing climate, taking full account of flood risk. The need to minimise impacts on the causes of climate change, including reducing carbon dioxide (and other greenhouse gas emission) and facilitate adaptation to increase resilience to climate change (including the risk of flooding), and to use resources efficiently, are important requirements of sustainable minerals development. Criteria 17 and 18 set out these 'high level' requirements that proposals for mineral development must satisfy in relation to climate change and resource efficiency. The detailed application of these criteria is set out in Chapter 5 Policy SP2 Climate Change, and the application of the Plan's other strategic and development management policies will ensure that climate change and resource efficiency are fully taken into account when assessing proposals for mineral development and mineral related development.



Doveholes Quarry

THE SUSTAINABLE LOCATION OF MINERAL DEVELOPMENT

- 4.28 Minerals can only be extracted where they occur naturally and therefore any strategy for planning the location of mineral development is constrained by the geographical distribution of mineral resources within the Plan area. In broad strategic terms, as depicted on the Key Diagram, this means that sand and gravel will be extracted in the south of the Plan area and limestone (Carboniferous and Permian) in the more central, north-western and north-eastern parts of the Plan area. Coal and other hydrocarbons are found generally in the more eastern parts of the Plan area.
- 4.29 The strategic locational strategy is further influenced by the different requirements for maintaining supply depending on the type of minerals and their end uses. Aggregate supply, as set out at paragraph 4.11 is maintained through the managed aggregates supply system. A particular feature of the Plan area is the overall scale of crushed rock permitted reserves which are sufficient to meet overall anticipated needs to the end of and beyond the Plan period. These reserves are located at some 12 Carboniferous limestone/sandstone quarries, which are responsible for providing approximately 65% of annual mineral production within the Plan area and which effectively set the overall spatial pattern of mineral development over the Plan period. Many of the same quarries also supply industrial limestone which equates to a further 19% of annual production. Only one operational quarry is located on the Permian Limestone although importantly it supplies industrial dolomitic limestone as well as aggregates (equating to approximately 8%) of total annual production. Further information about the provision of crushed rock aggregate and industrial limestone is set out in Chapters 6 and 7. Sand and gravel accounts for 8% of overall annual mineral production currently supplied from three quarries located in the Trent Valley and one quarry on the Sherwood Sandstones; additional reserves will be required to meet anticipated needs over the Plan period and factors influencing their proposed spatial distribution are set out in Chapter 6.
- 4.30 In addition to economic factors, environmental and social factors will also need to be taken into account in assessing the locational suitability of development. Such policies include maximising sustainable transport modes, protecting local communities and the natural, built and historic environment, mitigating and adapting to climate change and facilitating benefits from both local and wider landscape scale restoration. Policy SP1 Sustainable Development requires that such factors are satisfactorily addressed and its application through the

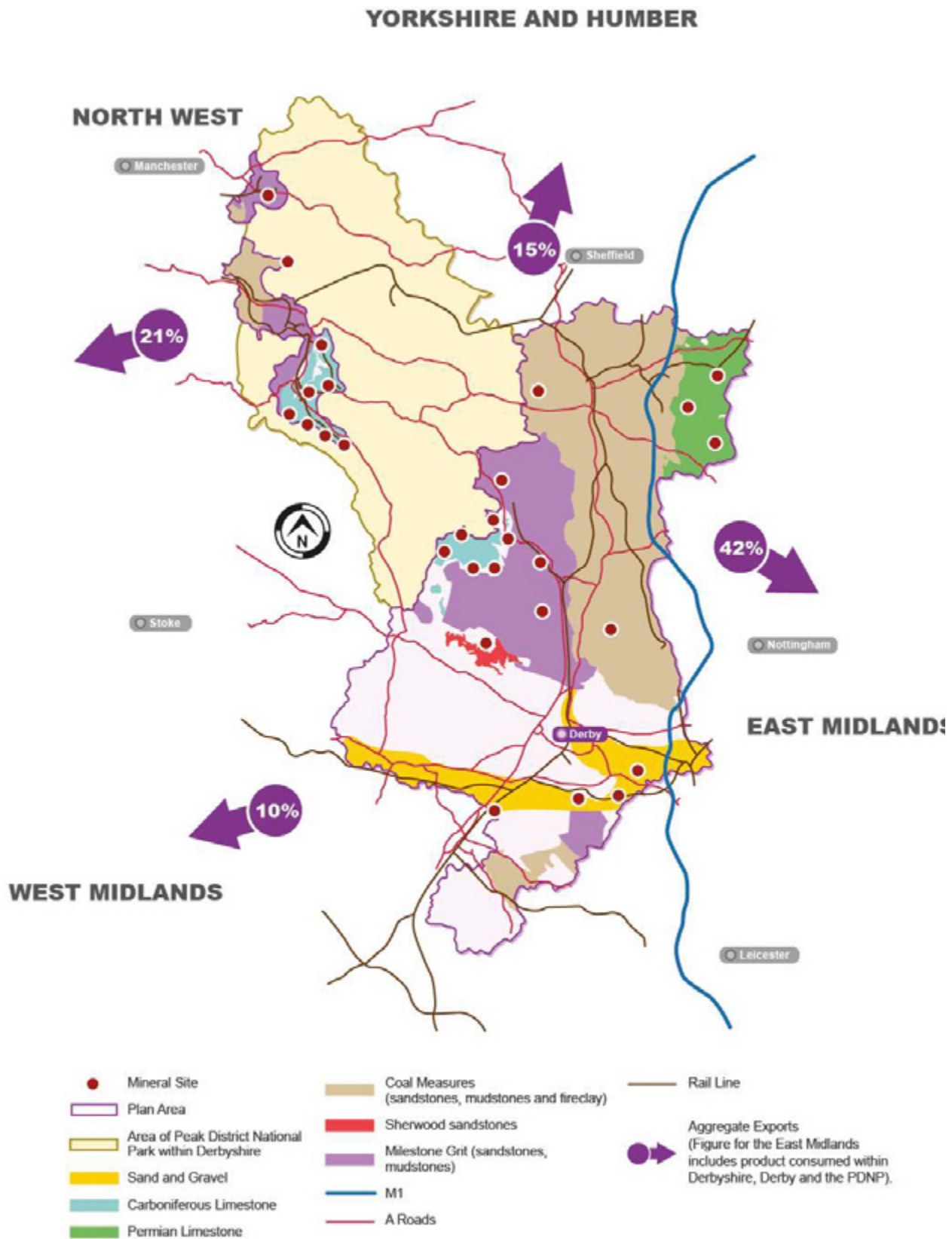
Plan's other strategic and development management policies will ensure that proposals for mineral development and mineral related development are appropriately located.

EXTENSIONS TO EXISTING MINERAL SITES

- 4.31 PPG³⁹ requires that the suitability of proposed mineral development, whether an extension to an existing site or a new site, must be considered on its individual merits. It does set out factors that should be taken into account, which may result in extensions being preferable to new sites. Such factors include the need for the specific mineral; economic considerations (such being able to continue to extract the resource, retaining jobs, being able to utilise existing quarry plant and other infrastructure); positive and negative environmental impacts (including the feasibility of a strategic approach to restoration) and the cumulative impact of proposals in an area. Policy SP1 Sustainable Development requires that these factors are addressed satisfactorily and its application through the Plan's other strategic and development management policies will ensure that the benefits of extensions will be given appropriate weight when assessing proposals for mineral development and mineral related development.

³⁹ PPG Minerals - Paragraph: 010 Reference ID: 27-010-20140306 Revision date: 06 03 2014

Figure 4.1 Key Diagram



CHAPTER 5: Climate Change

INTRODUCTION AND BACKGROUND

- 5.1 Climate change refers to long lasting changes in global climate and particularly those seen in the last few decades. These changes can be attributed to the rapid increase in global temperatures, caused largely by increased levels of atmospheric greenhouse gases principally carbon dioxide (CO₂) produced by the use of fossil fuels by humans. Climate change has been identified as the biggest threat to human society by the World Health Organisation. The world is already witnessing the effects of climate change in increases in the risk of extreme weather including heatwaves, floods, storms, droughts and wildfires. In the UK, this will mean warmer, wetter winters with less snowfall and fewer frosts. Summers are likely to be hotter and generally dryer but the potential for extreme, intense rainfall, droughts, heatwaves, flooding and storms are likely to all increase
- 5.2 In 2015, the Paris Agreement was signed by 195 Governments making a commitment to keeping a global temperature rise this century well below 2°C above pre-industrial levels and pursuing efforts to limit the increase even further to 1.5°C, a limit that is now close to being breached. In order to limit global warming to 2°C, it has been calculated that the world can only emit a certain quantity of carbon dioxide to the atmosphere. This is the global carbon budget which is then divided amongst individual countries according to the Paris Agreement.
- 5.3 Recent reports on climate change⁴⁰ by the Intergovernmental Panel on Climate Change (IPPC) note that human-induced climate change is causing dangerous and widespread disruption in nature and affecting the lives of billions of people around the world, despite efforts to reduce the risks. People and ecosystems least able to cope are being hardest hit. The IPPC reports contain a damning assessment of the current level of action on climate change and states that strong, rapid and sustained reductions in greenhouse gas emissions along with limiting cumulative CO₂ emissions, reaching at least net zero by 2050, are required to keep climate change to between 1.5°C and 2.0°C this century. The reports conclude that there is now a small window of opportunity when significant action by society and governments can reduce the worst effects of

⁴⁰ United Nation's Intergovernmental Panel on Climate Change (IPCC) 6th Assessment Report ,9 August 2021 and Impacts, Adaptation and Vulnerability Report, March 2022

climate change to a level within which the world will still have the ability to adapt. More recently in October 2022, a United Nations Environment Programme Report ‘Closing the Window’ has identified that current pledged emissions reductions will only reduce temperature rises to between 2.4 – 2.6°C by the end of the century.⁴¹ The UN Secretary General at the Climate Change Conference (COP) 27, held in Autumn 2022, called for “a giant leap on climate ambition” stressing the need to “drastically reduce emissions now.”

- 5.4 The UK Parliament declared a Climate Change Emergency in 2019 and is committed to reduce the UK’s carbon emissions. It has committed in law⁴² to achieve net-zero carbon emissions by 2050⁴³ with an interim target of 78% reduction on 1990 levels by 2035⁴⁴. The Climate Change Act 2008 also introduced legally binding ‘carbon budgets’ which cap emissions over successive 5-year periods. The first six carbon budgets cover the period 2008-2037. The third carbon budget period will finish at the end of 2022. So far, the UK has met its budgets and is on track to meet the third but will require significant emission reductions to be on track to meet future budgets and the net zero target for 2050.
- 5.5 The County Council has prepared a Climate Change Strategy⁴⁵ which includes a county-wide (not including Derby City) target of net zero by 2050 aligned with the UK’s legal commitment to deliver net zero by 2050. It sets out 5 yearly emission reduction targets. Since 2005, Derbyshire’s county-wide emissions have fallen by 21% but this will need to be accelerated in order to achieve the 47% reduction in emissions by 2025 (against the 2005 baseline) which is needed to be on course to deliver net zero by 2050.
- 5.6 The Strategy notes that in 2018, Derbyshire’s total greenhouse gas emissions were 10.5 MtCO₂e, equivalent to 13.2 tCO₂e/capita (for Derbyshire’s population of 796,142 people), which is much higher than the average for the UK of 6.8 tCO₂e/capita.⁴⁶ This is predominately due to the higher-than-average industry activity within the county⁴⁷, as well as the spatially disparate nature of

⁴¹ United Nations Environment Programme Emissions Gap Report – Closing the Window, October 2022.

⁴² The Climate Change Act 2008

⁴³ The Climate Change Act 2008 (2050 Target Amendment) Order 2019

⁴⁴ The Carbon Budget Order SI 2021 No.750

⁴⁵ Derbyshire County Council’s Climate Change Strategy: Achieving Net Zero 2021 - 2025

⁴⁶ BEIS, 2020. Emissions of carbon dioxide for Local Authority areas. With scaling factors applied to take account of all GHG emissions and not just CO₂. [online] Available at: <https://data.gov.uk/dataset/723c243d-2f1a-4d27-8b61-cdb93e5b10ff/emissions-of-carbon-dioxide-for-localauthority-areas>. [Accessed 25 March 2021]

⁴⁷ During national allocation heavy industries contributing to the national economy are reallocated

communities, which increases the reliance of private vehicles. The commercial and industrial sectors result in 68% of the total emissions, transport makes up 19% of emissions, and domestic buildings contribute 14%. Emissions from land use, land use change and forestry (LULUCF) were -0.1 MtCO₂ (equivalent to -1%) demonstrating the sequestration of carbon from the atmosphere. There is no separate emission data for the mineral operations in Derbyshire, but cement production and lime production are known to contribute significantly to emissions

- 5.7 Climate change can be addressed through both mitigation (action to reduce the impact of human activity on the climate system primarily through avoiding or reducing greenhouse gas emissions) and adaptation (adjustments to natural or human systems in response to the actual or anticipated effects of climate change, to mitigate harm or exploit beneficial opportunities). The NPPF⁴⁸ identifies that the planning system can play a key role in securing reductions in greenhouse gas emissions, minimising vulnerability and improving resilience to the effects of climate change, encouraging the re-use of existing resources and supporting renewable and low carbon energy and associated infrastructure.
- 5.8 Local plans are required by law⁴⁹ to include policies designed to secure that the development and use of land in a local planning authority's area, contributes to the mitigation of, and adaptation to, climate change. The NPPF requires that local plans adopt a proactive approach to mitigating and adapting to climate change, taking into account the long-term implications of flood risk, water supply, biodiversity and landscapes and the risk of overheating from rising temperatures, in line with the objectives and provisions of the Climate Change Act 2008⁵⁰.

CLIMATE CHANGE AND MINERALS

- 5.9 The production and use of minerals contributes to emissions and subsequently to climate change. Minerals, however, are essential to the economy and our way of life. It is important therefore that they are extracted, processed and transported sustainably and that, wherever possible, within the scope of

across counties

⁴⁸ NPPF, July 2021

⁴⁹ Section 19(1A) of the Planning and Compulsory Purchase Act 2004 (as amended by section 182 of the Planning Act 2008)

⁵⁰ The Climate Change Act 2008, as amended by the (2050 Target Amendment) Order 2019

minerals planning, measures are taken to mitigate and adapt to climate change. This can be achieved through:

- a) Mitigating its effects through avoiding or reducing greenhouse gas emissions associated with mineral development (mitigation). Where this is not possible by including off setting or capturing and storing emissions (sequestration), and
- b) Ensuring that minerals development contributes to the adaptation and resilience of the built and natural environment to the effects of climate change (adaptation).

REDUCING GREENHOUSE GAS EMISSIONS

- 5.10 By increasing the use of secondary and recycled aggregates, the need for the extraction of primary minerals can be reduced. If minerals are not re-used or recycled, then more primary mineral resources have to be extracted and new products manufactured, resulting in the use of additional resources and energy. Also, the recycling and re-use of construction and demolition material on site reduces the need for transporting aggregates which is a major source of carbon emissions.
- 5.11 The extraction of minerals, processing, transport to market and their use all generate greenhouse gas emissions, although the scale of them will depend on the mineral resource, method of extraction, the way in which they are processed, transport requirements and their ultimate use. Most mineral companies in Derbyshire have developed sustainability strategies and identified pathways with associated carbon reduction targets towards achieving net carbon zero by 2050. There are several ways in which emissions can be reduced.

ENERGY EFFICIENCY

- 5.12 The extraction and processing of minerals can be both energy and water intensive, which means that it is important for the minerals industry to reduce the consumption of energy and water and increase efficiency. From the outset, proposals should take account of landform, layout, building orientation, massing and landscaping to minimise energy and water consumption.
- 5.13 Other measures to improve energy efficiency include:
 - adapting processes and procedures;
 - updating/refurbishing/retrofitting plant and buildings;

- using sustainable design and construction techniques in plant and buildings, including the re-use of buildings, use of recycled or recyclable materials and locally sourced or on-site building materials;
- Increasing water efficiency by re-using wastewater, harvesting rainwater and using winter storage reservoirs to supplement supply throughout the summer months;
- Installing SMART meters and energy monitoring tools;
- Improving service and maintenance procedures to ensure plant, machinery and vehicles operate more efficiently;
- Investment in improved efficiency, including upgraded insulation, more efficient LED lighting, low energy heating, and natural ventilation to reduce the reliance on air conditioning;
- Behavioural change programmes. It has been estimated that maintaining equipment well or turning it off when it is not in use, can reduce energy demand by up to 10%⁵¹.

LOW CARBON ENERGY

- 5.14 The use of renewable and low carbon energy can help reduce emissions. In 2020 the mineral products industry (including mining and quarrying), excluding transport, accounted for 12% of industrial fuel consumption in the UK, of this 46% was from natural gas, 19% electricity, 14% coal, 12% bioenergy and waste and 7% petroleum products. Since the turn of the century fuel consumption by the minerals product sector has decreased by some 16%⁵².
- 5.15 Key factors influencing the potential for using renewable and low carbon energy at mineral operations are the scale, location and anticipated life of workings. Many of the limestone quarries within the plan area are large scale and long term and a number of them are involved in processing industrial minerals which can be particularly energy intensive. In these cases, the potential for renewable energy generation would be similar to that of any other industrial development. However, many of the limestone quarries are located in rural areas close to the PDNP and therefore the environmental and visual impacts of significant renewable energy generation would need to be taken into account. For shorter term operations that involve temporary buildings, the

⁵¹ MPrA Website Resources Carbon Trust A Well Oiled Machine and Switch It Off

⁵² DBEIS Digest of UK Energy Statistics (DUKES) 2021 ECUK Consumption Data Tables

potential for energy generation may be more limited to roof-mounted photovoltaic panels or similar.

- 5.16 The NPPF makes it clear that small-scale renewable or low carbon energy projects can provide a valuable contribution to cutting greenhouse gas emissions and that applicants for energy development are not required to demonstrate the overall need for renewable or low carbon energy. Some small-scale schemes may be considered an ancillary part of a minerals working or restoration scheme, but in some cases separate planning permission might be required from the relevant district, city or borough planning authority.

INDUSTRIAL PROCESS EMISSIONS

- 5.17 The processing of ‘industrial’ minerals can generate significant emissions. In the Plan area the calcination (heating) of limestone to produce cement and lime requires significant amounts of energy. Not all aspects of carbon emissions are from energy consumption some are from ‘chemical reactions’ or those which cannot be engineered out of the process. For example, the production of cement clinker⁵³ produces significant CO₂ emissions. In 2018, it was estimated that the concrete and cement production accounted for 1.5% of UK CO₂ emissions. In 2018, production accounted for 7.3 million tonnes of CO₂, of which around 4.4 million tonnes were ‘process emissions’ from clinker production, 2.2 million tonnes from fuel combustion and the remainder from electricity use and transport.
- 5.18 Significant progress has been made in reducing emissions in cement manufacture which have decreased by 53% since 1990. This has been achieved through a move toward using alternative low carbon waste-derived fuels and increasing the use of by-products, recycled materials and waste from other industries to substitute for clinker. In 2020, waste derived fuels made up 47% of the thermal input with waste biomass fuels comprising 18% of the thermal input to the cement manufacturing process. These alternative fuels also made up 29% of the thermal input for dolomitic lime manufacturing in 2020. In 2018, cement manufacturers replaced 7% of their raw materials with waste derived alternatives e.g., pulverised fuel ash.
- 5.19 Further emissions reductions may be achieved if product and design standards allow for lower carbon cement formulations and these are adopted by the

⁵³ The product of fusing together of clay and limestone which is the first stage in the manufacture of cement

market. However, to realistically meet ‘net zero’ emissions from cement and lime production by 2050 carbon capture and storage (CCUS) will need to be technologically and economically feasible. A cluster (the Peak District Inland Cluster) of high emitting sites which includes two cement sites and three lime sites within Derbyshire, with total emissions of 2.2 MtCO₂ in 2016, has been identified by the Government, as part of its decarbonising industry strategy, for investigation into options for CCUS.

TRANSPORT

- 5.20 Another major contribution to emissions from the minerals industry is transport, from vehicles used on site in the extraction process and off site, for transporting the mineral to the market. Despite comprising only 5% of UK road vehicles, heavy goods vehicles (HGVs) produce 17% of greenhouse gas emissions from the surface transport sector⁵⁴. The use of more sustainable modes of transport such as pipeline, conveyor, rail and water along with low carbon emission vehicles and fuels, such as hydrogen, would assist in reducing carbon emissions together with more efficient transport planning and logistics. Whilst indications are that over the 5-year period (2013-2018) nationally mineral products rail freight increased by 21%⁵⁵, within the Plan area it is currently only the limestone quarries that are long-life (2042) and have large scale production (between 3 to 6 mtpa) which transport mineral by rail. Four limestone quarries are currently rail linked and a further quarry that is likely to resume production during the Plan period intends to transport mineral by rail. In 2019, approximately 50% of aggregate limestone was transported by rail from the Plan area.

ADAPTING TO CLIMATE CHANGE

- 5.21 The effects of climate change are experienced through more extreme and unpredictable weather conditions, which are already being experienced and are projected to include more intense rainfall events, hotter summers, more heatwaves, more periods of drought and warmer but wetter winters. The impacts of these changes include an increased risk of flooding, increase risk of fire and heatwaves, droughts and damage to infrastructure from an increase in storm events. A changing climate also harms wildlife and precious ecosystems. It is recognised that a certain degree of impacts from climate change are inevitable due to past emissions and even if emissions are reduced

⁵⁴ Carbon Brief - Clear on Climate, 9 December 2020

⁵⁵ Sustainable Development Report 2020/2021 Minerals Products Association

dramatically, it is important that new developments are planned to take into account adaptive measures including those to protect the natural environment and increase its resilience to change.

- 5.22 Mineral proposals should include adaptive measures to ensure on site resilience from extreme climatic events such as heat and drought, storm events, and high winds. Climate change may particularly lead to increased and new risks of flooding over the lifetime of planned mineral developments. Such development should be located to avoid areas of vulnerability to climate change and flood risk. Where this is not possible, it will need to be planned, designed and operated to avoid, reduce and manage potential flood risk from all sources over its lifetime, including the risk of increasing flooding elsewhere. Mineral working can impact on water supply and groundwater and it is important that any impacts affecting the availability of water resources are appropriately assessed and mitigated. The use of sustainable drainage systems and water efficiency should be encouraged at mineral sites.
- 5.23 The restoration of mineral sites, however, does provide opportunities to increase resilience to climate change. In particular, restoration schemes for sand and gravel quarries (which because of where the mineral is found often have to operate in the flood plains of the river valleys) can contribute towards reducing the risk and scale of flooding. Such schemes are most effective where they are part of an integrated approach to flood risk management and where they include natural flood management techniques, such as using the extraction area next to the river for river braiding or widening or to provide increased capacity for winter flood water storage.
- 5.24 Restoration schemes can also provide opportunities for the creation of habitats for species affected by climate change. This includes the provision of wildlife corridors and making links to the wider green infrastructure network to improve the resistance of the natural environment to climate change. From a wildlife perspective, ensuring that water is managed so that water bodies, water courses and wetlands are receiving and storing water will be essential. Creating space for flood waters can also provide new habitats for wildlife, whilst the management of habitats should try to maintain a variety of micro-habitats to include shady, cooler areas as well as more open, hotter habitats.
- 5.25 More generally, restoration schemes can also increase and enhance green infrastructure providing a network of multi-functional green and blue spaces and other natural features including newly planted vegetation and trees; all of which provide local and wider benefits for the climate including carbon

reduction. It is important that any restoration benefits provided that would assist in carbon sequestration, for example trees and woodlands are balanced against the loss of such features in the first instance.

POLICY SP2: CLIMATE CHANGE

Proposals for mineral development and mineral related development will be supported where, taking into account the lifetime of the development (including restoration and aftercare), they include measures that clearly demonstrate:

- a) a progressive reduction of carbon dioxide (and other greenhouse gas) emissions including fugitive emissions consistent with meeting national and local carbon targets and achieving net zero emissions by 2050 unless the proposal involves the extraction of coal where emissions associated with the proposal should be ‘net zero’ from the outset; and**
- b) an improvement in resource efficiency; and**
- c) that they effectively assist in the reduction of vulnerability of the built and natural environment from, and increase resilience to, the future impacts of climate change.**

Measures will vary depending on the particular circumstances of each proposal but should, on a proportionate basis, take account of the following as a minimum:

- 1) Ensuring energy efficient plant, buildings and operations and the use of decentralised renewable, or low carbon energy sources to power the facility;**
- 2) Ensuring the use of sustainable design and construction techniques in plant and buildings, including the use of re-cycled and recyclable materials, locally or on-site sourced building materials and low carbon-embedded construction materials;**
- 3) Using sustainable transport modes, efficient logistics, and low carbon emission fuels and vehicles to extract and transport the mineral to market;**
- 4) Minimising water consumption by incorporating water efficiency measures including, where practicable, rainwater harvesting, the re-use of wastewater and winter storage areas;**

- 5) **Avoiding locations in areas of vulnerability to climate change and flood risk. Where this is not possible, measures should be incorporated, to mitigate any flood risk associated with the development and to avoid increasing the risk of flooding elsewhere;**
- 6) **Incorporating restoration schemes which will contribute towards emissions reduction and climate change adaptation and resilience, including the creation of multifunctional green and blue infrastructure including tree planting, biodiversity and habitat creation, carbon sinks and flood resilience.**

Where submitted in support of a proposal the MPA will give consideration to other mitigation and adaptation measures not listed in criterion 1-6.

The MPA will seek to enter into planning obligations to secure any measures which cannot be secured through planning conditions.

Proposals for mineral development and mineral related development should be supported by a Climate Change Impact Assessment which demonstrates how measures to mitigate and adapt to climate change have been considered, incorporated, and will be monitored and reported.

The Climate Change Impact Assessment should include an assessment of whether there is sufficient causal connection between the proposal and any impact on the environment associated with any indirect emissions and, whether this constitutes a significant indirect effect of the proposed development. Where this is the case, the indirect emissions will need to be taken into account under Policy SP2 Criterion a.

REASONED JUSTIFICATION

- 5.26 Planning has a key role in mitigating and adapting to climate change and helping the country to move towards a low carbon economy. This includes reducing greenhouse gas emissions to net zero by 2050, minimising vulnerability and creating resilience to climate change impacts (such as increased flood risk), using natural resources prudently, supporting the delivery of renewable and low carbon energy and associated infrastructure and protecting and enhancing natural capital and biodiversity.

- 5.27 Climate change is a wide-ranging issue affecting all of the economic, environmental and social aspects of mineral developments. Policy SP1, at Chapter 4, sets out the need to address climate change in order to deliver sustainable minerals development. Policy SP2 sets out in greater detail how proposals for mineral development and mineral related development are required to contribute to climate change mitigation and build resilience to the effects of climate change, but the implementation of all policies of the Plan, where relevant, will effectively deliver outcomes to address climate change. Policy SP3 supports the use of secondary and recycled aggregates whilst other policies of particular relevance are the development management policies set out at Chapter 11, which include DM3 Transport, DM4 Landscape, DM5 Biodiversity and Geodiversity, DM6 Trees, Woodland and Hedgerows, DM8 Water Management and Flood Risk, DM12 Green and Blue Infrastructure and DM15 Restoration, Aftercare and After-use.
- 5.28 Proposals for mineral development and mineral related development should demonstrate to the MPA through a Climate Change Impact Assessment how they will contribute towards reducing greenhouse gas emissions over the lifetime of the development from its location, design and construction through to operation, decommissioning and final restoration and aftercare in line with national and local carbon targets with the aim of achieving net zero carbon emissions by 2050. The Assessment should include the current baseline emissions from the site and a methodology for measuring emissions⁵⁶ associated with the development for the lifetime of the proposal including fugitive emissions and those arising from restoration.
- 5.29 Where proposals involve the extraction of coal, the carbon rich nature of the mineral is likely to result in emissions which are an intrinsic characteristic of the development. It is important therefore that such proposals can demonstrate from the outset that emissions will be managed to ensure that the development will have a 'net zero' impact on climate change. Requirements for proposals involving coal extraction are set out at Policy SP15 Coal Extraction and Colliery Spoil Disposal.
- 5.30 There are other emissions that, whilst not associated with the development, are indirectly⁵⁷ associated with the products and services of the development, including the use of the product. The Climate Change Impact Assessment should include an assessment of whether there is sufficient causal connection

⁵⁶ Scope 1 and 2 emissions as defined in the Greenhouse Gas (GHG) Protocol 2021

⁵⁷ Scope 3 emissions as defined in the Greenhouse Gas (GHG) Protocol 2021

between the proposal and any impact on the environment associated with the indirect emissions and, whether this constitutes a significant indirect effect of the proposed development. Where this is the case, the indirect emissions will need to be taken into account under Policy SP2 Criterion a.

- 5.31 Further information on how to assess and mitigate GHG emissions of development proposals and how to evaluate their significance can be found in the Institute of Environmental Management & Assessment (IEMA) Guide entitled 'Assessing Greenhouse Gas Emissions and Assessing their Significance 2nd Edition (February 2022). Whilst the guidance is primarily aimed at EIA development, the MPA considers that this represents a good practice standard for all developers.
- 5.32 The Climate Change Impact Assessment should set out as a minimum how the measures set out in Criteria 1 to 6 have been considered, incorporated, and will be monitored and reported. The MPA will expect, in the first instance, that consideration is given to incorporating any measures to reduce and adapt to climate change, such as tree planting and increased biodiversity, on site rather than offset elsewhere. However, where this is not possible, measures for offsetting or capturing and storing emissions should be included in the Assessment. Where appropriate, the MPA will use planning conditions or enter into planning obligations to secure climate change mitigation and adaptation measures and to require data to be supplied to report and monitor the effectiveness of those measures.
- 5.33 Climate Change Impact Assessments will be expected to take account of all relevant policies in the Plan and particularly those listed in paragraph 5.27. In assessing how proposals have addressed the potential impacts of climate change, the MPA will take into account the scale, nature and location of the proposed development such that large-scale mineral proposals will be expected to provide more information and be expected to show greater mitigation and adaptation measures than small-scale mineral proposals.
- 5.34 A Climate Change Guide and associated Assessment Tool have been prepared by the County, City, National Park and District Councils. The tool is designed to give an indication of the degree to which planning proposals have included climate change mitigation and adaptation measures in their conception and implementation. It can be accessed via the [Derbyshire County Council Planning Policy webpage](#).



Brassington Moor Quarry phased restoration

Chapter 6: The Supply of Aggregate Minerals

- 6.0.1 The majority of minerals quarried within the Plan area are used as aggregates. These are granular materials used in building and construction, for example in road making, house construction, in the manufacture of concrete and as railway ballast. Minerals from the Plan area which are used as aggregates include limestone (crushed), sandstone (crushed) and sand and gravel.

6.1: Recycled and Secondary Aggregates

INTRODUCTION AND BACKGROUND

- 6.1.1 Considerable volumes of aggregate minerals are required to construct the buildings and infrastructure that we need to support our way of life. By using recycled and secondary aggregates as alternatives in their construction, the amount of primary mineral that has to be extracted can be reduced, thus helping to secure its long-term conservation for future generations to use. A further benefit is that the use of recycled and secondary aggregates reduces the amount of re-useable materials from being wasted and disposed to landfill. In the interests of using resources prudently and delivering sustainable mineral development it is important, in principle, to maximise the production and use of recycled and secondary aggregates.
- 6.1.2 Construction will often require demolition of existing buildings and structures built with hard and durable materials such as concrete and brick which can be recycled and re-used in new construction. Recycled aggregates are produced from materials sourced from the processing of inert materials previously used in construction e.g., construction and demolition wastes. The waste streams can include concrete, bricks, glass and asphalt (road planings removed from road surfaces during roadworks). Processing involves the crushing and screening of the raw materials (similar to the processing of primary aggregates) but normally requires additional works to remove unsuitable contaminants such as metal, plastic or wood contained within the waste stream. The quality of recycled aggregates is therefore dependent on the type and source of the raw materials and the processes undertaken but like primary aggregates they are required to meet national specifications.
- 6.1.3 Secondary aggregates are aggregates derived from industrial wastes, such as glass (cullet) incinerator bottom ash, coal derived fly ash, railway ballast; and industrial and minerals by-products, notably waste/spoil tips from mineral extraction. Their uses are varied:
- colliery spoil -widely used for bulk fill;
 - power station ash (pfa) - used as a cementitious addition with cement manufacture and ready mixed concrete and as an aggregate in block manufacture (historically pfa was used as infill material, particularly in the restoration of sand and gravel sites).

- incineration bottom ash- used as fill material/sub-base for road construction or in block manufacture
- blast furnace slag from iron and steel industries - used as aggregates and when ground to form Ground Granulated Blast Furnace Slag (GGBS) as cementitious materials
- china clay waste - used as a mortar and in concreting sands

6.1.4 Recent figures⁵⁸ suggest that 90% of all Construction, Demolition and Excavation waste is recycled as aggregates. The annual production of recycled and secondary aggregates in Great Britain has grown considerably from around 20 million tonnes in 1980 to consistently around 70 million tonnes. In recent years, around 250 million tonnes of aggregates have been used each year in Great Britain, with 28% coming from recycled and secondary sources, considered to be close to the maximum achievable.⁵⁹ A further breakdown of recycled and secondary aggregate figures is available for 2017⁶⁰ when 90% of production was recycled aggregates and 10% secondary aggregates. An examination of this production in more detail shows the following contributions:

- 58.5 (81%) mt Recycled construction and demolition waste
- 6.1 (8.4%) mt Asphalt planings
- 3.1 (4.3%) mt Other (iron and steel slag, clay and shale, chalk, fly ash, furnace bottom ash and colliery spoil)
- 2.5 (3.8%) mt China and ball clay waste
- 1.8 (2.5%) mt Incinerator Bottom Ash

6.1.5 There are two main types of facilities producing recycled aggregates. The more permanent ones are those based at dedicated waste recycling centres, which crush and screen suitable streams of imported materials. Others are temporary production facilities that are set up at demolition sites, taking advantage of the direct availability of suitable materials.

6.1.6 Secondary aggregates are produced at three types of facilities:

- At stand-alone facilities which receive materials from other industrial processes. This includes ash and slag from foundries, power stations and incinerators.

⁵⁸ Minerals Products Association - From Waste to Resource 2019

⁵⁹ Minerals Products Association – Mind the Gap September 2022

⁶⁰ Minerals Products Association - Contribution of Recycled and Secondary Aggregates 2019

- At temporary sites which utilise minerals extracted from old tips associated with quarries, collieries and other industrial concerns.
 - At operational mineral quarries using waste derived from mineral processing although nowadays mineral operations are so sustainably managed that very little quantities of waste material not required for the restoration of the quarries are generated.
- 6.1.7 Whilst the production of recycled and secondary aggregates involves the use and re-use of minerals, it involves minerals that in some cases have previously been used for another purpose and which may have been discarded as waste. This issue is therefore relevant to both the emerging Minerals Local Plan and the emerging Waste Local Plan and will be reflected in the content of both plans and the policies they contain

POLICY SP3: THE SUPPLY OF RECYCLED AND SECONDARY AGGREGATES

Proposals for the reception, processing, treatment and distribution of waste materials in order to produce recycled and secondary aggregates will be supported where the proposal will promote the sustainable management of waste in accordance with the principles of the Waste Hierarchy and will facilitate a reduction in the need for primary aggregates.

Proposals will be assessed against this policy and the policies of the adopted Waste Local Plan (or any future replacement).

When located at mineral sites, proposals should not delay site restoration, not have an unacceptable adverse impact on working the minerals site or introduce unacceptable adverse impacts on sensitive receptors. The cumulative impacts of those proposals and mineral operations will need to be assessed both individually and in combination. Any planning permissions granted will be limited to the life of the mineral site.

Proposals which can demonstrate that early and high-quality restoration, in accordance with Policy DM15, can be achieved will be supported.

For mineral sites located in the Green Belt, proposals will need to demonstrate that any potential harm is clearly outweighed by other considerations, in accordance with Policy DM12.

REASONED JUSTIFICATION

- 6.1.8 NPPF⁶¹ states that mineral planning authorities should have planning policies that, so far as is practicable, take account of the contribution that substitute or secondary and recycled materials and minerals waste would make to the supply of materials, before considering extraction of primary materials, whilst aiming to source mineral supplies indigenously.
- 6.1.9 In terms of maintaining supply, it states that mineral planning authorities should plan for a steady and adequate supply of aggregates by:
- a) Preparing an annual Local Aggregate Assessment, either individually or jointly, to forecast future demand, based on a rolling average of 10 years' sales data and other relevant local information, and an assessment of all supply options (including marine dredged, secondary and recycled sources).

NEED

- 6.1.10 There is no specific national framework for determining the need for recycled and secondary aggregates. MPAs are required to consider their likely contribution to the overall supply of aggregates. However, information on recycled and secondary material that arises in the Plan area is often inconsistent and unreliable. Most recycled aggregate is derived from construction, demolition and excavation waste arisings. The most recent estimate⁶² of these arisings indicate that approximately 3 million tonnes will be generated annually over the plan period. Assuming that the Plan area achieves a recycling rate of 90% in accordance with the national trend, approximately 2.7mt of recycled aggregate will be generated annually. It is more difficult to estimate the contribution of secondary aggregates for which no figures exist. Aggregates from secondary sources within the Plan area have diminished with the demise of heavy industry e.g. steel manufacturing and coal mining, which makes it particularly difficult to determine the contribution of secondary aggregates over the Plan period. The national figures indicate that, of the total

⁶¹ National Planning Policy Framework, July 2021, Paragraph 210

⁶² DCC & DC Towards a Statistical Basis for the Waste Local Plan 2013

production of recycled and secondary aggregate, only 10% is from secondary aggregates and therefore annual production is not likely to be substantial. The LAA⁶³, using historical data, estimates that the Plan area is likely to make an annual contribution of 3mt of recycled and secondary aggregates over the Plan period but acknowledges the lack of robustness in this figure and commits to its review as part of the annual LAA preparation.

SUPPLY

- 6.1.11 It is not currently possible to obtain accurate information about the number and location of all the sites producing recycled and secondary aggregates in the Plan area or the amount they produce. However, the area does contain examples of all the types identified above at paragraph 6.1.5.
- 6.1.12 The most common are the dedicated stand-alone transfer and recycling facilities where crushing and screening of appropriate wastes is undertaken on sites which receive, sort and process a range of high volume, low-value materials. Some of these sites focus entirely on this activity but most sites perform a range of other sorting and recycling operations in addition to aggregate production. During the last twenty years, the number of dedicated recycling sites throughout the Plan area has increased significantly. The primary locations are in and around the main urban areas, focused on older industrial estates and other areas of previously developed land at the lower value end of the market. Most of these facilities are relatively small-scale operations.
- 6.1.13 The other source of recycled aggregate is from demolition sites where mobile crushing and screening equipment has been used to produce aggregates from the buildings and other site materials which are being removed and used in the reconstruction works at the site. Detailed information about the number of sites where this has taken place and the volume of material produced is very difficult to obtain.
- 6.1.14 At the crushed rock quarries, (mainly limestone, but also sandstone and gritstone) within the Plan area, there may be small quantities of processed waste material that can be used as secondary aggregate. Secondary aggregates have also been produced from materials obtained from the reworking of old, former tips associated with heavy industrial businesses. Some materials have been derived from sites where the primary activity has

⁶³ DCC, DC and PDNPA Local Aggregate Assessment 2022

been to obtain more valuable materials (e.g. red shale or coal) contained in tips and which are now in demand and can be worked in an economically viable manner. Other materials have been obtained from tips which have been removed as part of wider reclamation projects.

- 6.1.15 The different types and scale of production can lead to a cross-over of responsibility in terms of policy development and the determination of planning applications. For instance, whether proposals are primarily of mineral or waste management in character and should be subject to policies contained in the Minerals or Waste Local Plan. A further consideration is whether proposals are ‘county matters’ to be determined by the mineral or waste authority (including unitary authorities) or district/borough planning authorities. Further information on this issue is set out in the Background Paper⁶⁴ which accompanies the Plan. As a general principle, however, in the assessment of planning proposals all policies of the Minerals Local Plan apply, where relevant, and all policies of the ‘development plan’ for the Plan area apply, where relevant, which could include policies contained in the Waste Local Plan and any non-mineral and non-waste city/borough/district local plans.
- 6.1.16 The approach of the Minerals Local Plan, to ensure the supply of recycled and secondary aggregates, is to include a plan wide criteria-based policy to enable and encourage the development of recycling and secondary aggregate production facilities/operations in appropriate locations in response to the market.
- 6.1.17 Appropriate locations are considered to be:
- At operational quarries;
 - At operational landfill sites;
 - Within permanent waste management sites;
 - On existing, permitted or land allocated for ‘general industrial/storage or distribution’ uses identified in a local plan;
 - On previously developed land;
 - On demolition and redevelopment sites;
 - At waste/spoil tips;
 - As part of reclamation schemes.

⁶⁴ Towards a Minerals Local Plan, Winter 2021/2022 Consultation, Proposed Draft Plan, Recycled and Secondary Aggregates Background Paper December 2021

Where sites are situated within the Green Belt, Policy DM12 should be taken into account to demonstrate that any potential harm is clearly outweighed by other considerations.

- 6.1.18 A particular impact of incorporating recycled and secondary aggregate production into existing mineral/landfill/redevelopment operations is that it could increase the life of the development beyond that which is considered acceptable. It is important, therefore, that in such circumstances recycled/secondary aggregate production is limited to a temporary period where appropriate, concomitant with the timescale of the primary site operations.
- 6.1.19 The cumulative impacts of several mineral/landfill/redevelopment operations either on one site or in close proximity to each other may be a factor that needs to be considered, as well as the effects of these types of development in conjunction with other developments in the area.
- 6.1.20 Safeguarding is a further way of maintaining the future supply of recycled and secondary aggregates. The Plan proposes to safeguard known existing recycled and secondary aggregates production facilities and important mineral resources (including coal derived fly-ash in single use deposits) from sterilisation by non-mineral development. Policies for safeguarding mineral related infrastructure and mineral resources are set out at Chapter 9 of the Plan.
- 6.1.21 There are a range of environmental, local amenity and health impacts that are likely to be relevant when assessing planning proposals for recycling and secondary aggregates production depending on the type and location of the operation. Such impacts may include landscape and visual impacts, impacts from noise, vibration, heavy goods vehicle traffic, lighting, emissions/air quality and impacts on the natural and historic environment. The biodiversity value of spoil tips is also an important consideration. Many of these impacts are ones which would be common to the extraction of primary minerals and therefore their impacts will be assessed under the Development Management Policies set out at Chapter 11 of the Plan.
- 6.1.22 Where proposals include the re-working of spoil tips for non-aggregate purposes, they will be assessed under Policy OM2: Re-working of Spoil Tips set out at Chapter 11 of the Plan.
- 6.1.23 In all cases, proposals will be expected to include details of the proposed method of treatment/production, anticipated volume of material to be treated,

anticipated timescale of production and destination of processed material. For some of the locations the key factor will be the need to restrict the timescale of production to the length of the associated development/operation to avoid the impact of long-term working beyond the original permitted development. For proposals located on existing, permitted or land allocated for 'general industrial/storage or distribution' uses in a local plan account will need to be taken of any Unitary/Borough/District local plan policies which might restrict the use of such locations for recycled and secondary aggregate production. The emerging Waste Local Plan will examine in detail, the generation of waste arisings associated with recycled and secondary aggregates and the capacity of waste management facilities across the Plan area to manage those arisings. It will also include strategic policies to promote both temporary and permanent facilities for the production of recycled and secondary aggregates.



Tipper truck unloading crushed rock

6.2: Sand and Gravel

INTRODUCTION AND BACKGROUND

- 6.2.1 Sand and gravel is an aggregate mineral of both national and local importance. Around 1 million tonnes is produced in the Plan area each year, around half of which is used within Derbyshire, Derby and the Peak District. The remainder is exported to counties within the East Midlands and West Midlands. It is used in the production of concrete, mortar and asphalt and in the manufacture of concrete products which have national markets. Around 75% of the sand and gravel produced in the Plan area is used to produce concrete, with the remainder being used to produce mortar, asphalt and also as a fill material.
- 6.2.2 The strategy for ensuring a steady and adequate supply of sand and gravel through the provision of additional reserves is constrained by the fact that minerals can only be quarried where they occur. This means that in Derbyshire and Derby, sand and gravel sites can only be located in the alluvial sand and gravel resource of the Trent, Derwent and Lower Dove Valleys in the southern part of the Plan area. There are also more limited reserves of hard rock sand in the Sherwood Sandstones near Mercaston.
- 6.2.3 A Methodology to Map Environmentally Sensitive Areas (AMES)⁶⁵, undertaken by the County Council, identifies those areas of the river valleys that continue to be of existing value for a range of environmental factors and which should be retained as part of the developing Strategy for the Restoration of the River Valleys. It also identified the areas considered to have least overall environmental value and which could therefore be considered as having the greatest potential for mineral extraction. The most appropriate spatial distribution for proposed sand and gravel sites has been determined by a combination of AMES and site assessments: AMES for environmental factors and the site assessments which consider a range of economic, social and other environmental factors.
- 6.2.4 Derbyshire has substantial resources of sand and gravel in the river valleys of the Trent, Lower Derwent and the Lower Dove, occurring within the fluvial/alluvial and terrace deposits. There has been little mineral working in the Lower Dove Valley, with most to date having taken place in the Trent and the Lower Derwent Valleys. In the area of the Trent Valley between Long Eaton

⁶⁵ A Methodology to Map Environmentally Sensitive Areas Background Paper, DCC, November 2014

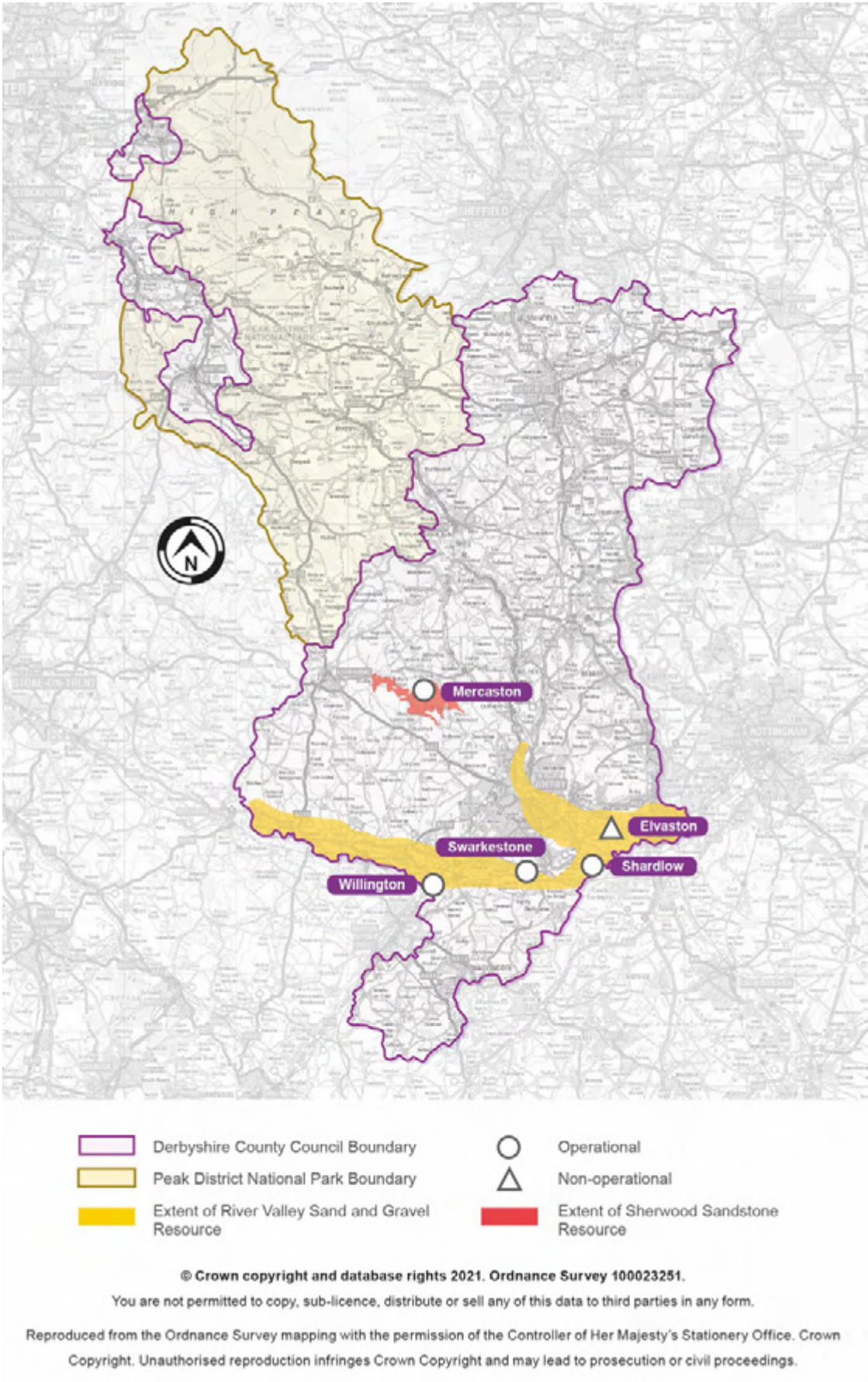
and Willington and on into Staffordshire these resources are of particularly high quality, both in geological and commercial terms. There are only limited resources of sand and gravel in Derby City and no current workings.

- 6.2.5 Deposits of sand and gravel also occur in the solid bedrock of the Sherwood Sandstones. It is an important source of soft building sand and there is currently only one operation in the county. This is located at Mercaston in an area between Derby and Ashbourne. The operator of this quarry has confirmed that it has sufficient reserves to sustain production over this Plan period and beyond. Figure 6.2.1 shows the location of sand and gravel quarries and resources in the Plan area.



Shardlow Quarry - sand and gravel extraction

Figure 6.2.1 Sand and Gravel Quarries and Resources



- 6.2.6 There are three stages involved in the production of sand and gravel; extraction, processing and restoration. Extraction initially involves the stripping of topsoil, subsoil and overburden. These materials are used either in progressive restoration or stored and used at a later stage in the restoration programme. Extraction of the mineral is usually carried out in a de-watered working area by excavator. The excavated material is then either loaded into dump trucks for transportation to the processing plant or loaded into a hopper, which feeds a conveyor. At the plant, a series of crushing and screening operations grade and sort the minerals into the different sizes of sand and gravel required by the construction industry. The processed material is stored in stockpiles according to size before being transported to the customer or used on site in the manufacture of concrete.
- 6.2.7 Although the shallow nature of sand and gravel extraction results in high lateral land take, it also enables restoration to be undertaken to a high standard. The lack of waste material produced means that fill material is often required to be imported to enable land to be restored original levels. Alternatively, extracted areas will return naturally to the water table level, presenting opportunities for water-based after-uses.

POLICY SP4: THE SUPPLY OF SAND AND GRAVEL

To meet identified levels of need for sand and gravel over the Plan period from 1 January 2022 to 31 December 2038, the continued working of existing reserves, together with provision at additional sites, at an annual minimum rate of 0.93 million tonnes will ensure that provision is made for at least 15.81 million tonnes of sand and gravel. Taking into account the needs of the Plan area as well as cross border demands, a landbank of at least 7 years will be maintained.

REASONED JUSTIFICATION

- 6.2.8 Sand and gravel is a mineral of national and local importance and, since workable resources of this mineral exist in the Plan area, the Plan is required to make provision for its extraction.
- 6.2.9 The NPPF sets out the need to plan for a steady and adequate supply of aggregate by preparing a LAA annually to forecast future demand based on a rolling average of 10 years' sales data and other relevant information and an assessment of all supply options. A landbank of reserves of at least seven years should be maintained for sand and gravel. It specifies that MPAs which

have adequate resources should plan for a steady and adequate supply of minerals by preparing a LAA and through this, making provision for aggregates by the identification of specific sites, preferred areas and/or areas of search.

- 6.2.10 It also sets out the Government's aim to take account of the contribution that recycled and secondary aggregates make to minerals supply before considering extraction of primary materials.
- 6.2.11 PPG sets out that the MASS seeks to ensure a steady and adequate supply of aggregate mineral, to handle the significant geographical imbalances in the occurrence of suitable natural aggregate resources, and the areas where they are most needed. It requires MPAs which have adequate resources of aggregates to make an appropriate contribution to national as well as local supply, while making due allowance for the need to control any environmental damage to an acceptable level.
- 6.2.12 It sets out that a LAA should include a forecast of the demand for aggregates based on both the rolling average of 10-years sales data and other relevant local information and an analysis of all aggregate supply options. It should also look at average sales over the last three years to identify the general trend of demand as part of the consideration to determine whether it might be appropriate to increase supply.

Need

- 6.2.13 Derbyshire and Derby have the requirement to help meet the local and national need for sand and gravel. This requirement is determined through the LAA process. The most recent LAA (2022) has considered all relevant information as required by national policy and has concluded that, based on an annual provision rate of 0.93mt, Derbyshire and Derby should provide 15.81 million tonnes of sand and gravel from 1 January 2022 to 31 December 2038 (i.e. 17×0.93) to help meet the need for sand and gravel. A five-yearly review of provision in the Plan will be carried out if necessary to ensure that a landbank of at least seven years is maintained and that any significant changes identified in the need and demand for the sand and gravel from the area are addressed.

SUPPLY

- 6.2.14 Information regarding sand and gravel production and reserves is collected annually. As Figure 6.2.2 shows, production of sand and gravel in the Plan area between 2012 and 2021 has averaged 0.93 million tonnes.

Figure 6.2.2: Annual Production of Sand and Gravel 2012-2021 (figures in million tonnes)

2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	AV
0.81	0.82	0.95	1.13	1.29	0.94	1.05	0.78	0.57	0.99	0.93

6.2.15 Swarkestone, Shardlow, Willington and Mercaston are the operational sand and gravel quarries in the Plan area which currently produce this sand and gravel. There is also one site, Elvaston, which is currently non-operational.

6.2.16 These sites together have reserves of 9.43 million tonnes of sand and gravel. This stock of reserves is known as the landbank. National policy⁶⁶ requires landbanks to be maintained for all aggregate minerals, with the landbank period for sand and gravel being at least 7 years. The current length of the landbank for sand and gravel in the Plan area is 10.1 years (total permitted reserves of 9.43 million tonnes divided by the current annual provision rate of 0.93mt). The sand and gravel resource in the Plan area is generally of uniform type and does not supply distinct and separate markets and as such there is no requirement to maintain separate landbanks.

6.2.17 Figure 6.2.3 below provides a calculation of the amount of sand and gravel that will need to be provided from the Plan area. The calculation is based on making provision for the period up to 2038. The calculations take account of the level of permitted reserves of 9.43mt at the Plan base date of 31st December 2021. The table indicates that there would be a shortfall of 6.38 million tonnes of sand and gravel reserves over the Plan period to 2038.

Figure 6.2.3: Sand and Gravel Provision

Sand and Gravel		Million Tonnes
A	Annual Requirement	0.93
B	Total Production Requirement 2022-2038 (Ax17)	15.81
Reserves		
C	Permitted Reserves (Landbank) at 31/12/2021	9.43
Shortfall		
E	Shortfall 2022 – 2038 (B-C)	6.38

⁶⁶ NPPF 2021 Paragraph 213

6.2.18 The Plan will make provision for this requirement through the continued working of existing permitted sites and through the allocation of additional sites to ensure continuity of production over the Plan period.

PROPOSED SAND AND GRAVEL SITES

POLICY SP5: ALLOCATION OF SITES FOR SAND & GRAVEL EXTRACTION

Land is allocated to provide for at least an additional 6.38mt of sand and gravel over the Plan period as extensions to Swarkestone and Elvaston Quarries and new sites at Foston and Sudbury, as shown on the Policies Map.

The extraction of sand and gravel from the proposed allocated sites at Swarkestone and Elvaston quarries will be supported:

- 1) where the extensions follow cessation of mineral working within the existing working area, unless it is demonstrated that there are operational reasons why this is not practicable or there would be significant environmental benefits to be gained from alternative phasing.**
- 2) provided that the processing of the material produced at the site will be carried out via the established plant and access arrangements, unless there are significant environmental benefits in alternative arrangements.**

Proposals will need to satisfactorily address the Principal Planning Requirements set out at Appendix A of the Plan.

REASONED JUSTIFICATION

6.2.19 Based on the average production figures set out in Policy SP4, the Plan needs to provide an estimated 15.81 million tonnes of sand and gravel over the Plan period). Permitted sand and gravel sites reserves located in the Plan area are 9.43 million tonnes, a shortfall of 6.38 million tonnes. Where the existing level of reserves is not sufficient for the Plan period, the Minerals Local Plan must identify suitable land to meet the expected shortfall.

- 6.2.20 A number of sites were proposed through a call for sites from landowners and mineral operators. These sites have all been assessed against the same methodology, as set out in paragraph 6.2.3 to determine which have the best potential to be worked for sand and gravel over this Plan period. The assessments are set out in the Sand and Gravel Site Assessments Background Paper. A deliverability schedule is included at Appendix B, which provides an indication when the MPA expects the sites will come forward and how much sand and gravel they will supply over the Plan period. It should be noted that this does not form part of the delivery timetable for the sites or the plan as a whole.
- 6.2.21 The following sites are allocated to meet the identified remaining requirement and therefore to ensure continuity of production of sand and gravel over the course of the Plan period to 2038.
- 6.2.22 Swarkestone South has been shown to have good potential for mineral extraction and can be delivered early in the Plan period as an initial extension to Swarkestone Quarry. It is proposed, therefore, to allocate this site. The western part (2.5mt) is likely to follow on after extraction in the current workings in the eastern half is completed.
- 6.2.23 Swarkestone North, Sudbury, Foston and Elvaston are also proposed to be allocated. These sites would yield approximately 4.25 million tonnes, 2 million tonnes, 3.1 million tonnes and 1.5 million tonnes respectively.
- 6.2.24 These allocated sites would yield a total of around 13.35 million tonnes of sand and gravel. It is acknowledged that this is more than sufficient in overall terms to meet the remaining requirement of around 7 million tonnes for the Plan period. However, because Swarkestone North (the largest site) is only likely to become operational during the latter part of the Plan period, this site will only contribute a small proportion of its material in this Plan period (around 1mt of its total 4.25mt). There is a need, therefore, to allocate more sites to cater for this, and which will also ensure continuity of required annual production rates over the whole of the Plan period. For these reasons, the sites at Sudbury and Foston have been proposed as allocations. Without these additional sites, it is likely that required annual production rates of around 1 million tonnes in the latter part of the Plan period would not be sustained.
- 6.2.25 As shown in the deliverability schedule at Appendix B, total production over the Plan period is estimated at 18.6 million tonnes. Production will continue to be monitored and any significant changes which come to light may result in a review of this part of the Plan.

- 6.2.26 There are a number of matters that will need to be addressed in any planning application submitted to work the allocated sites. These principal planning requirements are set out at Appendix A of the Plan. The requirements are not necessarily a comprehensive set of all the matters which will need to be addressed. Planning proposals will need to provide sufficient evidence to satisfy all policies of the development plan, where relevant.

ADDITIONAL SITES

POLICY SP6: OTHER SITES FOR SAND & GRAVEL SUPPLY

Outside the allocated areas, proposals for sand and gravel extraction for aggregate purposes will be supported provided that the site is required to meet an identified need to address a shortfall in the landbank and/or to sustain production capacity to meet current and anticipated need, as identified by the Local Aggregate Assessment.

REASONED JUSTIFICATION

- 6.2.27 This policy proposes to supply any unforeseen needs over the Plan period. There may be cases where allocated sites cannot be developed or existing sites are lost through closure, which may require the need for the release of additional reserves, particularly where this has led to a shortfall in the required landbank.
- 6.2.28 In order, therefore, to provide a further degree of flexibility and to reinforce the Plan's commitment to ensuring the delivery of a steady and adequate supply of sand and gravel for aggregate purposes over the Plan period, the ability to obtain planning permission during the Plan period outside the areas identified in Policy SP5 is not ruled out.

Figure 6.2.4 Foston

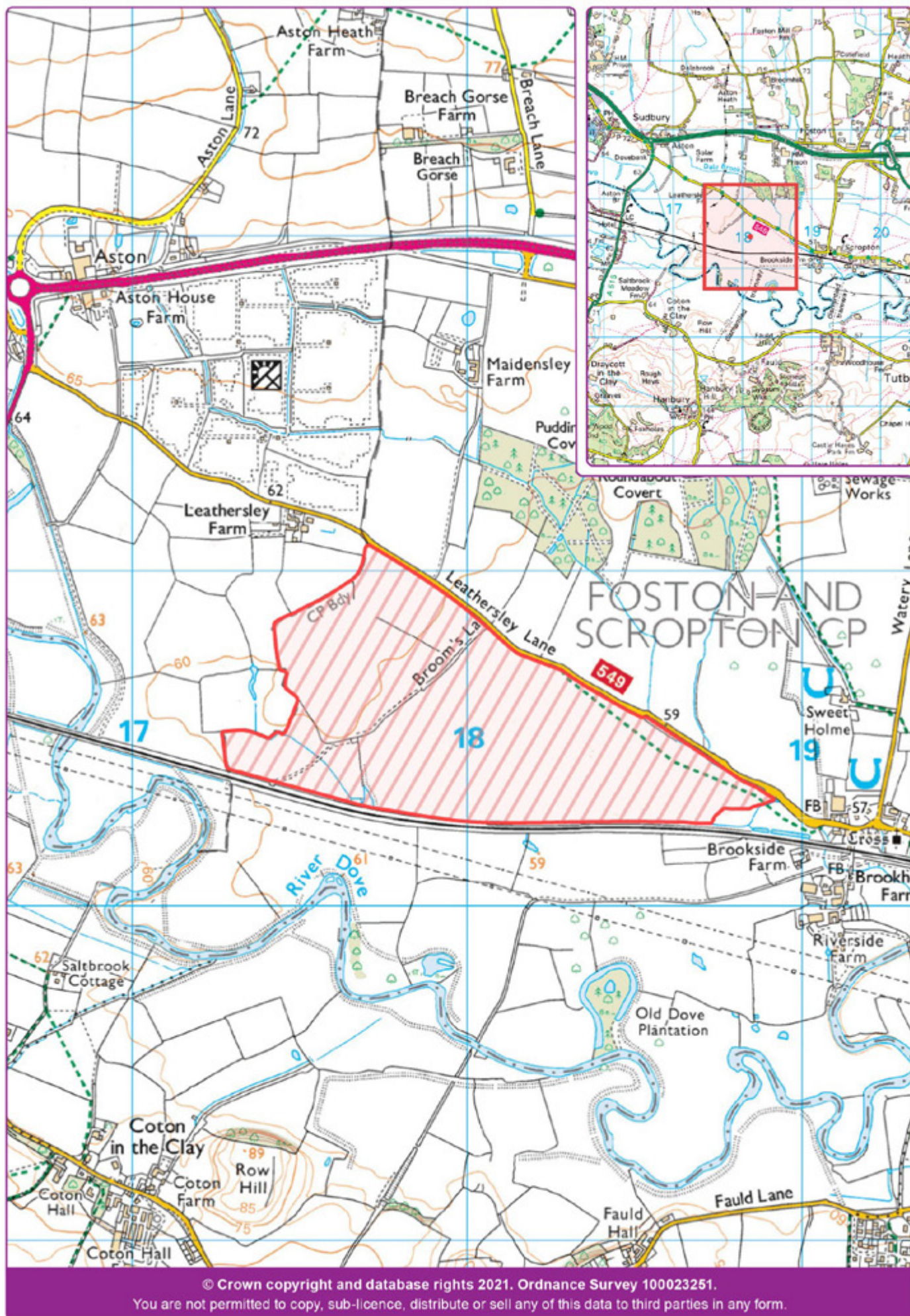


Figure 6.2.5 Sudbury

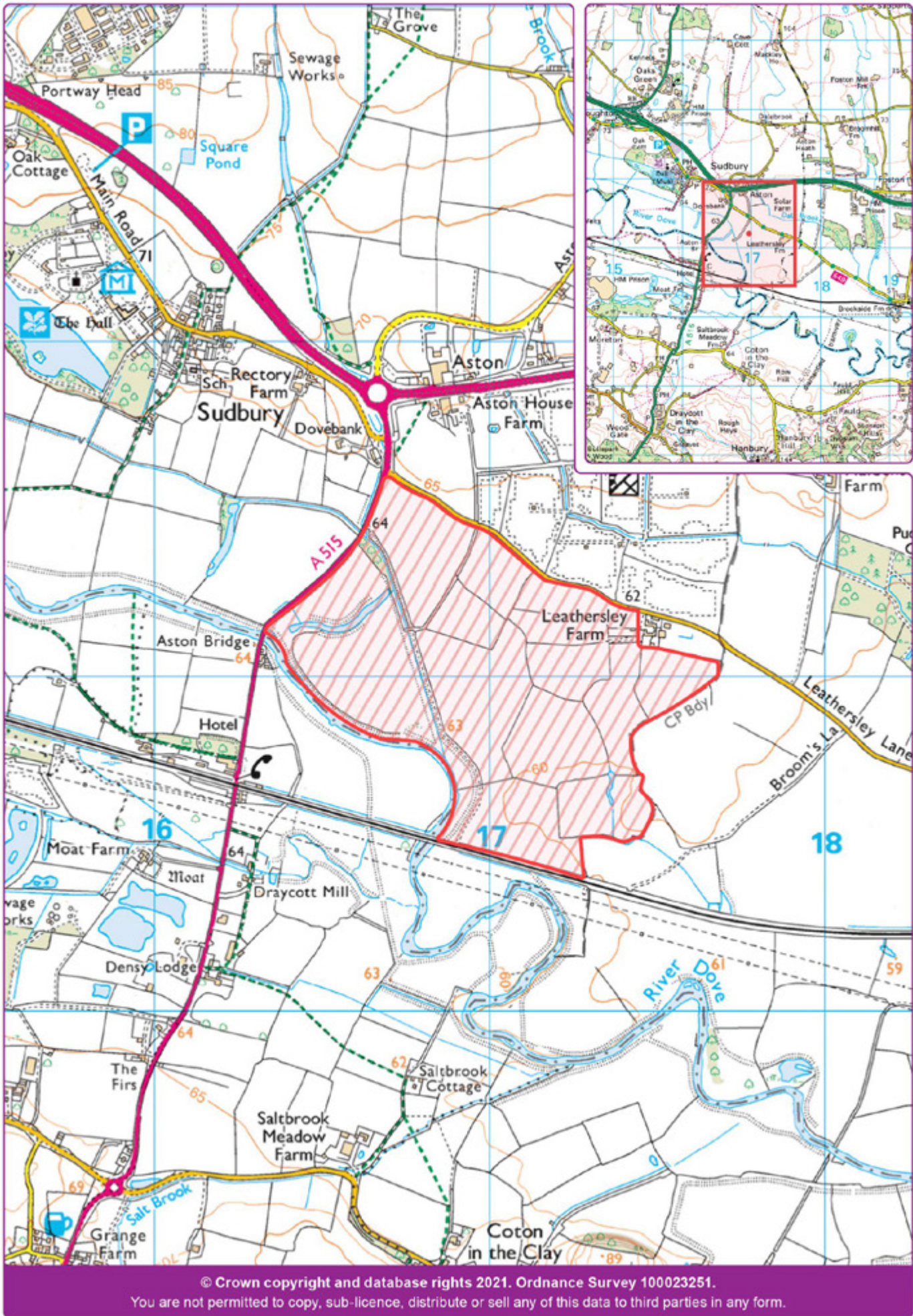


Figure 6.2.6 Elvaston

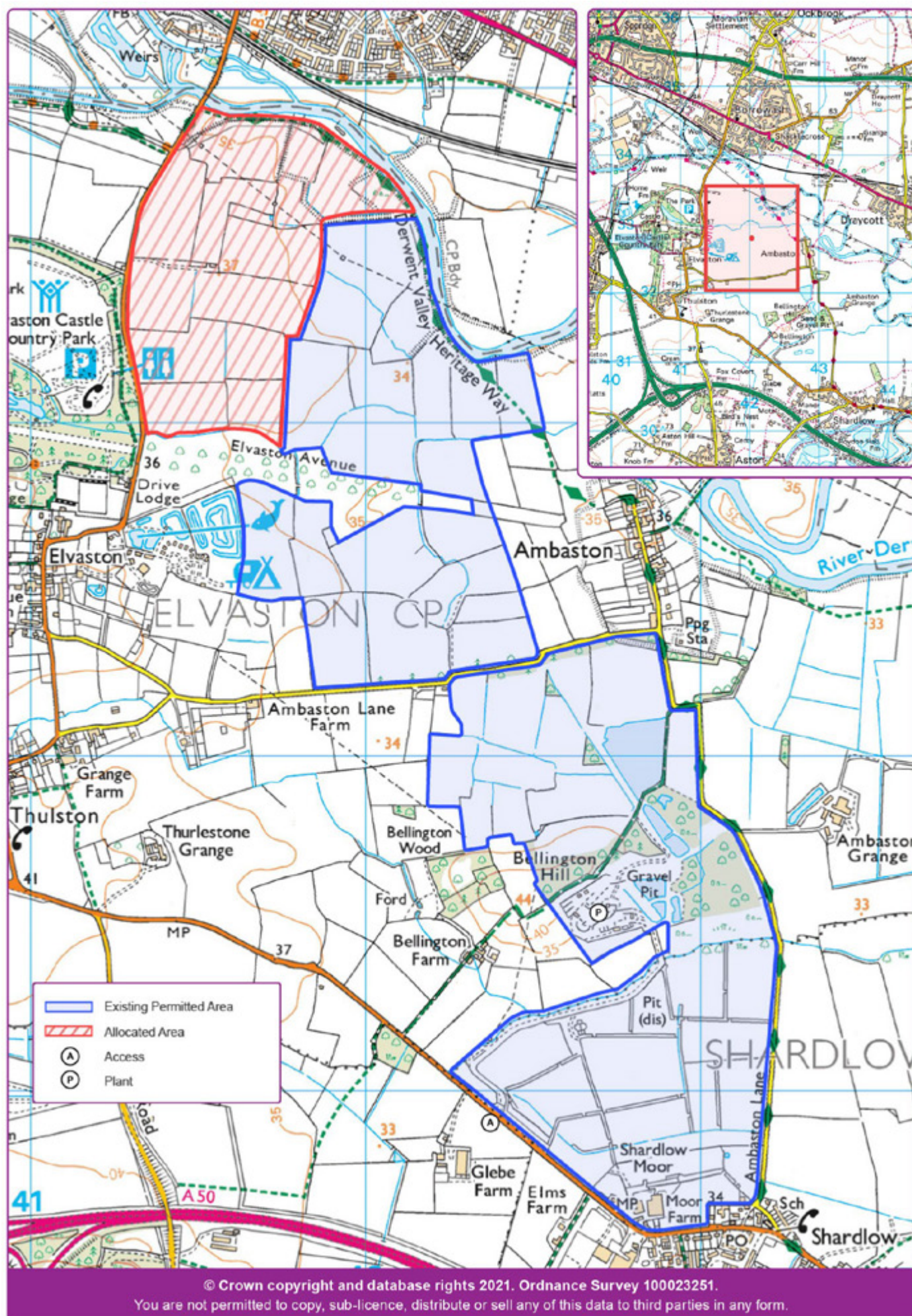
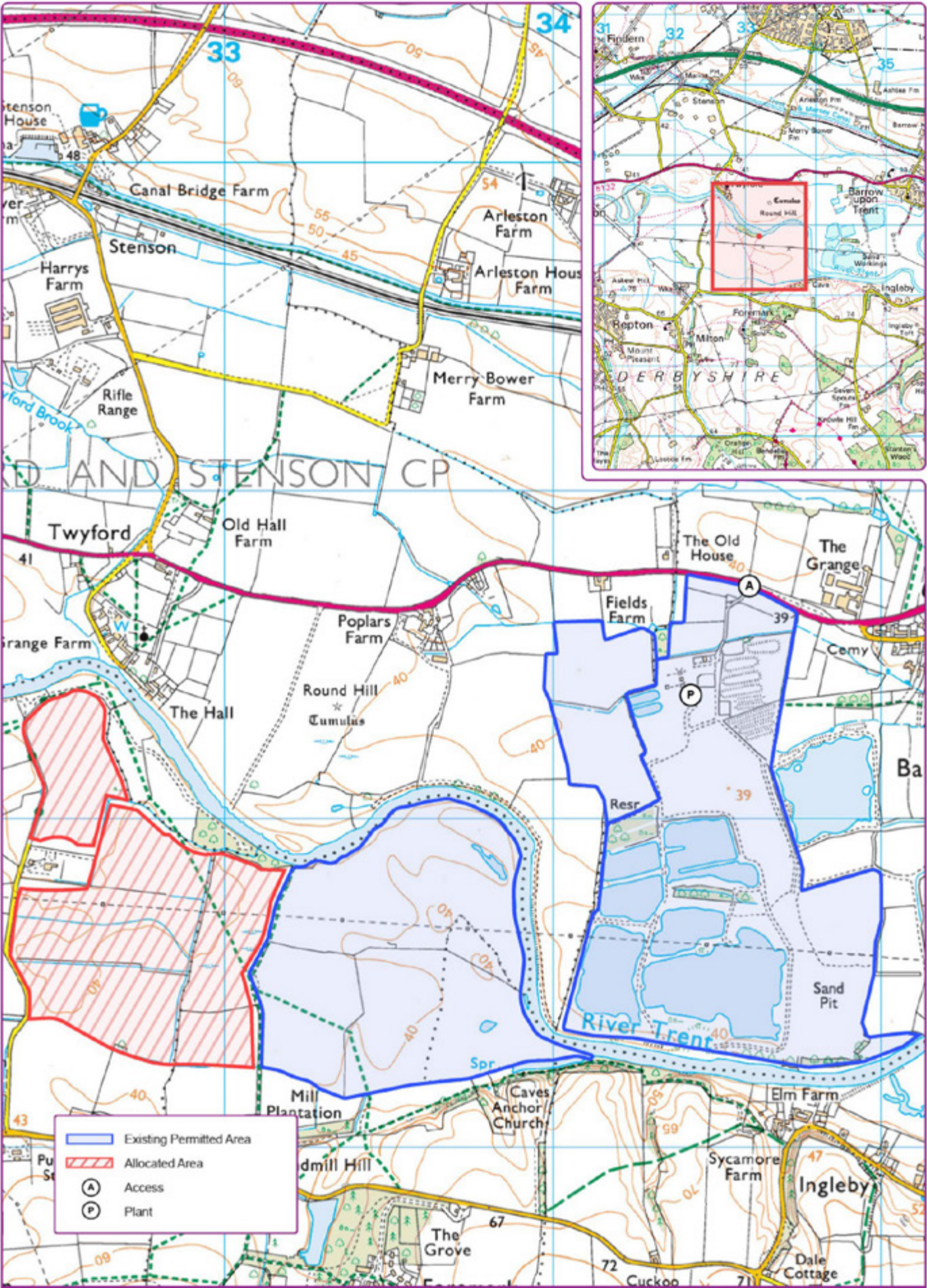
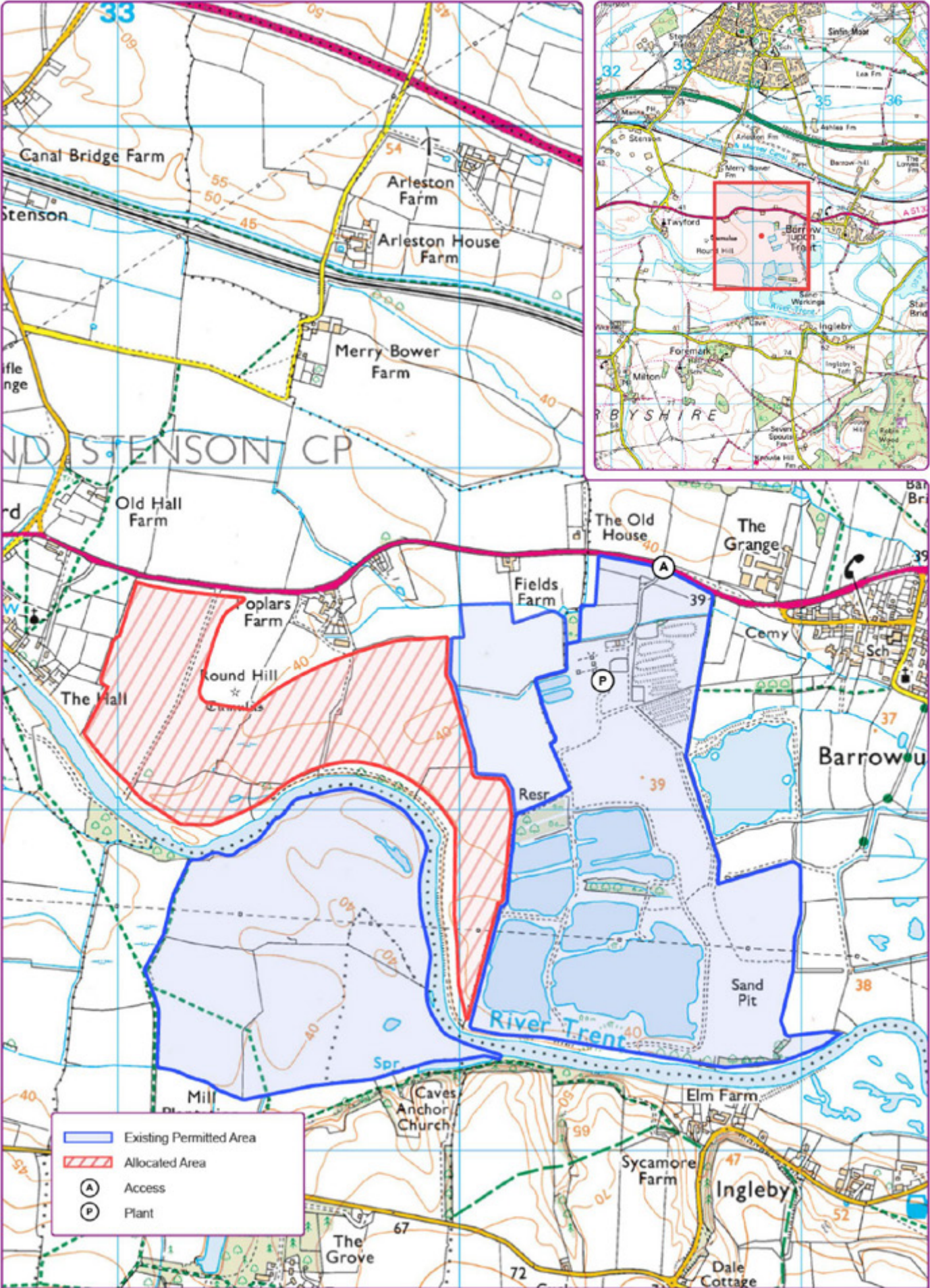


Figure 6.2.7 Swarkestone South



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Figure 6.2.8 Swarkestone North



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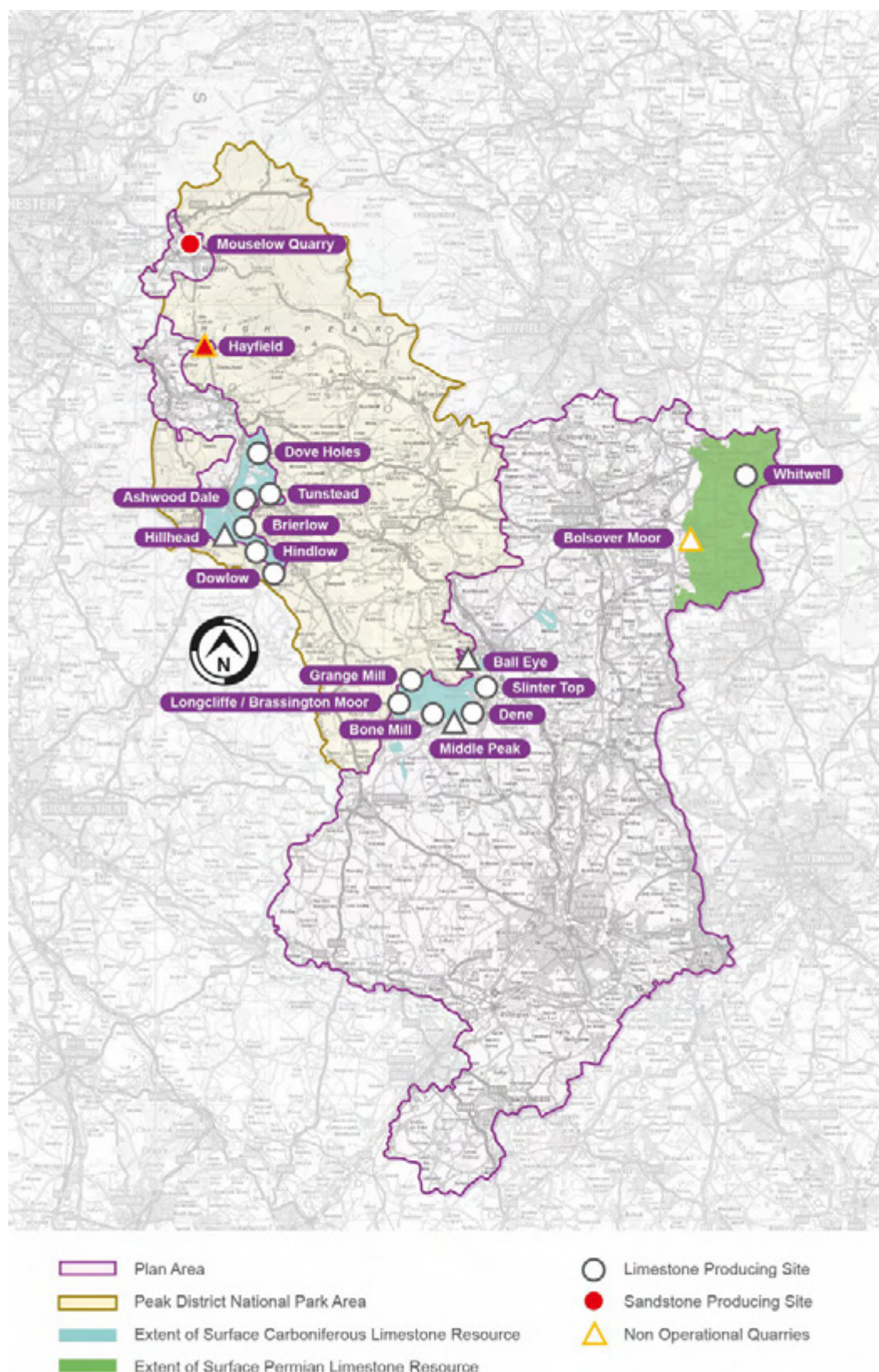
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6.3: Aggregate Crushed Rock

INTRODUCTION AND BACKGROUND

- 6.3.1 Crushed rock is produced from hard rock formations, particularly limestone and sandstone, by mechanical crushing. Crushed rock resources vary greatly in terms of their structure and composition. Their use can, however, be divided into two main types, depending upon the physical and chemical properties of the mineral. Limestone which is valued for its specific chemical properties is used primarily in the chemical and manufacturing industries and is commonly referred to as ‘industrial’ limestone. This is discussed in Chapter 7.2 of the Plan. This chapter is concerned with the limestone which, together with a small amount of sandstone, is valued mainly for its physical properties and is used as an aggregate for construction purposes, mainly as fill material, roadstone and in the manufacture of concrete.
- 6.3.2 The area covered by this Plan is one of the main producers of aggregate crushed rock in the country. Aggregate crushed rock, which comes from the limestone resource of Derbyshire is a resource of national importance because it is used throughout the United Kingdom.
- 6.3.3 As shown on Figure 6.3.1 below, the principal sources of Carboniferous Limestones within Derbyshire are found outcropping mainly around Buxton and also in an area around Matlock and Wirksworth/Cromford and this is where the majority of quarries are found. Permian Limestone is found outcropping in the northeast of the county around Bolsover and Whitwell.
- 6.3.4 Whilst total resources of sandstone and gritstone within the Plan area are large, deposits of a quality which can be used as aggregate are much scarcer and this restricts the demand for their exploitation. Relatively small amounts of this material are quarried in the northwest of the county around New Mills and Hayfield.
- 6.3.5 The nature of the material and the depths to which the resource extends means that hard rock quarries are worked over relatively long periods of time. The scale of the operations and the relatively small quantities of waste material involved compared to the rock which is removed means that it is not generally possible to restore land to its original levels following completion of working.

Figure 6.3.1 Hard Rock Resources with operational and non-operational quarries



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POLICY SP7: THE SUPPLY OF AGGREGATE CRUSHED ROCK

To meet identified levels of demand for aggregate crushed rock over the plan period from 1 January 2022 to 31 December 2038, the continued working of existing reserves at an annual minimum rate of 8.85 million tonnes will ensure that provision is made for at least 150.45 million tonnes.

Proposals for the extraction of aggregate crushed rock will be supported where it can be demonstrated that:

- 1) they are required to maintain at least a 10-year land bank of permitted reserves, and/or**
- 2) they will result in significant net sustainability benefits to the local community and/or the local/wider environment.**

Where appropriate, the MPA will seek to enter into Section 106 Agreements to secure the implementation of any benefits proposed.

REASONED JUSTIFICATION

6.3.6 Aggregate crushed rock is a mineral of national and local importance, of which Derbyshire is one of the main suppliers. The NPPF specifies that MPAs should plan for a steady and adequate supply of aggregate minerals by preparing a LAA and through this, making provision for aggregates by the allocation of specific sites, preferred areas and/or areas of search. In addition, it sets out that MPAs should also maintain a landbank (stock of permitted reserves) of crushed rock which will last for at least 10 years.⁶⁷

6.3.7 PPG⁶⁸ explains that the MASS seeks to ensure a steady and adequate supply of aggregate mineral, to handle the significant geographical imbalances in the occurrence of suitable natural aggregate resources, and the areas where they are most needed. It requires MPAs which have resources of aggregates to make an appropriate contribution to national as well as local supply.

⁶⁷ National Planning Policy Framework Paragraph 213, July 2021

⁶⁸ Planning Practice Guidance, October 2014

- 6.3.8 It also sets out that aggregate landbanks should be used as a trigger for a MPA to review the current provision of aggregates in its area and consider whether to conduct a review of the allocation of sites in any existing adopted Plan.

NEED

- 6.3.9 The MASS provides the national framework for determining the need for aggregates and sets out that MPAs which have resources of aggregates make an appropriate contribution to supply. The Plan area has significant reserves of hard rock and, through the Duty to Cooperate, the MPA has agreed to continue to help contribute towards the aggregate crushed rock requirements of many other areas within the United Kingdom which do not benefit from their own resources. The LAA 2022⁶⁹ for the Plan area concludes that there are already sufficient permitted reserves of this resource to last well beyond the end of the Plan period in order to continue to help meet these needs. In numerical terms, therefore, there will be no requirement for the Plan to identify further reserves. There could, however, be circumstances where it may be appropriate for permission to be granted for further reserves.

SUPPLY

- 6.3.10 There are nineteen quarries in the Plan area which have permission for the extraction of crushed rock for aggregate. Thirteen of these are producing aggregate and the other six are currently non-operational.
- 6.3.11 Survey data from 2021 shows that there is an estimated reserve of around 672.4 million tonnes of rock for aggregate use at these quarries; 453.1mt at the operational sites and 219.3mt at the non-operational sites. The LAA proposes an annual provision rate of 8.85 million tonnes. As a result, there is a landbank of reserves of around 76 years. This extends well beyond the timescale of this Plan. This landbank is capable of providing for an upturn in crushed rock demand, provided that sufficient productive capacity is available at the existing quarries and that existing reserves remain capable of being worked.
- 6.3.12 In accordance with the most recent LAA, the Plan will continue to compensate for the continued and progressive reduction of quarrying in the PDNP and provide flexibility to cater for potential increases in demand from other areas that are reliant on supplies of aggregate crushed rock from Derbyshire. Currently, it has been agreed that Derbyshire will increase its annual provision

⁶⁹ Derbyshire, Derby and Peak District National Park Authority Local Aggregate Assessment, 2022

figure by 10% of the PDNP three-year average figure to compensate for a reduction in the PDNP figure of the same amount. The LAA sets out that Derbyshire will provide around 8.85 million tonnes of aggregate crushed rock each year from existing reserves. This will continue to be reviewed on an annual basis. Further details regarding this issue are set out in Chapter 6.4.

NEW SITES FOR CRUSHED ROCK

- 6.3.13 The scale of the landbank for aggregate crushed rock in Derbyshire of around 76 years means that there should be no requirement in numerical terms to permit additional reserves over the Plan period. In general terms, it is likely to be more sustainable to continue to use the existing landbank than to grant permissions for further sites.
- 6.3.14 There may be cases, however, where proposals come forward for new aggregate crushed rock quarries or extensions to existing quarries, which offer significant economic and/or social sustainability benefits to the local community and/or the environment, but which would not lead to a significant increase in the landbank of aggregate crushed rock.
- 6.3.15 Local benefits from new proposals for quarrying (particularly extensions to existing quarries) would include continued local benefit through employment or a reduction in the impact of quarrying, for example through improvements to access, relocation of the plant operations, better control of working methods, reduction in road transport or an improved restoration scheme for the wider working area.
- 6.3.16 Where a clear benefit to the local community or the local environment cannot be identified within the proposal itself, additional benefits might include contributions to wider local environmental projects or the maintenance of public footpaths through operator owned land. It could also involve the relinquishment of permitted reserves elsewhere in the Plan area or the PDNP, which are considered unacceptable if they were worked in the future, in exchange for new reserves. Proposals would be required to deliver better outcomes in overall sustainability terms. Policy DM2: Criteria for Assessing the Benefits of Mineral Development Proposals at Chapter 11 sets out how the MPA will assess the benefits of mineral proposals.

6.4: Helping to Reduce Quarrying in the Peak District National Park

INTRODUCTION AND BACKGROUND

- 6.4.1 National Planning Policy seeks to conserve and enhance the landscape and scenic beauty of National Parks. To help achieve this, it also seeks to maintain landbanks of non-energy minerals from outside designated areas, such as National Parks. The PDNPA has a policy in its adopted Core Strategy (2011) to not allow proposals for new quarries or extensions to existing quarries in the National Park (other than proposals for the small scale working of building and roofing stone) other than in exceptional circumstances, in order to help protect the special qualities of the landscape. Although having been adopted prior to NPPF, this policy is consistent with the NPPF in that it helps to achieve the aims of maintaining landbanks of minerals outside the National Park, thus helping to conserve and enhance the landscape and scenic beauty of the National Park.
- 6.4.2 The concept of the MPA assisting the PDNPA with its aim of reducing quarrying of aggregate has been included as an issue since the start of the preparation of this Plan at Issues and Options stage and has received public support at the various consultations. With the Plan area being adjacent to the PDNP and having plentiful supplies of limestone which is of similar geological type and composition as resources in the PDNP as well as having similar markets, it is considered to be a sound and sustainable approach which helps to achieve the aims of the NPPF in respect of conserving and enhancing the landscape and scenic beauty of National Parks.
- 6.4.3 The Plan helps the PDNPA to achieve this aim by increasing the provision figure for aggregate crushed rock (limestone and gritstone) in the Plan area to compensate for a continued reduction of quarrying in the National Park. This can only be achieved for aggregate minerals with a level of accuracy because there is a national system for determining levels of aggregate provision, the MASS. There is not such a system for minerals which are used for industrial purposes or for minerals which are used for building and roofing stone.

POLICY SP8: HELPING TO REDUCE QUARRYING IN THE PEAK DISTRICT NATIONAL PARK

Derbyshire and Derby will compensate for a continued reduction in quarrying from the Peak District National Park over the Plan period through an increase in its provision figure for aggregate crushed rock, as set out in the most recent Local Aggregate Assessment.

REASONED JUSTIFICATION

- 6.4.4 Section 62 of the Environment Act 1995 makes it a duty for all relevant authorities (including Government departments and agencies, utility companies and parish councils) to have regard to National Park purposes when coming to decisions or carrying out their activities.
- 6.4.5 The NPPF sets out that great weight should be given to conserving and enhancing the landscape and scenic beauty in National Parks and that mineral planning authorities should provide, as far as is practicable, for the maintenance of landbanks of non-energy minerals from outside National Parks. It states further that when considering applications for development within National Parks, planning permission should be refused for major development other than in exceptional circumstances.⁷⁰ The Councils recognise that this should be considered in the context of the benefits of mineral extraction to the economy, ensuring that adequate supplies of minerals are provided and recognising that minerals can only be worked where they occur.
- 6.4.6 One of the primary objectives of the PDNPA is to conserve and enhance the special qualities of the National Park. This encapsulates the approach to the protection of National Parks, which is embodied in National Planning Policy.
- 6.4.7 Minerals Policy 1 in the Peak District National Park Core Strategy seeks to reduce quarrying in the National Park through not permitting new proposals for mineral extraction or proposals which would extend existing operations, other than in exceptional circumstances (other than local small-scale proposals for building stone). It should be recognised that this policy does not categorically rule out permission being granted for mineral extraction. The onus will be on

⁷⁰ National Planning Policy Framework Paragraph 211, July 2021

an applicant to demonstrate the 'exceptional circumstances' which may allow for mineral development in the National Park.

- 6.4.8 The MASS has provided the mechanism to deliver long term planning for the supply of aggregates. It seeks to meet imbalances in supply and demand for aggregates. The underpinning concept behind the MASS is that Mineral Planning Authorities which have adequate resources of aggregates should make an appropriate contribution to national as well as local supply, while making due allowance for the need to reduce environmental damage to an acceptable level. LAA is a key part of this system.
- 6.4.9 To support the NPPF approach of providing, as far as is practicable, for the maintenance of landbanks of non-energy minerals from outside National Parks, Derbyshire County Council has confirmed, as part of the Duty to Cooperate, that it is willing to meet a shortfall in aggregate provision arising from the reduction in production within the National Park. This approach has been encapsulated in the emerging Plan since the Issues and Options stage and in the LAA since it was first produced in 2014 and has been approved by the East Midlands Aggregates Working Party. The LAA reduces the provision figure for aggregate crushed rock from the PDNP by 10%, and this is added to the provision figure for Derbyshire and Derby.
- 6.4.10 The similarity of the mineral resources in the areas of Derbyshire both within and outside the National Park, together with the similarity of the markets for the mineral mean that overall supply of the mineral is not likely to be affected to any significant extent. Adequate supplies of mineral will continue to be supplied from the area with no significant adverse impacts on the economy. As a result of the overall supply from the area as a whole remaining steady, there is unlikely to be any significant impact on employment within the industry.
- 6.4.11 As noted above, should an exceptional need be demonstrated for additional quarrying of aggregate in the National Park, this will be considered by the PDNPA.

CHAPTER 7: Supply of Non-Aggregate Minerals

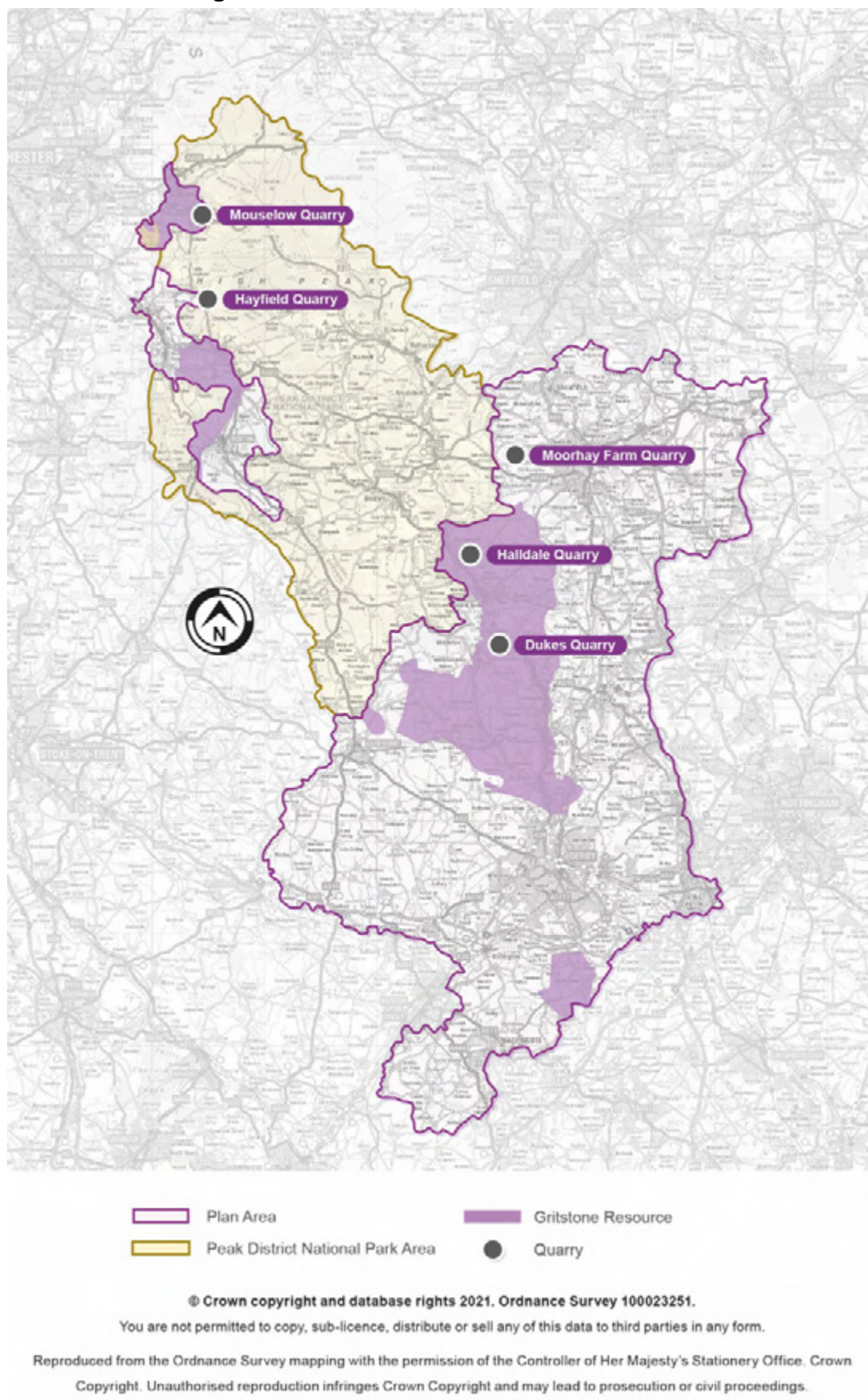
7.0.1 Non-aggregate minerals are those which are used for purposes other than aggregate. They are minerals which are used mainly for industrial processing and manufacturing purposes. This includes, in particular, limestone in cases where its particular chemical properties make it a valuable mineral for a wide range of industrial and manufacturing processes. Limestone is also used on a very small scale, along with sandstone, as building and roofing stone. Clays from the Plan area are also used in the production of bricks. Vein minerals including Fluorspar and Barytes are also extracted on a relatively small scale from the Plan area and are important for use in a variety of chemical and industrial processes.

7.1: Building Stone

INTRODUCTION AND BACKGROUND

- 7.1.1 This chapter focusses on building stone, which includes material used for roofing, walling, flagstones or ornamental purposes. The main source of building and roofing stone in the Plan Area is the sandstone/gritstone of Carboniferous origin. Limestone is also produced in small amounts for this purpose as a by-product at some of the limestone producing quarries.
- 7.1.2 Building stone operations are generally relatively small low-key operations and are characterised generally by short term intermittent working to meet an identified need for stone for specific projects
- 7.1.3 To be suitable for building purposes, stone has to be of a particular quality and character. Resources of building stone which are of a quality and specification that can be used for building are scarce. As with all minerals, it is a finite resource and can only be worked where it is found.
- 7.1.4 The market for building stone is small but profitable and is concerned mainly with the repair and restoration of historic buildings, the repair/extension of existing properties or for new build properties and structures in areas of high environmental value, such as conservation areas where it is important to preserve and enhance local distinctiveness and local building character. The colour and appearance of stone varies greatly depending on where it is found, which means that building stone must often be sourced locally if the character and appearance of local buildings is to be maintained.
- 7.1.5 As can be seen in Figure 7.1.1, there are five quarries in the Plan area which have planning permission specifically for the production of building stone and which have permitted reserves of building stone. Production from these is on a relatively small and intermittent scale. These are Halldale Quarry near Darley Dale, Dukes Quarry near Whatstandwell, Mouselow Quarry near Glossop, Hayfield Quarry near New Mills and Moorhay Farm Quarry near Chesterfield. In recent years, only Dukes Quarry and Mouselow Quarry have been producing any building stone, although some aggregate quarries have produced some as an ancillary product for specific orders. Moorhay Farm Quarry has been producing small quantities of stone roofing slate, with paving stone and walling stone produced as a by-product.

Figure 7.1.1 Building Stone Resources and Quarries with Permission for the Extraction of Building Stone



POLICY SP9: THE SUPPLY OF BUILDING STONE

Proposals for new building stone quarries or extensions to existing quarries will be supported where it can be demonstrated that:

- 1) The stone extracted would be primarily used for building purposes rather than for aggregate purposes.**
- 2) Proposals for the supply of building stone are supported by evidence to demonstrate the contribution that the stone proposed to be worked would make to the quality and distinctiveness of the built and/or historic environment in the Plan area and/or to meeting particular requirements for building stone outside the area.**
- 3) The scale of the proposal is consistent with the identified needs for the stone.**

REASONED JUSTIFICATION

7.1.6 The NPPF sets out the national approach to planning for the sustainable use of minerals. It states that local planning authorities should consider how to meet any demand for the extraction of building stone needed for the repair of heritage assets, taking account of the need to protect designated sites and to recognise the mainly small scale, intermittent nature and impact of building and roofing stone quarries and the need for a flexible approach to the duration of planning permissions, reflecting the intermittent or low rate of working at many sites.⁷¹

7.1.7 The NPPF sets out the national policy approach to the conservation and enhancement of the historic environment, referring to the treatment of historic buildings and the wider historic environment and the wide range of social, economic and environmental benefits that the conservation and enhancement of the historic environment can bring. It recognises that new development within historic areas can make a positive contribution to the area.⁷² The continued provision of building stone from the Plan area will help to ensure that

⁷¹ National Planning Policy Framework Paragraph 211, July 2021

⁷² National Planning Policy Framework Part 16, July 2021

there continues to be a sufficient supply of appropriate stone to help fulfil these requirements.

- 7.1.8 There will be a certain amount of by-product stone which is not suitable for use as building/roofing stone and which, if justified, may be sold for aggregate or is deemed to be waste material and is used in the final restoration of the site. This is in line with national requirements to make the best use of limited resources to secure their long-term conservation. It will be important that the proposal is of a scale that reflects the identified need for the stone and also respects the location where it is proposed and that any adverse impact on the surrounding area can be mitigated in accordance with other policies of the Plan.

Need

- 7.1.9 The market for building stone fluctuates greatly, meaning future demand is very unpredictable. There are also wide variations in the character of the stone, which are critical to specific market needs. This increases the unpredictability of determining where stone will be extracted for specific projects over the Plan Period.
- 7.1.10 In the Plan Area, the majority of resources of building and roofing stone are in the parts of Derbyshire which are close to the PDNP which may impact on the setting of the National Park. The need to protect the landscape will, therefore, be an important consideration in proposals to work this resource. In assessing proposals for building stone therefore, the MPA will have particular regard to Policies SP1 and DM4 which seek to protect the National Park.
- 7.1.11 The continued quarrying of local building stone plays an important role in helping to preserve the historic environment and enhancing the local distinctiveness of an area. Local building stone is usually needed to enable existing historic buildings and structures to be repaired and restored effectively and it also means new buildings in historic areas can blend in with the surrounding area more effectively. The stone may also be required at times for the repair and restoration of historic buildings outside the Plan area where stone of particular characteristics is required to match the existing stone. Although evidence about future requirements for building stone is very limited, it is likely that demand for this stone from the Plan area is likely to remain around existing rates over the course of the Plan period.

Supply

7.1.12 Unlike for aggregates, there is no managed supply system for building and roofing stone, so it is not possible to determine with any reasonable accuracy the level of supply which will be required over the Plan period. Supply will be maintained through existing permitted quarries listed above and, whilst sandstone/gritstone resources are widespread within the Plan area, only limited deposits have sufficient qualities to make them important for building stone purposes and therefore, the Plan proposes to supply any unforeseen need through a plan-wide policy, which allows for new working subject to meeting certain criteria.

7.2: Industrial Limestone

INTRODUCTION AND BACKGROUND

- 7.2.1 Limestone is by far the most significant mineral quarried within the Plan area in terms of the number of quarries and the scale of production, around 12 million tonnes in 2021⁷³).
- 7.2.2 Limestone is mainly quarried within the Plan area for use in the construction industry (about 75% of production) where its physical properties have made it the principal source of crushed rock aggregate for use as fill material, road stone and in the manufacture of concrete. Limestone is also used on a very small scale, along with sandstone, as building stone. Limestone used for these purposes is covered elsewhere in this Plan at Chapter 6.3 for Aggregate Uses and Chapter 7.1 for Building Stone.
- 7.2.3 Limestone is also a very important ‘industrial’ mineral where its chemical properties make it a valuable mineral for a wide range of industrial and manufacturing processes; recently⁷⁴ around 3 million tonnes has been quarried annually in the Plan area for this purpose. It can be crushed and used for chemical applications, for example, in flue gas desulphurisation, ceramics or glass production. It can be calcined (heated) and used in the production of cement or in the production of lime for use in steel making or water purification/sewage and effluent treatment. It can be coarsely ground and used in animal feeds/agriculture and carpet backing/plastic floor tiles or finely ground to produce a powder which is used extensively as a filler in a diverse range of products such as paints, plastics, paper, rubber, sealants, pharmaceuticals, food and drink etc.
- 7.2.4 Although limestones occur widely in England, many are unsuitable for industrial use because of their chemical and/or physical properties. The Plan area makes an important national contribution to the supply of industrial limestone; the three main areas of production are around Buxton and Wirksworth on the Carboniferous Limestone resource and near to Whitwell on the Permian Limestone resource.
- 7.2.5 Limestone quarries are characteristically large scale and long term. A particular feature of industrial limestone working is the importance of the

⁷³ East Midlands Aggregates Working Party: Annual Minerals Survey (2009-2021)

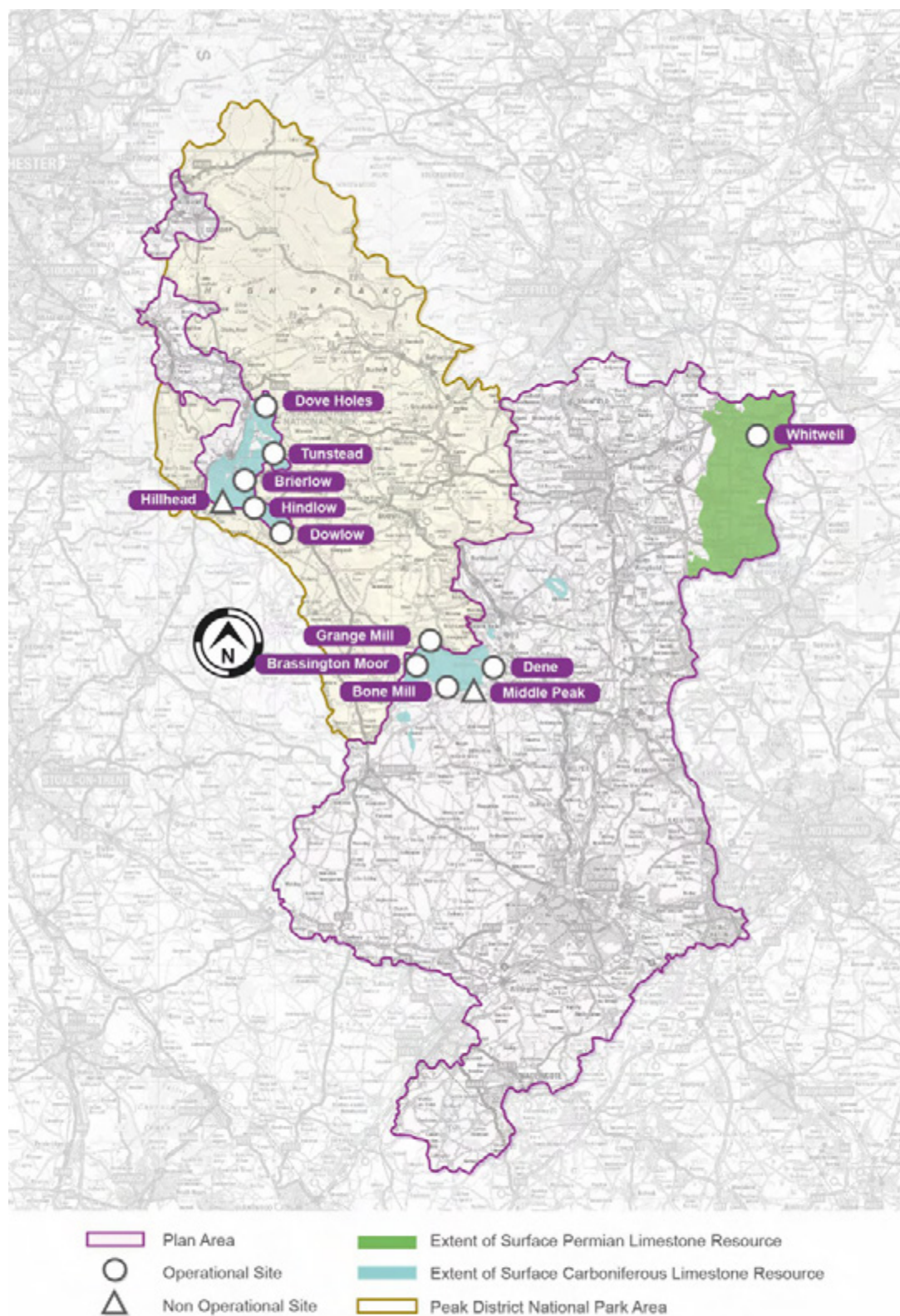
⁷⁴ East Midlands Aggregates Working Party: Annual Minerals Survey (2009-2021)

specification of the mineral which may require multiple extraction faces within one quarry or supplies of feedstock from several different quarries to allow blending. It may also lead to only a small proportion of the mineral being suitable for industrial purposes with the remainder being used for aggregates. The need for multiple working areas may impact on the timescale within which the quarry can be restored.

- 7.2.6 In 2021, a total of ten quarries produced industrial limestone within the Plan area, depicted on Figure 7.2.1. Most of these quarries also produced limestone for aggregate use and in some cases industrial limestone production is quite low. In addition to the operational quarries, a further three non-operational quarries have reserves of industrial limestone and would not require a new planning permission to resume extraction but are not currently producing limestone. Estimated permitted reserves at operational sites for industrial uses totalled around 200 million tonnes⁷⁵ in 2021. Industrial grade limestone from the Plan area is used to produce lime and industrial carbonates for national and local markets and for export. A full range of products are produced from the Plan area for use in, for example, flue gas desulphurisation, glass production, steel making, water purification/sewage and effluent treatment, agricultural improvement, cement production, animal feedstuffs, carpet backing/tiles. The Plan area also contains very high purity grade limestone which is finely ground to form powders for use in a diverse range of applications.

⁷⁵ East Midlands Aggregates Working Party: Annual Mineral Surveys (2009-2021)

Figure 7.2.1: Limestone Resources with operational and non-operational Industrial Limestone quarries 2021



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POLICY SP10 SUPPLY OF INDUSTRIAL LIMESTONE

Proposals for the extraction of Industrial Limestone will be supported where additional reserves are required for use in industrial and manufacturing processes and where:

- 1) they are required because of their particular chemical and/or physical properties; and/or
- 2) the stock of permitted reserves can be shown to have fallen below the level required to sustain production throughout the plan period; and/or
- 3) they are required to provide the necessary level of security of supply to support the level of actual and proposed investment required for new or existing plant and the maintenance and improvement of existing plant and equipment; and
- 4) the recovery of the mineral is maximised to meet that use; and
- 5) the method of their extraction would not result in an unreasonable delay to the proposed restoration of the site.

Where appropriate, the MPA will seek to enter into a planning obligation to control the use of industrial limestone for industrial purposes.

REASONED JUSTIFICATION

NPPF

7.2.7 The NPPF⁷⁶ identifies limestone as a mineral of national and local importance and requires the MPA to plan for industrial minerals, such as limestone, by co-operating with neighbouring and more distant authorities, to ensure adequate provision is made to support its likely use in industrial and manufacturing processes. Safeguarding and stockpiling should be encouraged to ensure that the mineral remains available for future use. The NPPF sets out that MPAs should plan to maintain a stock of permitted reserves to support the level of actual and proposed investment required for new or existing plant and the maintenance and improvement of existing plant and equipment. It specifically requires that for cement, primary (chalk and limestone) and secondary (clay

⁷⁶ National Planning Policy Framework, July 2021

and shale) materials, the stock of reserves should be equivalent to at least 15 years to support the maintenance of an existing plant and at least 25 years to support the development of a new kiln. It does not set out requirements for other industrial uses of limestone such as the manufacture of lime.

PPG

- 7.2.8 PPG⁷⁷ provides specific advice on how MPAs should plan for industrial minerals. It notes that recognition should be given to any marked differences in geology, physical and chemical properties, markets and supply and demand between different industrial minerals which can have different implications for their extraction. It also stresses the economic importance of industrial minerals for downstream industries; the loss of supply of one mineral may jeopardise the whole manufacturing process.
- 7.2.9 PPG⁷⁸ provides advice on how and when the required stock of permitted reserves for industrial minerals should be calculated. It states that stocks of reserves should be calculated when a planning application is submitted or when new capital investment is proposed. The overall amount required should be linked directly to the scale of capital investment required to construct and operate the facility.
- 7.2.10 PPG⁷⁹ provides advice on the way in which MPAs should plan for mineral extraction. It states that priority should be given to identifying (allocating) specific sites for mineral working followed by preferred areas and areas of search. Site allocations should be restricted to where viable resources are known to exist, landowners are supportive of mineral development and the proposal is likely to be acceptable in planning terms.

Need

- 7.2.11 Industrial limestone from the Plan area supplies both national, local and export markets and in accordance with the NPPF, the Plan is required to include policies for its extraction to support its likely use in industry and manufacturing. There are no national assessments of need for Industrial Limestone. In order to make provision for its likely use in industrial or manufacturing processes, therefore, the plan has to meet both anticipated and unforeseen need. Such need may take the form of additional reserves required at an existing quarry

⁷⁷ Planning Practice Guidance Minerals 2014 Paragraph: 086 Reference ID: 27-086-20140306

⁷⁸ Planning Practice Guidance Minerals 2014 Paragraph: 088 Reference ID: 27-088-20140306

⁷⁹ Planning Practice Guidance Minerals 2014 Paragraph: 008 Reference ID: 27-008-20140306

to maintain supply or a new quarry. The overall production of industrial carbonates, including limestone and dolomite, is not anticipated to increase over the Plan period due to the national decline in industrial and manufacturing processes in Britain⁸⁰.

- 7.2.12 The annual production of industrial limestone from the Plan area has remained fairly steady at around 3 million tonnes over the last 12 years⁸¹. If demand follows the national trend ⁸² production is not expected to increase. At the end of 2021, permitted reserves in the Plan area were ‘theoretically’ equivalent to around 66 years of production at current annual rates, well beyond the Plan period to 2038. However, for the reasons set out above it is important to consider the need for industrial limestone reserves on an individual quarry basis in line with the individual characteristics of those quarries and the markets that they supply.
- 7.2.13 At individual quarries the overall stock of permitted reserves may not reflect the particular specifications needed for a particular industrial process. Subtle differences can make the performance of minerals different from one deposit area to another. Overall reserves may also contain areas of low-quality minerals not suitable as industrial minerals but suitable for aggregate uses. There are sufficient permitted reserves remaining at existing quarries to maintain production throughout the Plan period. At Whitwell Quarry, permitted reserves of dolomitic industrial limestone to supply the adjacent Whitwell Works are anticipated to run out in 2028 and Lhoist UK is actively seeking an alternative supply.
- 7.2.14 Additionally at Aldwark/Brassington Moor, the operator (Longcliffe Quarries Ltd) has indicated that it has insufficient reserves of ‘low cadmium, iron and lead’ mineral to maintain supply throughout the Plan period and is promoting an extension to its existing quarry (Aldwark South). The Company produces high purity limestone for specialist markets. Some of the products require exacting specifications which impacts on the availability of suitable reserves. The production of mineral used in animal feedstuffs and glass manufacture requires mineral that is low in cadmium, iron and lead. Permitted reserves of this specification are estimated to be exhausted between 2025 and 2031. The promoted extension area, which measures 25 Ha, would yield approximately

⁸⁰ UK Minerals Forum: Trends in UK Production of Minerals Feb 2014 – 7.8 Industrial Carbonates

⁸¹ East Midlands Aggregates Annual Minerals Survey (2009-2021)

⁸² UK Minerals Forum: Trends in UK Production of Minerals Feb 2014 – 7.8 Industrial Carbonates

24mt of reserve comprising 18% low cadmium reserves, 19% low iron reserves and 63% low lead reserves.

Supply

- 7.2.15 In order to meet the need for industrial limestone, the Plan will maintain supply in three ways. Firstly, through existing permitted reserves, which are present at ten active quarries (at three of these quarries industrial limestone production is small, less than 10%). Secondly, through an allocation of land for working additional reserves at Aldwark/Brassington Moor quarry. Thirdly, the Plan proposes to supply any unforeseen needs through a policy which allows for the working of additional reserves subject to meeting certain criteria.
- 7.2.16 The criteria include the need for the particular specification of mineral, the contribution to the stock of permitted reserves to maintain production throughout the plan period and/or to support the high capital and operating costs of industrial processing plant. For industrial limestone (not including cement) there is no requirement to maintain a stock of reserves at a particular level. Proposals will need to demonstrate how the reserves required link to the overall scale of investment proposed to construct/maintain the facility.
- 7.2.17 In the excavation of industrial grade limestone, rock of all grades will necessarily be produced and most producers of industrial limestone also produce aggregates. However, in view of the relative limited occurrence of industrial grade limestone, it is important that proposals include working schemes that maximise the recovery of such limestone to serve industrial limestone markets. Accordingly, where appropriate, the MPA will seek to enter into a planning obligation to control the use of industrial limestone for industrial purposes.
- 7.2.18 A particular feature of industrial limestone working is that it may require multiple extraction faces within one quarry, or supplies of specific feedstock from several different quarries, to enable blending of lower specification material with that of a higher grade. Alternatively, it may result in only a small proportion being suitable for specific industrial end uses, with remaining minerals being used for alternative purposes such as aggregates. It is important at the outset that the proposed working scheme would not result in an unreasonable delay to the overall restoration of the site.
- 7.2.19 Policy SP10 will apply plan-wide because whilst, Permian Limestones, and Carboniferous Limestones particularly, are widespread within the Plan area, only limited deposits have sufficient qualities to make them suitable for

industrial uses, making it difficult to identify ‘preferred areas’ or ‘areas of search’ from which future supply should be obtained.

- 7.2.20 Safeguarding is a further way of maintaining the future supply of industrial limestone. The Plan proposes to safeguard the whole of the Carboniferous and Permian Limestone resource to protect resources from sterilisation by non-mineral development. Safeguarding policies are set out at Chapter 9 of the Plan.

POLICY SP11: ALDWARE SOUTH

ALLOCATION OF LAND FOR INDUSTRIAL LIMESTONE WORKING AT BRASSINGTON MOOR QUARRY

Land is allocated for mineral extraction at Aldware/Brassington Moor Quarry, shown on the Policies Map.

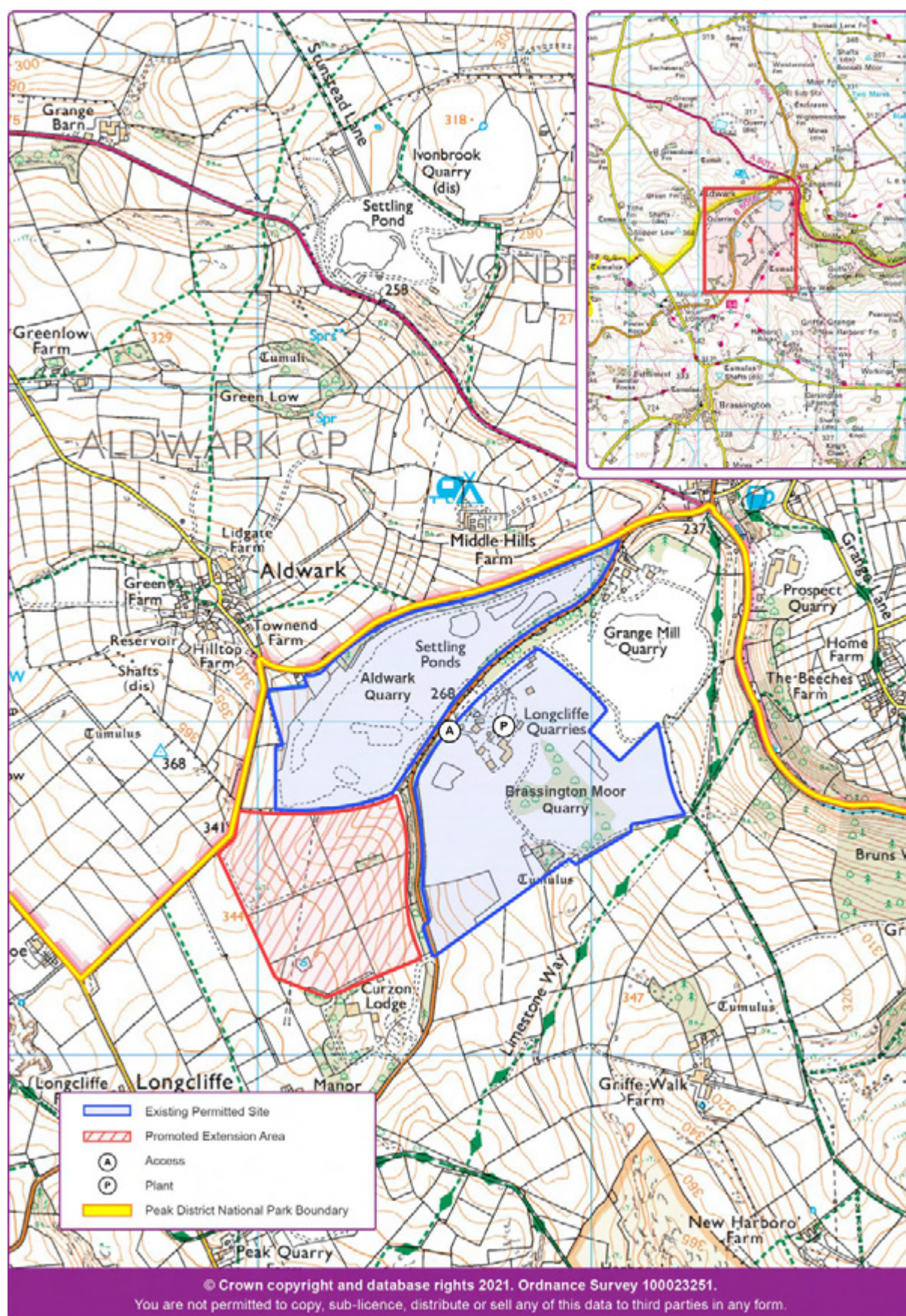
Proposals for the extraction of mineral from the allocated site will be supported provided that the processing and distribution of material from the site will be carried out via the established and permitted plant and access arrangements unless there are operational reasons why this is not practicable or there would be significant environmental benefits to be gained from alternative arrangements.

Proposals will need to satisfactorily address the Principal Planning Requirements set out at Appendix A of the Plan.

REASONED JUSTIFICATION

- 7.2.21 The Plan proposes to allocate land, see Figure 7.2.2, for working at Aldware/Brassington Moor quarry where there is a need for additional ‘low cadmium, iron and lead’ reserves to maintain production throughout the plan period. It is intended that the site will be worked through the existing plant and access arrangements.
- 7.2.22 There are a number of matters that will need to be satisfactorily addressed in any planning application submitted to work the allocated site. These principal planning requirements are set out at Appendix A of the Plan. The requirements are not necessarily a comprehensive set of all the matters which will need to be addressed. Planning proposals will need to provide sufficient evidence to satisfy all policies of the development plan, where relevant.

Figure 7.2.2 Aldwark South



Cement

INTRODUCTION AND BACKGROUND

- 7.2.23 Industrial limestone is a primary raw material in the manufacture of cement with clay and shale as secondary materials. The most important use of cement is in the production of mortar and concrete which are both vital construction materials for the building and civil engineering industries. There are five main producers of cement in the UK: Cemex UK Cement, Hanson Cement, Breedon Cement, Aggregates Industries and Tarmac. The UK's supply of cement is produced at just 11 plants. The UK is also a net importer of cement. Cement plants at Tunstead, in Derbyshire, Hope, in the Peak District National Park and Cauldon in Staffordshire are particularly important for supplying the nearby conurbations of Greater Manchester and the West Midlands.
- 7.2.26 Cement plants are large consumers of raw materials with about 1.6 dry tonnes of materials being required for each tonne of cement clinker produced. Processing plants associated with cement manufacture are generally large and require high capital investment; cement raw materials therefore must be available in sufficiently large quantities to justify this investment. Consequently, modern cement operations are usually large-scale and long-lived. A particular issue associated with cement manufacture is the generation of greenhouse gas emissions; this matter is addressed in Chapter 5 Climate Change.

POLICY SP12: SUPPLY OF CEMENT MAKING MATERIALS

Proposals for the extraction of Limestone, Clay or Shale for use in the manufacture of cement will be supported where they are required to supply a cement works and where:

- 1) They will contribute towards the maintenance of a stock of reserves of at least 15 years to support an existing kiln or 25 years to support a new kiln and/or**
- 2) They are required because of their particular chemical or physical composition.**

Proposals that accord with the criteria set out in SP12 will be supported provided that:

- 1) They are extensions of time and/or physical extensions to existing limestone/clay/shale quarries; or
- 2) Where the proposal involves a new quarry, it is located as near as possible to the cement works where the material will be used.

REASONED JUSTIFICATION

NPPF

7.2.27 The NPPF⁸³ identifies cement making materials as minerals of national and local importance and accordingly requires the Plan required to include policies for their extraction to support their likely use in cement production. The NPPF requires a minimum stock of 15 years of primary (limestone) and secondary (clay/shale) to support investment at an existing plant and 25 years to support investment to develop a new kiln. These requirements apply to individual sites or feeder sites rather than the whole Plan area.

PPG

7.2.28 PPG⁸⁴ provides advice on how and when the required stock of permitted reserves for industrial minerals should be calculated. It states that stocks of reserves should be calculated when a planning application is submitted or when new capital investment is proposed. The overall amount required should be directly linked to the scale of capital investment required to construct and operate the facility.

Need

7.2.29 The demand for cement is reliant on economic activity and especially construction activity which can be highly cyclical. The Government's recent objective of boosting the supply of new homes has seen a corresponding increase in cement production after a long period of decline and this trend is anticipated to continue.

EXISTING QUARRIES

Tunstead Quarry

7.2.30 Within the Plan area there is one cement plant located at Tunstead Quarry; the plant is operated by Tarmac and supplied by the two adjoining quarries

⁸³ National Planning Policy Framework, July 2021

⁸⁴ Planning Practice Guidance Minerals 2014 Paragraph: 088 Reference ID: 27-088-20140306

Tunstead and Old Moor (part of this quarry lies within the Peak District National Park (PDNP) outside the Plan area). The cement plant has a capacity of 1 million tonnes per annum (mtpa); permission has been granted for a second cement kiln which would see capacity increase to 2.15 mtpa. The date when the new kiln is expected to be operational is not known but the operator estimates that it will not be commissioned until the long term i.e. beyond 2038. The permitted reserves of industrial limestone at Tunstead and Old Moor quarry are substantial⁸⁵ and according to the operator, are sufficient to last well beyond the plan period which ends in 2038.

- 7.2.31 In addition to the industrial limestone, secondary materials including shale and marl are required for cement production at Tunstead. Approximately 60,000 tpa of shale is imported from Kingsley Quarry and 120,000 tpa of marl is imported from Keele Quarry; both quarries, are located in Staffordshire. Importation of these raw materials is expected to increase with the commissioning of K2. However, the date for the development of K2 is presently unknown. In planning for minerals, mineral planning authorities are expected to identify and co-operate on strategic cross border matters. The MPA are liaising with Staffordshire County Council in order to ensure that supplies are maintained.

Hope

- 7.2.32 Hope cement works operated by Breedon Cement, lies approximately 10 km from the County boundary, and is located within the Peak District National Park. It has a production capacity of around 1.5 mtpa and is supplied by adjoining quarries i.e. (Hope Limestone Quarry and Hope Shale Quarry) also operated by Breedon Cement.
- 7.2.33 Both quarries have permission for extraction until 2042. However, at anticipated production rates it is likely that additional limestone reserves will be required before this date. It will be for the PDNPA to determine any planning proposals in their area to enable the continued operation of Hope Cement works. The NPPF⁸⁶ however requires that great weight should be given to conserving and enhancing landscape and scenic beauty in National Parks. It adds that planning permission should be refused for major development other than in exceptional circumstances, and where it can be demonstrated that the development is in the public interest. The outcome of any planning proposals

⁸⁵ Permitted Reserve information supplied in confidence for Annual Mineral Surveys 2021

⁸⁶ National Planning Policy Framework, July 2021, Paragraph 177

in the PDNP may impact on cement production from within the Plan area; the MPA is co-operating with the PDNPA to monitor this situation.

SUPPLY

- 7.2.34 In order to meet the need for cement making materials, the Plan will maintain supply in two ways. Firstly, through existing permitted reserves which should be sufficient to maintain production at Tunstead throughout the plan period.
- 7.2.35 Secondly, the Plan proposes to supply any unforeseen needs through a policy which allows for the working of additional reserves subject to meeting certain criteria. The criteria include the need for the particular specification of mineral and the contribution to the stock of permitted reserves to support the high capital and operating costs of cement plant. For cement manufacture the NPPF requires a minimum stock of 15 years of primary (limestone) and secondary (clay/shale) to support investment at an existing plant and 25 years to support investment to develop a new kiln. Proposals will need to demonstrate how the reserves required link to the overall scale of investment proposed to construct/maintain the facility. Where new quarries are proposed they should be located, in principle, as near as possible to where the material will be used to manufacture cement.
- 7.2.36 The policy will apply plan-wide because whilst Carboniferous Limestones and Clay, Shale and Mudstones, are widespread within the Plan area, only limited deposits have sufficient qualities that are suitable for cement making and, therefore, it is difficult to identify ‘preferred areas’ or ‘areas of search’ from which future supply should be obtained.



Tunstead Quarry

7.3: Brick Clay and Fireclay

INTRODUCTION AND BACKGROUND

7.3.1 Brick clay and fireclays are used in the manufacture of bricks, tiles and other clay products. Within the Plan area the most economically important sources of clay and shales are of Carboniferous age and associated with the Millstone Grit and the Coal Measures. The latter is also a potential source of fireclay used in the manufacture of buff and pale-bodied facing bricks. Fireclay is not normally commercially viable to extract on its own and almost all production is as a co or by-product of surface coal mining. There are no current surface coal mining sites within the Plan area and therefore no fireclay production. Provisions to enable its supply, however, are included in Policy SP15 Supply of Coal and Colliery Spoil Disposal.

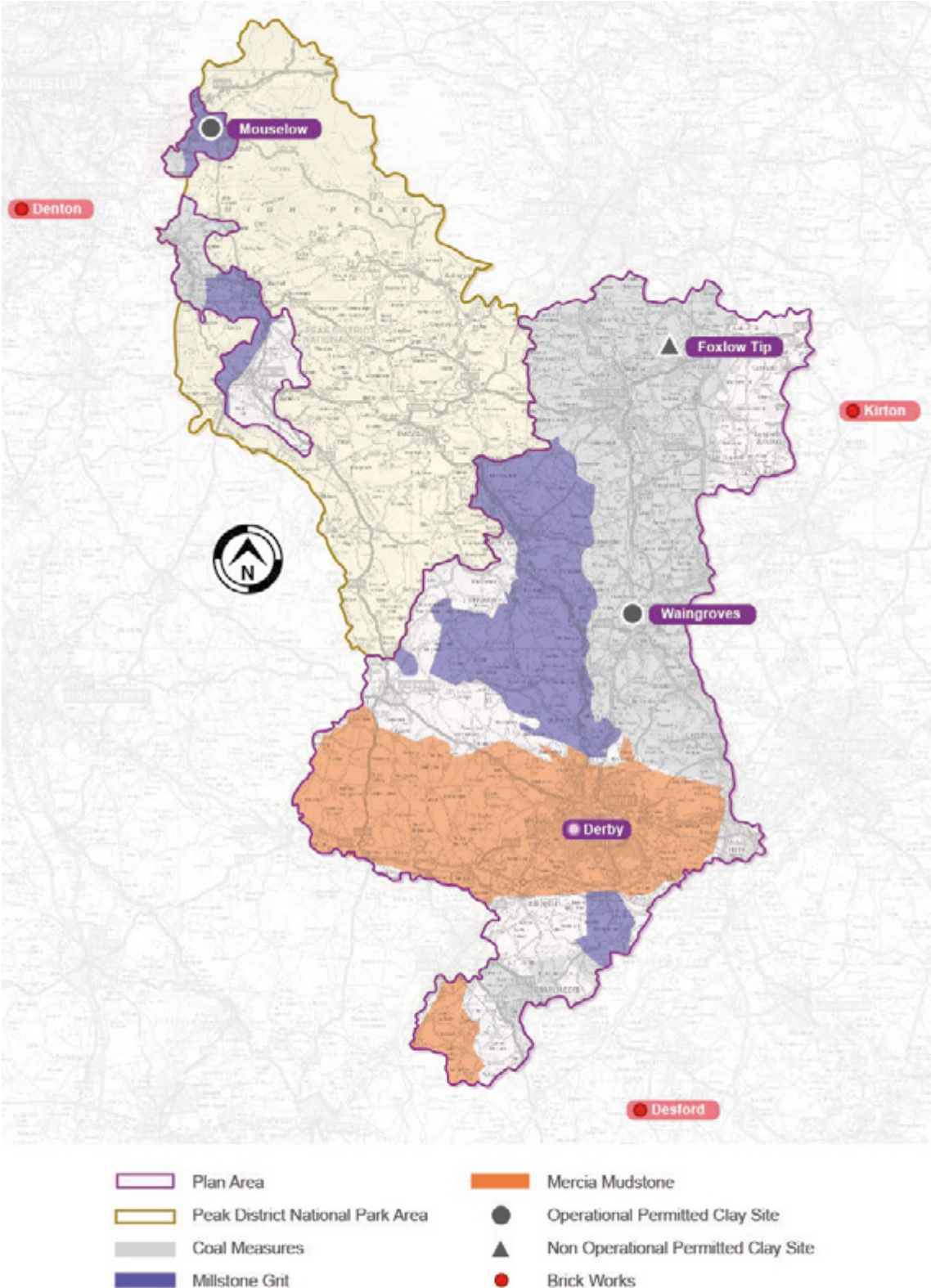
7.3.2 The use of brick clay is particularly susceptible to fluctuations in the construction industry which can lead to the ‘mothballing’ or closure of extraction sites and processing facilities. There are currently no brickworks within the Plan area; all brick clay excavated from the Plan area’s two active sites is exported to works in adjoining Mineral Planning Authority areas:

- Mouselow Quarry, Glossop, operated by Wienerberger, supplies the company’s brick works at Denton, East Manchester and,
- Waingroves Quarry, Ripley, operated by Forterra Building Products Ltd, supplies the Company’s brickworks at Kirton in Nottinghamshire and at Desford in Leicestershire.

A small amount of brick clay, excavated from Foxlow Tip is stockpiled on site following closure of the Plan area’s last brickworks at Barrow Hill, Chesterfield in 2013. Clay resources, quarries and clay products sites are shown on Figure 7.3.1.

7.3.3 Brick clay workings tend to be long term operations and may involve working different parts of the quarry for blending purposes. Clay working takes place on a campaign basis rather than continuous. Before delivery to the manufacturing plant, there will be a need for the excavated clay to be weathered prior to blending. This requires the creation of stockpiles usually at the quarry which can result in delays to the reclamation of a site.

Figure 7.3.1: Clay Resources, Extraction and Manufacturing Sites



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POLICY SP13: SUPPLY OF BRICK CLAY

Proposals for the extraction of brick clay will be supported where additional reserves are required to supply a brick works or clay products manufacturing site and where:

- 1) they are required to contribute towards the maintenance of a minimum 25 year stock of permitted reserves; and/or**
- 2) they are required to enable the appropriate blending of clays; and/or**
- 3) they are required because of their particular chemical or physical composition; and where**
- 4) the need for stockpiling will not significantly delay the reclamation of the site.**

Proposals that accord with the criteria set out in SP13 will be supported provided that:

- 1) they are extensions of time and/or physical extensions to existing brick clay pits/quarries; or**
- 2) they are located as near as possible to the site where the clay will be used.**

Where practicable, proposals that include the location of stockpiles at the excavation site will need to make provision for their progressive restoration, as material is removed, in order to minimise their impact and ensure the timely restoration of the site.

REASONED JUSTIFICATION

NPPF

7.3.4 The NPPF⁸⁷ identifies brick clay and fireclay as important minerals and requires Mineral Planning Authorities (MPAs) to plan for their steady and adequate supply, by co-operating with neighbouring and more distant authorities, to ensure adequate provision is made to support their likely use in industrial and manufacturing processes. Safeguarding or stockpiling should be encouraged to ensure that the minerals remain available for future use. To

⁸⁷ National Planning Policy Framework, July 2021

support the manufacture of brick or clay products a 25 year stock of permitted reserves of brick clay should be maintained, to support the level of actual and proposed investment required to maintain or improve an existing plant or to provide a new kiln.

- 7.3.5 MPAs should also take into account the need for the provision of brick clay from a number of different sources to enable appropriate blends to be made. Coal producers should be encouraged to extract separately and, if necessary stockpile, fireclay so that it remains available for use.

PPG

- 7.3.6 PPG⁸⁸ provides specific advice on how MPAs should plan for industrial minerals. It notes that recognition should be given to any marked differences in geology, physical and chemical properties, markets and supply and demand between different industrial minerals which can have different implications for their extraction. It also stresses the economic importance of industrial minerals for downstream industries; the loss of supply of one mineral may jeopardise the whole manufacturing process.
- 7.3.7 PPG⁸⁹ provides advice on how and when the required stock of permitted reserves for industrial minerals should be calculated. It states that stocks of reserves should be calculated when a planning application is submitted or when new capital investment is proposed. The overall amount required should be directly linked to the scale of capital investment required to construct and operate the facility.
- 7.3.8 PPG⁹⁰ provides advice on the way in which MPAs should plan for mineral extraction. It states that priority should be given to identifying (allocating) specific sites for mineral working followed by preferred areas and areas of search. Site allocations should be restricted to where viable resources are known to exist, landowners are supportive of mineral development and the proposal is likely to be acceptable in planning terms.

Need

- 7.3.9 Brick Clay is a mineral of national and local importance and in accordance with the NPPF, the Plan is required to include policies for its extraction to support its likely use in industry and manufacturing. There are no national assessments

⁸⁸ Planning Practice Guidance Minerals 2014 Paragraph: 086 Reference ID: 27-086-20140306

⁸⁹ Planning Practice Guidance Minerals 2014 Paragraph: 088 Reference ID: 27-088-20140306

⁹⁰ Planning Practice Guidance Minerals 2014 Paragraph: 008 Reference ID: 27-008-20140306

of need for brick clay production. In order to make provision for its likely use in industrial or manufacturing processes the Plan, through Policy SP13, seeks to maintain supply to meet both anticipated and unforeseen need. Such need may take the form of additional reserves required at an existing quarry to maintain supply or a new quarry to support a brick or clay products works. There are no brick works within the Plan area but two operational brick clay quarries supply mineral to sites across the border in neighbouring authorities. Brick clay production is anticipated to increase over the Plan period in response to the Government's initiatives to stimulate the housing market.

EXISTING QUARRIES

Mouselow Quarry

7.3.10 Permitted reserves of shale (of sufficient quality for brick making) at Mouselow are approximately 520,000 tonnes⁹¹. Based on an estimated production rate of 57,000 tonnes per annum (tpa) these are forecast to sustain production to Denton brickworks until around 2030.

Waingroves Quarry

7.3.11 Permitted reserves at Waingroves are approximately 3,650,000 tonnes⁹². Based on an estimated production rate of 60,000 tonnes per annum (tpa) increasing to 111,000 tpa from 2023, to supply the new brickworks at Desford, these are forecast to sustain production to Desford and Kirton brickworks for over 32 years well beyond the end of the Plan period in 2038.

Foxlow Tip

7.3.12 A small amount of brick clay, 250,000 tonnes, is stockpiled on site following the demolition of Phoenix Brickworks at Barrow Hill. A suitable market has been found and it is anticipated that it will be removed off site within the near future.⁹³

SUPPLY

7.3.13 In order to meet the need for brick clay, the Plan will maintain supply in two ways; firstly through existing permitted reserves, which are present at two active quarries; Mouselow and Waingroves, and stockpiled at Foxlow Tip

⁹¹ At 31/12/2021, source memo from Weinerberger 2/11/2022

⁹² At 31/12/2021

⁹³ Source memo from operator 1/11/2022

7.3.14 Secondly, whilst clay, shale and mudstones are widespread within the Plan area, only limited deposits have sufficient qualities to make them economically important. The Plan, therefore, proposes to supply any additional or unforeseen need for Brick Clay through a plan-wide policy which allows for new working subject to meeting certain criteria. The criteria include the need to contribute towards maintaining a minimum 25 year stock of reserves to support investment. They include recognition of the need for clays with particular technical specifications and the need to blend different sources of clays. The criteria support the need for additional reserves at existing quarries and where new sites are proposed they are required, in principle, to be located as near as possible to where the clay will be used. The supply of brick clay will be further maintained through safeguarding, as set out at Chapter 9.



Mouselow Quarry, Glossop - Brick Clay and Sandstone

STOCKPILING

7.3.15 There are a range of environmental and social impacts that are likely to be relevant when assessing planning proposals for Brick Clay extraction. Many of these impacts are ones which would be common to most other mineral developments and their impacts will be assessed under the general development management policies set out at Chapter 11. One impact that is particular to brick clay working arises from the need to stockpile clay. The stockpiling of brick clay is a particular feature of clay working which can be visually intrusive and impact on the speed that sites can be restored. Where practicable, proposed schemes for working brick clay will need to include the progressive restoration of areas used for stockpiling in order to minimise their environmental impact.

7.4: Vein Minerals

INTRODUCTION AND BACKGROUND

- 7.4.1 Vein minerals such as fluorspar and barytes are high-value specialist minerals often found in narrow bands within limestone. The majority of resources in Derbyshire are found outside the Plan Area in the PDNP. In the Plan area, deposits lie within the areas of high landscape value bordering the PDNP, mainly in a line along the eastern edge of the Carboniferous Limestone deposit around Matlock, Wirksworth and Brassington.
- 7.4.2 Metallurgical grade fluorspar is used mainly in steel manufacture and Acid grade fluorspar as a raw material in chemical applications to produce aerosols, refrigerants, air conditioning components and in the smelting of aluminium. Growth areas for fluoro-polymers include the production of Teflon, solar panels and Li ion batteries. Barytes, due to its relatively high density, is used in the offshore oil and gas industries as a weighting agent in drilling fluid. It is also used as a high-quality filler and extender in the plastics, rubber and paint industries.
- 7.4.3 Information about the production of vein minerals in the United Kingdom is limited. The most recent figures dating from 2020⁹⁴ estimate that 12,000 tonnes of fluorspar were produced and 50,000 tonnes of Barytes. Historically, significant production of fluorspar began at the start of the 20th Century, where demand came mostly from steelmaking and the demand for fluorine-bearing chemicals. From a relatively buoyant market in the late 1970s early 1980s where production topped 235,000 tonnes in 1975, need has declined progressively, due largely to the decline of indigenous chemical and steel industries.
- 7.4.4 Prior to the mid-1980s the UK was a net exporter of fluorspar but subsequently has become a net importer mainly from China and Mexico. The recent growth in new markets for fluoro-polymers has resulted in the inclusion of fluorspar and barytes on the European Union's (EU) fourth list of critical raw materials for 2020. The main parameters used to determine the criticality of the material for the EU are economic importance and supply risk⁹⁵. Following the departure

⁹⁴ United Kingdom Minerals Year Book 2021

⁹⁵ EU Fourth List of Critical Raw Materials 2020

of the UK from the EU the UK Government has published its Critical Minerals Strategy in 2022⁹⁶ which did not include fluorspar or barytes.

- 7.4.5 The PDNP is now the focal point of the fluorspar production in the UK; there is no existing or likely future interest in exploiting barytes in the PDNP⁹⁷. There are currently, at 2021, only two active vein mineral sites within the PDNP, Milldam Mine (Fluorsid British Fluorspar Ltd (FBFL)) and Smalldale Head Quarry. (High Peak Spar Limited, Furness Brothers and Ernest Hinchliffe Limited). Ancillary vein minerals are also worked in conjunction with Hope Cement Works Limestone Quarry (Breedon Cement) although no commercial deposits of fluorspar have been worked since 2010-2011. There is one current proposal which is to resume underground vein mineral working at Watersaw Mine (FBFL) which, if permitted, would result in 300-600 tonnes of fluorspar being mined each day. Cavendish Mill, Stoney Middleton (operated by FBFL) operates as the main processing site for vein minerals. Vein minerals from Smalldale Head Quarry are processed on site at the quarry.
- 7.4.6 Within the Plan area there is one operational site at Slinter Top (Slinter Mining Company), near Cromford where vein minerals are quarried as secondary minerals alongside limestone aggregates with the resulting void infilled with inert, non-hazardous materials. A planning application has been submitted, in 2017 for a lateral southwest extension to the existing quarry for limestone and vein mineral extraction. The proposal is to extract 1.3 million tonnes of mineral over the period to 2033 with a further 3 years to complete infilling and restoration.⁹⁸
- 7.4.7 The planning statement⁹⁹ in support of the application states that both fluorspar and barytes have been extracted from Slinter Top quarry and sold to the operator of Cavendish Mill processing works near Stoney Middleton in the PDNP. Since 1978, approximately 80,000 tonnes of fluorspar/barytes has been delivered to Cavendish Mill with peaks of supply occurring in the 1980s and 2000s. The likely quantity of vein mineral that may be extracted from the proposed extension is not quantified in the Planning Statement but it states that, the Geological Assessment accompanying the planning application has

⁹⁶ HM Government: Resilience for the future - The United Kingdom's Critical Minerals Strategy 2022

⁹⁷ Information supplied by PDNPA, letter dated 7/9/2021

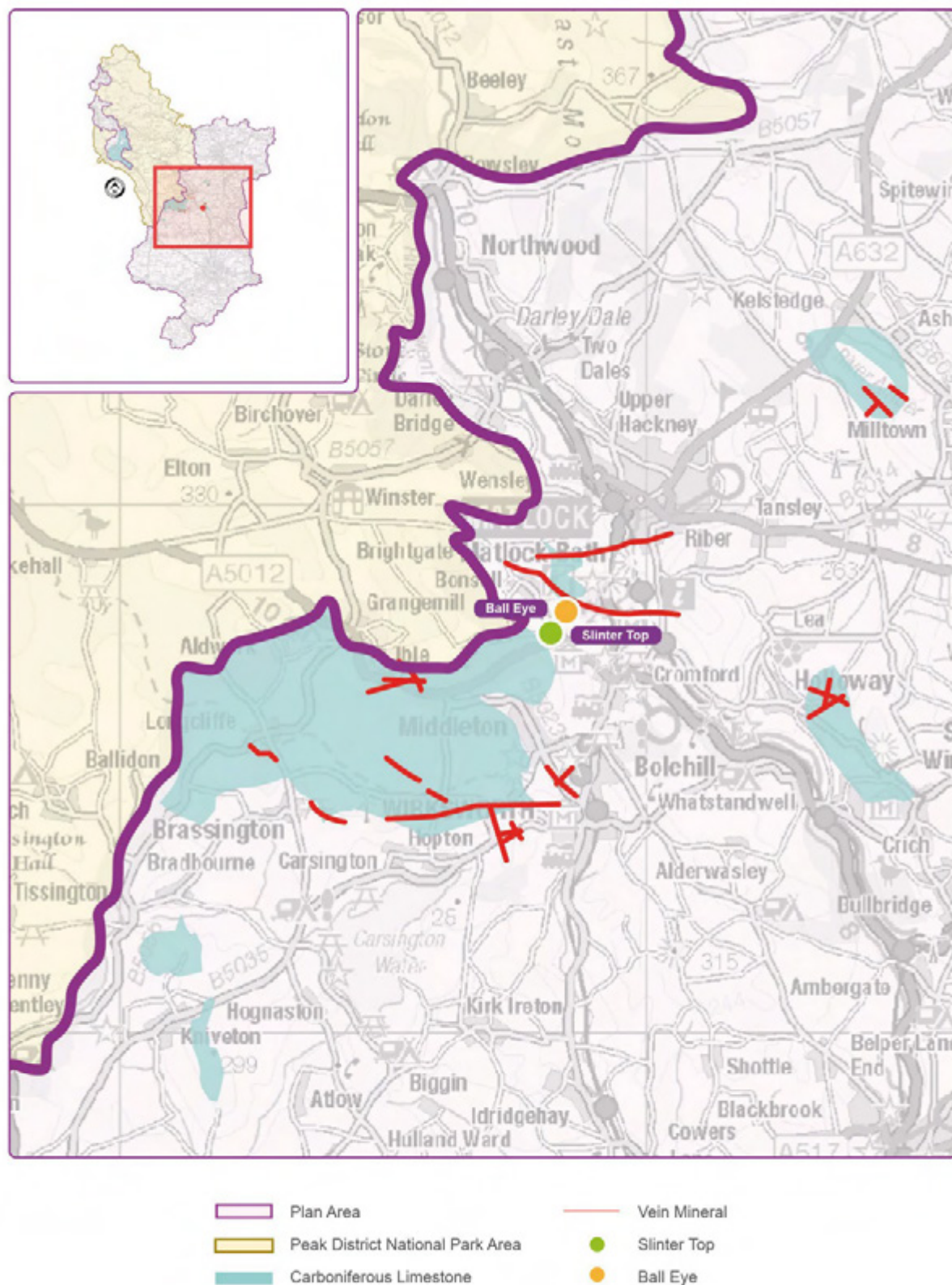
⁹⁸ EIA Addendum in support of planning application CM3/0817/40 May 2020

⁹⁹ Planning statement by Slinter Mining Company in support of planning application CM3/0817/40 July 2017

concluded that it is highly likely that veins will occur within the extension area as experienced in the existing quarry.

- 7.4.8 A non-operational site at Ball Eye Quarry, Bonsall is also present within the Plan area. Some vein mineral working has taken place historically in association with limestone extraction by both surface and underground methods. There has been no extraction since 2014 and the quarry has recently, in 2022, been sold. Figure 7.4.1 shows these sites along with vein mineral resources.
- 7.4.9 Vein minerals can be worked by both surface and underground methods depending on the location of the deposit. Historically, working moved along the rakes extracting shallower veins using a hydraulic machine or dragline. As these have become worked out the remaining ore is now likely to be found at greater depths often inter-mixed with limestone and therefore, within the Plan area, vein minerals are mainly worked alongside aggregate minerals resulting in operations more akin to hard rock quarries with longer timescales and similar impacts. Historically, the small scale working of fluorspar/barytes from old lead-zinc workings and waste dumps, has also taken place.
- 7.4.10 Potential impacts of working vein minerals alongside aggregates in hard rock quarries include the visual impacts of quarry benches, including any impacts on the setting of the PDNP where sites are located close to its boundary. Other impacts include noise and dust generated by machinery and blasting. Once worked, the vein mineral is transported to a processing plant, usually by road, although it may be initially crushed on site. The main central processing plant for vein minerals is located at Cavendish Mill, at Stoney Middleton in the PDNP and therefore a particular issue is the impact of HGV traffic on the National Park, as the plant receives material to be processed, and then distributes it afterwards.

Figure 7.4.1 Vein Mineral Resources and Sites



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POLICY SP14: SUPPLY OF VEIN MINERALS

Proposals for the extraction of vein minerals will be supported where additional reserves are required for use in industrial and manufacturing processes and where the duration and scale of the development is limited to the minimum necessary to extract the vein mineral.

REASONED JUSTIFICATION

NPPF

7.4.11 The NPPF¹⁰⁰, states that when preparing local plans, local planning authorities should identify and include policies for the extraction of mineral resources of local and national importance, including vein minerals. As industrial minerals, the NPPF at paragraph 214 sets out how best to plan for them. It requires MPAs to make provision for their adequate and steady supply taking into account their likely use in industrial and manufacturing processes, through co-operating with neighbouring and more distant authorities. MPAs are required to safeguard or stockpile resources so that minerals remain available for use.

PPG

7.4.12 PPG provides specific advice on how MPAs should plan for industrial minerals. It stresses their economic importance for downstream industries; the loss of supply of one mineral may jeopardise the whole manufacturing process. It states that MPAs should recognise differences in geology, physical and chemical properties, markets and supply, and the demand between different industrial minerals, which can have different implications for their extraction. They should plan for the supply in one of three ways. In order of priority these are; designating specific sites where viable resources are known to exist, where landowners are supportive of minerals development and the proposal is likely to be acceptable in planning terms, designating preferred areas (areas of known resources where planning permission might reasonably be anticipated), or designating areas of search where knowledge of resources may be less certain, but within which planning permission may be granted.

¹⁰⁰ National Planning Policy Framework 21 July 2021

Need

7.4.13 There are no national assessments of need for industrial minerals. In order to make provision for their likely use in industrial or manufacturing processes, the Plan has to meet both anticipated and unforeseen demand. This may take the form of additional reserves required at an existing quarry to maintain supply, or a new quarry. The demand for fluorspar for chemical applications in particular, appears to be increasing which could lead to an increase in domestic production.

SUPPLY

7.4.14 Given the limited availability of vein minerals throughout the country, it is anticipated that the Plan area could make a contribution towards meeting national demand. It is difficult, however, to plan for the supply of vein minerals because whilst it is known that there are further resources in the Plan area, it is not possible to quantify the overall resource, the volume of potentially economic reserves, or even the volume of vein minerals with outstanding planning permissions, as often the main permission relates to limestone extraction where vein mineral extraction is an ancillary operation, and its volume is not quantified. However, for new proposals it is possible to identify the presence of ore bearing structures within the ground to enable a reasonable estimation of potential reserves within a particular site using geophysical techniques.

7.4.15 In order to meet the need for vein minerals therefore, the Plan will maintain supply in two ways. Firstly, through existing permitted reserves, where they are present at one operational quarry, Slinter Top and one non-operational quarry Ball Eye, within the Plan area. There are also ‘dormant’¹⁰¹ extraction sites at Ashover, Brassington, Matlock, and areas where permissions have been revoked, including Cromford and Milltown. Some areas of historical extraction have been worked out, yet are still covered by extant planning consents, with deposits uneconomic to extract. Given the uncertainty surrounding these potential resources, and their future planning status, they are considered to have little importance in the overall picture of supply.

7.4.16 Secondly, the Plan proposes to supply any unforeseen needs through a criteria-based policy which allows for the working of additional reserves. Policy, SP14, will apply Plan-wide, with the deposits that have the most potential for

¹⁰¹ As defined by the Environment Act 1995

sourcing vein minerals lying along the eastern edge of the Carboniferous Limestone. Given that the Plan area has a very large landbank of permitted crushed rock reserves it is important that vein mineral extraction is restricted, in terms of its scale and duration, to working the vein mineral resource rather than the crushed rock resource. Proposals will need to satisfy all relevant policies of the Plan including the detailed development management policies set out at Chapter 11.

- 7.4.17 Safeguarding is a further way of maintaining the future supply of vein minerals. The Plan proposes to safeguard the whole of the Carboniferous Limestone resource including the veins to protect resources from sterilisation by non-mineral development. Safeguarding policies are set out at Chapter 9 of the Plan.

Chapter 8: Coal

- 8.0.1 Chapter 8 deals with the supply of energy minerals which for the purposes of the Plan are coal (including former colliery spoil tips) and colliery spoil disposal, conventional oil and gas and unconventional oil and gas. Energy minerals are so called because they provide the fuels that are used to produce energy for electricity generation or as part of other industrial processes such as steel and cement production. Oil and gas are also used as a product in the Petrochemical industry. Chapter 8.1 sets out the policy requirements for coal, whilst chapter 8.2 deals with the requirements for conventional and unconventional oil and gas extraction.

8.1: Coal and Colliery Spoil Disposal

INTRODUCTION AND BACKGROUND

8.1.1 Historically, coal has been an important energy mineral in the UK. The abundance of the coal resource in Derbyshire has played a significant role in the way that the Plan area looks and operates, particularly in the east and in the south. Increased use of imported supplies, combined with the move away from coal as a source of energy generation, resulted in the significant decline of the Derbyshire coal industry with all deep mined collieries closed by the mid-1990s. In more recent years, coal production has largely been from surface mining apart from one small drift mine at Eckington which closed in early 2019. The last remaining coal extraction site in the Plan area, at Hartington Tip, is expected to cease extraction during 2023.

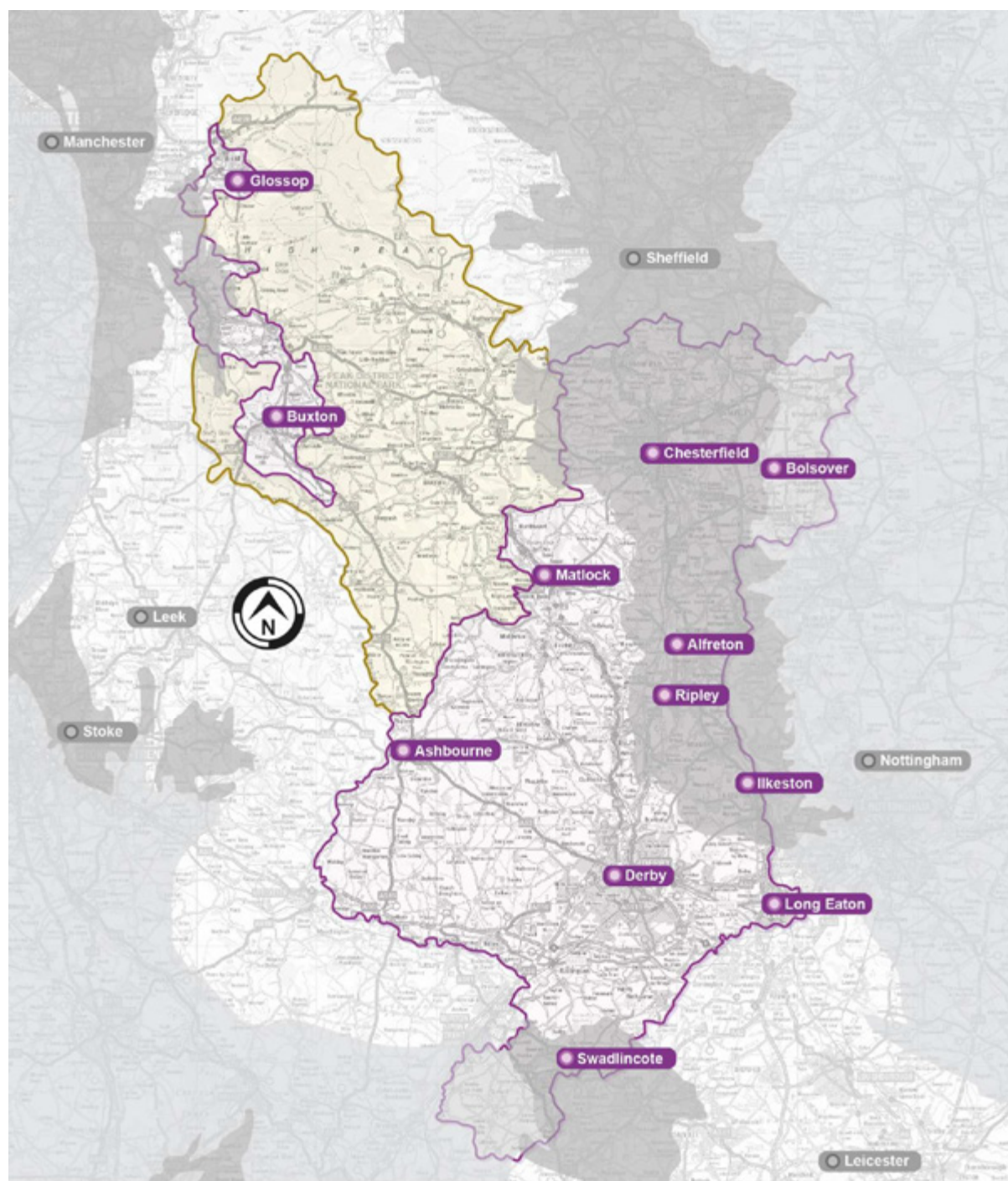
COAL IN THE PLAN AREA

- 8.1.2 Derbyshire contains both shallow and underground coal resources, the extent of which are shown on Figure 8.1 below. The shallow coal resource in Derbyshire is found primarily in two areas, the North Derbyshire Coalfield and the South Derbyshire Coalfield. Shallow coal deposits also occur in the north-west of the County, mainly outside the Peak District National Park boundaries between Charlesworth and Whaley Bridge, but these are not, generally, of commercial quality. The underground coal resource in Derbyshire is located to the east of the main Derbyshire shallow coal measures, below an area of Permian Limestone.
- 8.1.3 The geological conditions that gave rise to the creation of coal also support the presence of clay. In Derbyshire, brick clay has been extracted from the coal measures of the exposed coalfield covering the North Derbyshire Coalfield. Further detailed information about brick clays can be found in Chapter 7.3: Brick Clay and Fireclay. The southern part of Derbyshire is an important source of fireclays.
- 8.1.4 Fireclays are sedimentary mudstones that occur as seatearths or fossil soils that underlie almost all coal seams. Fireclays are typically thin (normally <1m, although rarely 3m) and extraction on their own would not be economically viable because of the high overburden to mineral ratios. In contrast to brick clays, which are normally red-firing due to the presence of iron oxides, fireclays have relatively low iron contents and are particularly valued for the production

of buff-coloured bricks and pavers. Bricks made from fireclay also exhibit superior technical properties, such as strength and durability.

- 8.1.5 The underground working of coal can create large volumes of waste or ‘spoil’, the disposal of which is one of the main potential causes of environmental impacts. Whilst it is unlikely that any new proposals for deep mined coal will come forward during the Plan period, the need to provide sufficient space close to mines to accommodate spoil disposal will be a significant consideration. Underground mining can also cause problems with land stability, particularly in areas where such mining has historically taken place. The treatment and pumping of underground water as well as the potential for gas emissions from active and former mine workings also need to be given consideration.
- 8.1.6 Historically, coal processing was often inefficient with the result that large quantities of coal potentially remained in spoil tips. There are a number of spoil tips remaining in the Plan area, although many have now been reworked and restored or completely removed. Recent examples of removal and/or reworking include the Belp and Whitwell Colliery tips near Whitwell. Some of the materials which were previously placed in the tips as unwanted and unusable waste materials (including mudstone, siltstone and red shale) now have a commercial use, as low-grade aggregate for example, and several tips have been reworked to extract this previously discarded resource. The tips can also include quantities of coal which is now recoverable due to the availability of improved processing equipment, although the viability of such schemes will vary in accordance with the price of coal and quantities available.
- 8.1.7 Demand for coal as an energy source in the UK has reduced significantly in recent years as a result of government policies to address climate change and assist in achieving the UK target of net zero carbon emissions. Future demand for coal in the UK during the Plan period is likely to come from the industrial sector, including steel and cement production, although advances in technology and the increased use of alternative fuels are also likely to result in reduced demand from this sector in the medium to long term.
- 8.1.8 In this context, it is unlikely that coal will be extensively worked again over the Plan period but, as the Plan area still contains substantial resources which could be extracted by either surface mining or deep mining methods, it includes a policy approach for any proposals that do come forward.

Figure 8.1.1: Derbyshire Shallow and Underground Coal Resource



Plan Area
 Peak District National Park
 Coal Bearing Strata at Surface
 Concealed Coal Bearing Strata

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POLICY SP15: COAL EXTRACTION AND COLLIERY SPOIL DISPOSAL

1. **Proposals for the extraction of coal and the associated disposal of colliery spoil will not be supported unless the need for the proposal is for markets other than electricity generation and it can be demonstrated that:**
 - a) **it is environmentally acceptable, or can be made so by planning conditions and/or obligations; and**
 - b) **greenhouse gas emissions are capable of being managed to ensure that the proposal will have a ‘net zero’ impact on climate change for the lifetime of the development (including restoration and aftercare).**

In the assessment of greenhouse gas emissions, the MPA will have regard to the requirements of Policy SP2: Climate Change.

2. **Where development proposals are unable to demonstrate the requirements of 1) above, planning permission will only be granted where proposals can be demonstrated to provide national, local or community benefits of a scale which clearly outweigh the likely impacts (taking all relevant matters into account, including any residual environmental impacts)**

In the assessment of benefits of coal mining development against adverse impacts the mineral planning authority will have regard to the requirements of sub-paragraphs 2 and 3 of Policy DM2: Criteria for Assessing the Benefits of Minerals Development Proposals.

Incidental Extraction of Fireclay

3. **Where appropriate, proposals for coal extraction should also make provision for the extraction and stockpiling of fireclays where it can be demonstrated that site restoration will be undertaken in a timely manner; it would enable the efficient use of the clay resource and the proposal would ensure that the clay resource would not be needlessly sterilised.**

Reworking former colliery spoil tips

4. **Proposals for the reworking of former colliery spoil tips will be supported where it can be demonstrated that the environmental and economic benefits of the development, including measures to address identified tip safety issues or the delivery of significant environmental improvements to the site, outweigh the environmental or amenity impacts of the development.**

REASONED JUSTIFICATION

- 8.1.9 The NPPF contains a general presumption against the extraction of coal, making it clear that the great weight normally given to the benefits of mineral extraction should not be applied to coal¹⁰². It also clarifies that planning permission for development proposals involving coal should only be granted in certain limited circumstances¹⁰³. There are no national targets for coal production, either from underground sources or by surface mining.
- 8.1.10 All proposals for coal extraction and the disposal of colliery spoil will be assessed against the overarching tests set out in Policy SP15: Coal Extraction and Colliery Spoil Disposal which reflects the requirements of the NPPF as well as the government's commitment to phasing out coal for use in energy generation to assist in the achievement of the UK's climate change objectives¹⁰⁴. In acknowledgement of this, and in line with the planned cessation of unabated coal fired power generation, the MPA will not support proposals for coal extraction where the identified need is for electricity generation.
- 8.1.11 Coal is the most carbon intensive fossil fuel producing twice the carbon dioxide (CO₂) per unit of electricity than natural gas when burnt. It is also responsible for the release of other GHG emissions such as Nitrous oxide (N₂O), although in smaller quantities than CO₂. Coal extraction and its subsequent processing also results in the release of methane (CH₄). For this reason, the MPA will require all proposals for coal extraction to demonstrate that they would be Net Zero in respect of climate change over the lifetime of the development from its location, design and construction through to operation, decommissioning and final restoration and aftercare. Policy SP2 sets out a series of measures that

¹⁰² Footnote 71, NPPF, July 2021.

¹⁰³ Paragraph 217, NPPF, July 2021

¹⁰⁴ BEIS, Coal generation in Great Britain: The pathway to a low-carbon future (2016)

should be employed to achieve ‘net zero’ for coal development. Further information on how to assess GHG emissions of a development proposals and how to mitigate or limit their effects can be found in the Institute of Environmental Management & Assessment (IEMA) guidance document ‘Assessing greenhouse Gas Emissions and Assessing their Significance: 2nd edition (2022). Whilst the guidance is primarily aimed at EIA development, the MPA considers that this represents a good practice standard for all developers when assessing GHG emissions.

- 8.1.12 There are some emissions that whilst not directly attributable to the development are indirectly associated with the products and services of the development including those arising from the use of the product. The Climate Change Impact Assessment should include an assessment of whether there is sufficient causal connection between the proposal and any impact on the environment associated with the indirect emissions and, whether this constitutes a significant indirect effect of the proposed development. Where this is the case, the indirect emissions will need to be taken into account under Policy SP2 Criterion (a).
- 8.1.13 National policy¹⁰⁵ states that minerals planning authorities should “*indicate any areas where coal extraction and the disposal of colliery spoil may be acceptable*” and also that they should “*provide for coal producers to extract separately, and if necessary stockpile, fireclay so that it remains available for use*”¹⁰⁶.
- 8.1.14 The MPA recognises that there are substantial remaining reserves of commercially workable surface and underground coal in Derbyshire. However, the lack of an active mining industry in the Plan area, combined with the absence of any promoted ‘sites’ coming forward during plan preparation, has led the MPA to adopt a ‘Plan Area’ wide approach to the surface and underground coal resource. Where a development proposal for coal extraction does come forward during the Plan period, it will be assessed on a ‘case-by-case basis’, in accordance with the relevant policies of the Development Plan. This approach is considered the most flexible and would also avoid the potential for ‘planning blight’ arising from the identification of specific sites or areas for future coal working.

¹⁰⁵ Paragraph 215 (c), NPPF, July 2021.

¹⁰⁶ Paragraph 215(e), NPPF, July 2021

ENVIRONMENTAL IMPACTS OF COAL EXTRACTION

- 8.1.15 PPG states that the environmental impacts of coal extraction should be considered in the same way as for other minerals¹⁰⁷. However, Section 53 of the Coal Industry Act 1994¹⁰⁸ places a duty on MPAs to have regard, not only to ‘...*the desirability of the preservation of natural beauty, of the conservation of flora and fauna and geological or physiographical features of special interest and the protection of sites, buildings, structures and objects of architectural, historic or archaeological interest...*’, but also the extent to which an applicant has given consideration to these matters in the design of those proposals and any measures the applicant has adopted in order to mitigate any adverse environmental effects of the development on the environmental concerns identified above.
- 8.1.16 The effects of coal extraction, colliery spoil and the reclamation of former colliery sites on local amenity will be measured against policy DM1: Protecting Local Amenity, Health, Well-Being and Safety, which sets out the general criteria to be used in respect of all proposals for mineral development. The environmental acceptability of proposals for coal extraction and colliery spoil disposal will be assessed against Policy SP1: Sustainable Minerals Development as well as the other development management policies which are contained within Chapter 11: Other Mineral Related Issues & Development Management Policies.
- 8.1.17 Where it cannot be demonstrated that a proposal for coal extraction would be environmentally acceptable, consideration of any national, sub-regional or local benefits delivered by the development will be undertaken in accordance with the terms of sub-paragraph 2 of Policy DM2: Criteria for Assessing the Benefits of Minerals Development Proposals. The list of benefits set out in the policy is not intended to be exhaustive. Where an applicant considers that a development proposal delivers benefits not included in sub-paragraph 2, but which would be a material consideration in the determination of any planning application, they should submit sufficient information to enable a full assessment of those benefits.

¹⁰⁷ Planning Practice Guidance, Paragraph 174, Reference ID: 27-147-20140306, March 2014

¹⁰⁸ <https://www.legislation.gov.uk/ukpga/1994/21/section/53>

INCIDENTAL EXTRACTION OF FIRECLAYS

8.1.18 The MPA recognises that fireclay largely coincides with the coal resource and that it is usually most economically viable to be extracted with coal at surface coal sites. Policy SP15.3 allows for the extraction of fireclay in association with coal where it would not significantly delay restoration and where the prior extraction of coal meets the tests set out in policy SP15.1.

REWORKING OF FORMER COLLIERY SPOIL TIPS

8.1.19 The reworking of colliery spoil tips can be a sustainable activity as it recovers coal that has been discarded as waste and can provide the means to properly reclaim old tips that may either have been left unrestored or previously subject to poor quality restoration. Poorly restored tips can have a number of safety issues such as instability, pollution resulting from contaminated run-off or spontaneous combustion. Their reclamation can also assist in the reclamation of derelict or heavily contaminated land, or the remediation of legacy issues associated with historic mineral working. However, such operations can also have a significant impact on the environment in terms of visual intrusion, traffic movements, noise and dust. These impacts have to be weighed against the benefits.



Lodge House - pre soil replacement 2011

8.2 Conventional and Unconventional Hydrocarbons and Gas from Coal

HYDROCARBONS

Introduction and Background

- 8.2.1 Hydrocarbons include minerals such as oil and gas which provide a significant proportion of our energy supplies. They are also used as raw materials for the petro-chemicals industry and in the manufacture of drugs and plastics. In 2021, domestic production met 42% of the country's supply of gas, with the vast majority of this supplied from North Sea offshore production with a smaller proportion from the onshore oil and gas sector¹⁰⁹.
- 8.2.2 The geological conditions where these resources are found has resulted in two categories of hydrocarbons, conventional and unconventional. Conventional oil and gas reserves can be typically exploited by drilling a well, with oil or gas then flowing out under its own pressure. Conventional deposits are contained in porous rocks with interconnected spaces, such as limestone and sandstone. These interconnected spaces give rise to permeability that allows oil or gas to effectively flow through the reservoir to the well. Unconventional oil and gas deposits are contained in impermeable rocks, such as shale or coal deposits. In these cases, the oil or gas cannot easily flow through the reservoir. To extract the oil and gases, techniques such as hydraulic fracturing (commonly referred to as fracking), coal bed methane dewatering or coal gasification are used.
- 8.2.3 Hydraulic fracturing is the process of opening and/or extending existing narrow fractures or creating new ones in gas or oil-bearing rock, which allows gas or oil to flow into wellbores to be captured¹¹⁰. These operations vary, in choice and volume of fluid injected, pressures and rates, depending on specific reservoir attributes. Typically, it involves the pumping of fluid, usually water pumped at high pressure into the rock. The water normally contains small quantities of other substances to improve the efficiency of the operation. Sand is often pumped into the fractures to keep them open and allow the gas to flow out. The fluids pumped into the shale are referred to as proppants (props to

¹⁰⁹ BEIS (2021) Energy Trends Table 4.1

¹¹⁰ PPG Paragraph: 129 Reference ID: 27-129-20140306 Revision date: 06 03 2014

keep it open) and can include small quantities of chemicals. Hydraulic fracturing is not limited to unconventional resources but is more likely to be required to extract oil and gas from those deposits. In calcareous conventional resources, such as limestone, fracturing may take place involving the use of an acidic fluid which dissolves the rock to open up fractures (acidisation fracturing) and stimulate flow. The volume and pressure of fracturing fluid used can vary widely e.g., when used to stimulate the extraction of conventional resources the volume/pressure is typically much smaller than that required to extract unconventional resources such as shale gas. For the purposes of the Plan the PPG definition is adopted which does not differentiate between the volume or pressure of hydraulic fracturing fluid.

- 8.2.4 Coal mine methane (CMM) or abandoned mine methane (AMM) is extracted from active or abandoned underground mines following the natural accumulation of gas in the underground void. The removal of methane from active and former coal mine workings can be beneficial for a variety of reasons. Methane leaking from active or abandoned mine workings can result in serious risk from explosions or other health risks. In such cases it is necessary to vent the gas in a controlled manner. Methane is also an important greenhouse gas which has significant global warming potential. Reducing methane emissions can therefore have significant climate change benefits. The exploitation of coal mine methane is a simple process typically involving the collection and transfer of gas to a surface generating engine which burns the gas to produce electricity, often used to operate the mine if it is active.
- 8.2.5 Coalbed methane (CBM) is extracted from unworked coal seams. It is produced during the process of coal formation; the gas is either adsorbed onto the coal or dispersed into pore spaces around the coal seam. Wells are drilled into the coal seam; the well is then pumped to remove any water to enable the methane to be extracted. The dewatering reduces pressure which releases the methane. Development of coal bed methane usually involves the development of multiple wells in order to access a sufficient volume of resource.
- 8.2.6 Underground Coal Gasification (UCG) is an industrial process involving the controlled combustion of unworked coal seams beneath the ground and the recovery of the resulting gas. It is achieved, by drilling several wells into the coal seam. It requires a minimum of two wells; an access well to inject steam and air or oxygen to trigger and maintain the combustion of the seam and, a production well which recovers the resulting gas-water vapour mixture to the surface for treatment. Gasification produces a mixture of gases including carbon monoxide, carbon dioxide, hydrogen and methane that can be

processed to provide fuel for power generation, vehicle fuels and chemical feedstocks. The surface footprint for underground gasification can be considerable depending on the scale of the project.

- 8.2.7 Shale gas (predominantly methane) is found within organic rich shale beds or other fine-grained rocks with low porosity, rather than in a conventional reservoir of porous or permeable rock. To recover the shale gas wells are drilled down to the shale beds. The drill shafts can consist of a single and direct vertical path to the shale bed. An alternative is horizontal drilling, in which the well trajectory is turned horizontally, sometimes running for thousands of feet along a layer of rock. A single horizontal well can access a much larger volume than a vertical well, reducing the number of wells that need to be drilled. The shale has to be broken or opened to enable the gas to flow out and be captured; this process ‘hydraulic fracturing’ is described at paragraph 8.2.3.

Hydrocarbons in the Plan area

- 8.2.8 Historically oil and gas has been extracted within the Plan area on a small scale, mainly from conventional limestone resources, lying below the exposed coal measures. It was one of the first areas in Britain to be explored for oil in an attempt to shore up the nation’s supplies during the First World War. In the first half of the 20th Century oil and gas was exploited successfully at Hardstoft, Calow and Ironville. Exploratory wells have also been sunk at Ridgeway, Bramley Moor, Renishaw, Whitwell, Shirebrook, Heath, Golden Valley (near Ripley) and Sawley. Recent production has been intermittent and small scale and the resources remaining underground are considered to be of limited extent. The potential for future hydrocarbon extraction is considered to be focused on gas rather than oil.
- 8.2.9 Methane gas is commonly found in coal measures; within the Plan area the main exposed coalfield lies in the eastern half of the County. A smaller area of concealed coal measures lies below the Permian Limestone in the north east of the County (See Figure 8.2.1). In the recent past AMM has been extracted from the now abandoned coal mines at Markham, Whitwell and Shirebrook. However, production is presently minimal and the potential for further extraction is considered to be low.
- 8.2.10 Other means of extracting gas from coal include coalbed methane (CBM) and underground coal gasification (UCG). The prime requirements for CBM prospects are unworked coal seams at depths of between 200 and 1500 metres together with good methane content of the coal. Whilst such factors are present in the Derbyshire coalfield, past coal mining will have affected the

prospectivity of the area as coal extraction has the effect of lowering the pressure of the strata which causes gas to desorb from the coal. Former coal mining activity can also cause drilling problems (loss of circulation) if mud or water is used as a drilling fluid. Widespread degasification is likely to have taken place on the exposed Coal Measures, due to centuries of mining, thus the most prospective part of the area is likely to be the concealed coalfield, or those areas between more recently closed deep mines. However, collieries have existed all along the eastern side of the concealed North Derbyshire coalfield, from Whitwell to Shirebrook, so any unmined areas are likely to be small. Research by the British Geological Survey (BGS)¹¹¹ and a Department of Energy and Climate Change (DECC) paper¹¹² both indicate that the CBM prospects of both the North and South Derbyshire Coalfields are poor due to relatively low seam gas contents and uncertainty over the permeability of the coals. There have been no proposals for extracting hydrocarbons via CBM technology in Derbyshire and there is no known commercial interest at present.

- 8.2.11 Requirements for underground coal gasification includes coal seams that are more than 2 metres thick at depth of between 600 and 1200 metres with more than 500m vertical and horizontal separation from historic mine workings and current coal licences, which would suggest that there is little or no potential in Derbyshire. This was confirmed by BGS research¹¹³ which noted that the South Derbyshire Coalfield (Figure 8.2.2) did not form a UCG resource due to the extensive nature of former underground and the need to stand off from these workings, both vertically and horizontally. Prospects for UCG in the north Derbyshire Coalfield were also considered low due to the shallow nature of the Coal measures and the large number of former mine workings in this area. There have been no proposals for extracting hydrocarbons via UCG technologies in Derbyshire and there is no known commercial interest at present.

¹¹¹ British Geological Survey: UK Coal Resource for New Exploitation Technologies Final report. 2004

¹¹² Department of Energy and Climate Change (DECC) The Unconventional Hydrocarbon Resources of Britain's Onshore basins – Coalbed Methane (CBM) 2013

¹¹³ British Geological Survey: UK Coal Resource for New Exploitation Technologies Final report. 2004

Figure 8.2.1 Location of Coal Bed Methane areas in North Derbyshire Coalfield

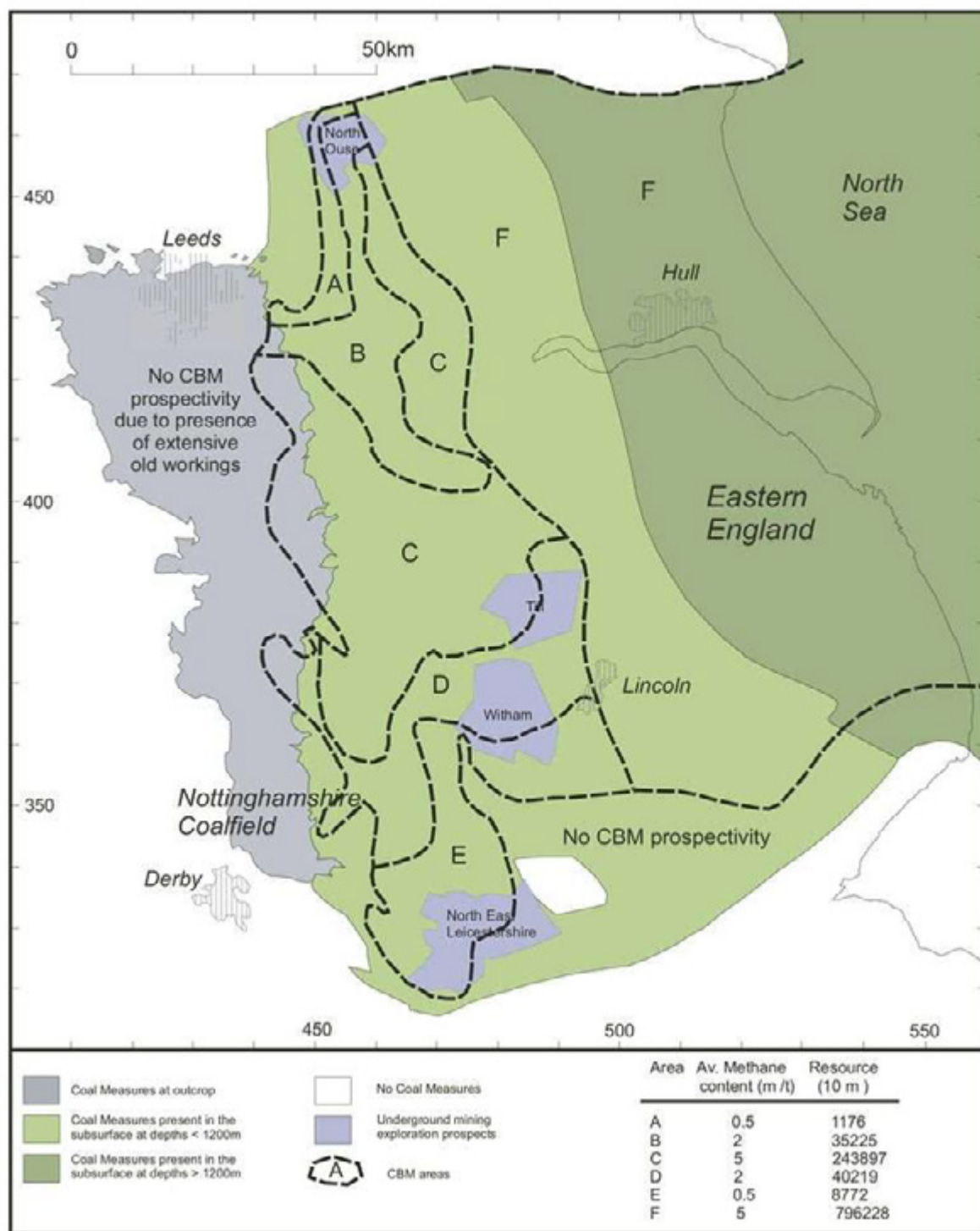


Image credit: Earthwise British Geological Society¹¹⁴

¹¹⁴ https://earthwise.bgs.ac.uk/images/f/f5/YGS_CHR_13_CANN_FIG_06.jpg Previously published in S. Holloway, N. S. Jones, D. P. Creedy, K. Garner 'Can new technologies be used to exploit the coal resources in the Yorkshire–Nottinghamshire coalfield?'

Figure 8.2.2 Summary map showing unconventional hydrocarbon coalbed methane resource potential, including South Derbyshire Coalfield

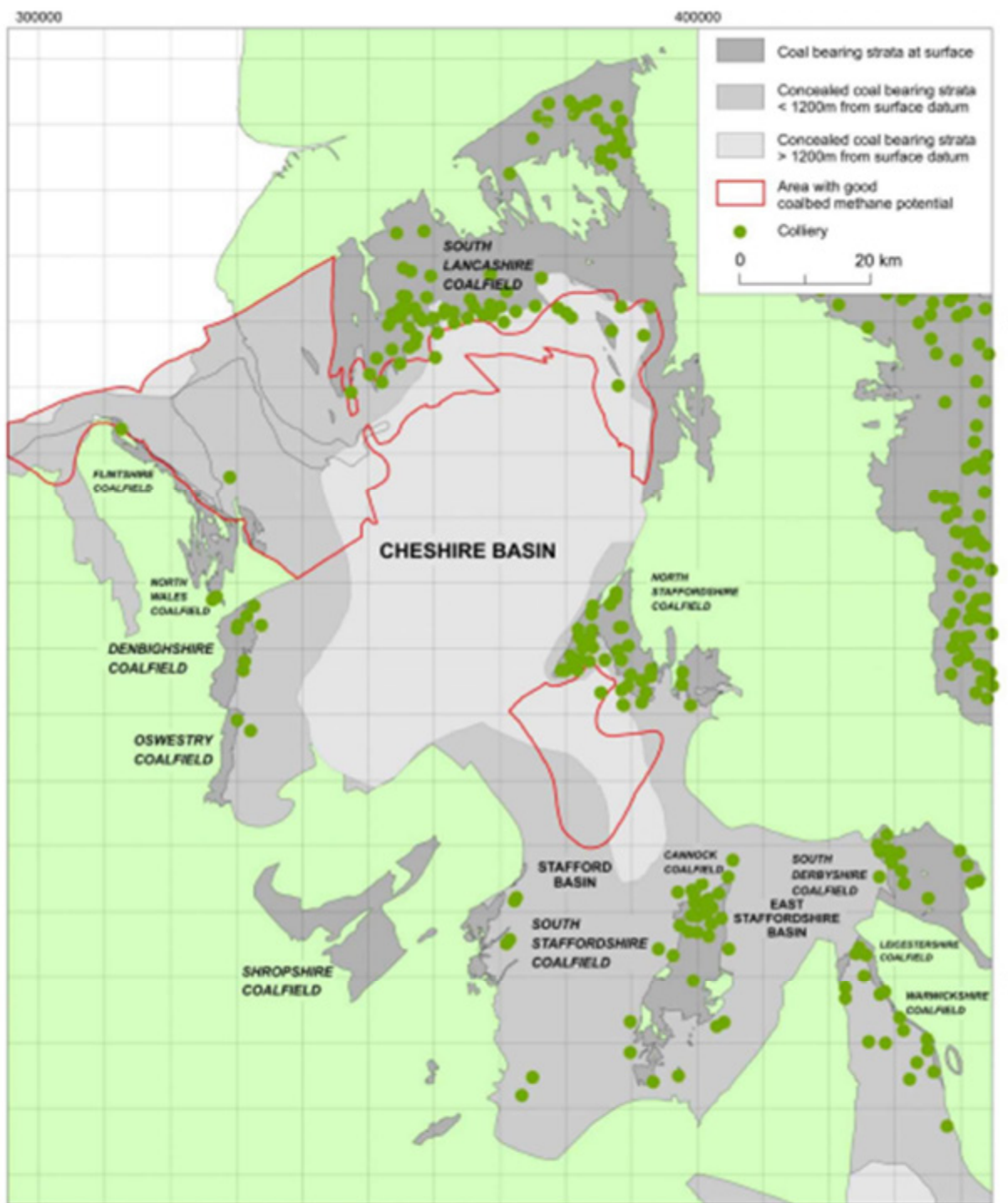


Image credit: DECC, (2013), page 31, 'The Unconventional Hydrocarbon Resources of Britain's Onshore basins – Coalbed methane (CBM)'

Figure 8.2.3 Location of underground coal gasification resources in eastern England including North Derbyshire

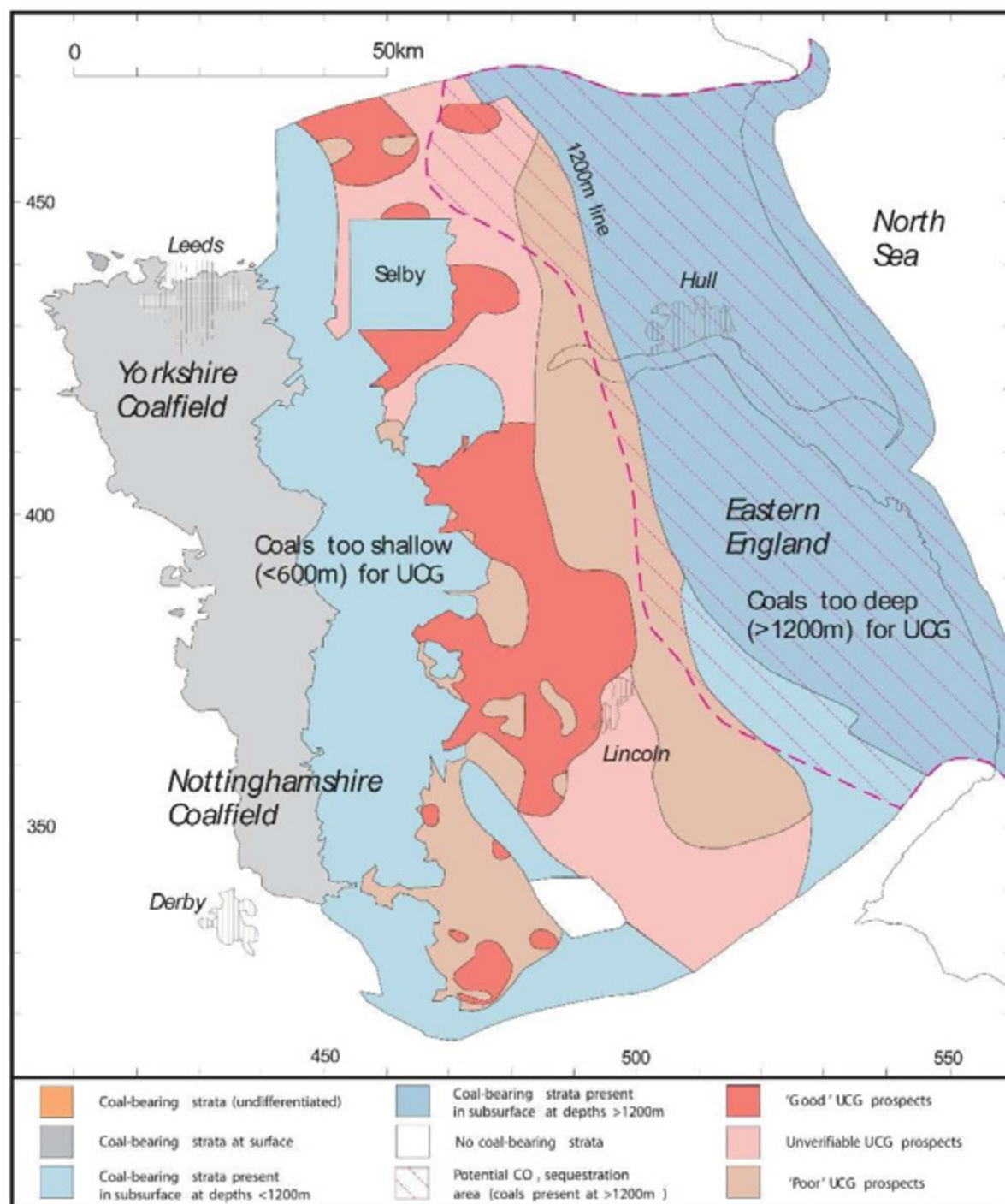
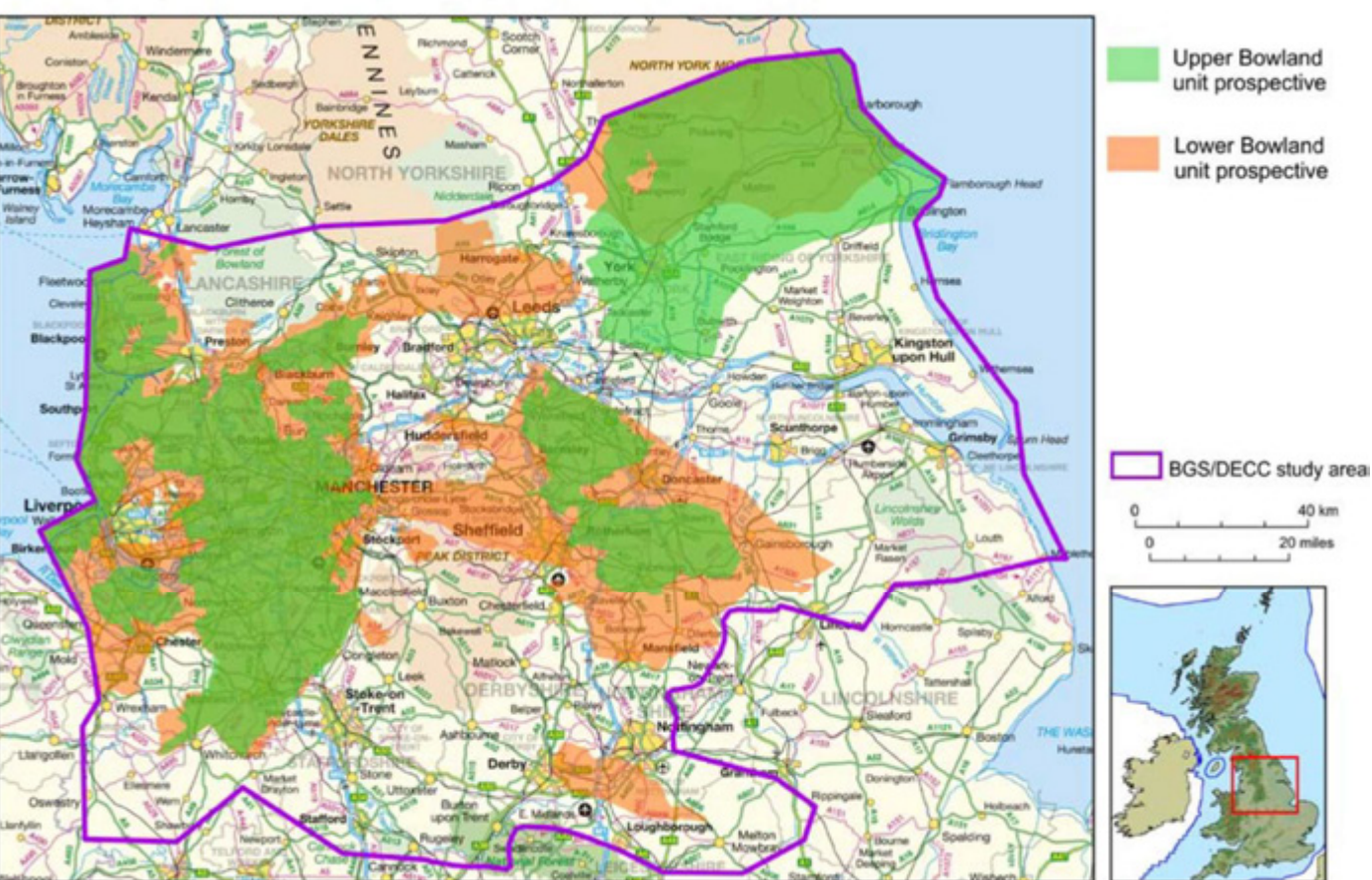


Image credit: Earthwise, British Geological Society¹¹⁵

¹¹⁵ http://earthwise.bgs.ac.uk/images/5/5c/YGS_CHR_13_CANN_FIG_07.jpg previously published in S. Holloway, N. S. Jones, D. P. Creedy, K. Garner 'Can new technologies be used to exploit the coal resources in the Yorkshire–Nottinghamshire coalfield?'

8.2.12 Gas can also be obtained from shale deposits and research by the British Geological Survey¹¹⁶ has identified substantial resources within the Bowland-Hodder shale deposits. This area extends from Lancaster in the north-west, across to Scarborough in the north-east. The broadly rectangular area extends as far south as Derby and Loughborough and therefore covers a large part of the County. Seismic surveys have been undertaken within the north east of the County. To date only one site at Bramley Moor has been granted planning permission on appeal, in 2018, for the exploration of shale gas. This permission expired in August 2021. The location of potential hydrocarbon resources from shale gas is shown on Figure 8.2.4.

Figure 8.2.4: Summary of areas prospective for gas in the upper and lower parts Bowland-Hodder unit in relation to the urban areas of central Britain 2013¹¹⁷



¹¹⁶ British Geological Survey and DECC report: The Carboniferous Bowland Shale Gas Study, Geology and Resource Estimation, 2013.

¹¹⁷ Figure 44, The Carboniferous Bowland Shale gas study: geology and resource estimation, BGS, DECC, 2013

SUMMARY OF THE KEY PHASES OF HYDROCARBON DEVELOPMENT

8.2.13 The three phases of all hydrocarbon extraction operations; exploration, appraisal and production all require planning permission, although some initial preparatory work may have deemed planning consent.¹¹⁸

Exploration

8.2.14 The exploratory phase seeks to acquire geological data to establish whether hydrocarbons are present. The main method of determining whether an area has potential traps for petroleum is seismic exploration. Geological data can also be obtained by exploratory drilling for which planning permission is required. For onshore situations, exploratory drilling is a short-term, but intensive activity. For unconventional hydrocarbons exploratory drilling may take longer if measures are required to stimulate the gas flow, through hydraulic fracturing and in the case of coal bed methane the removal of water from the coal seam.

Appraisal

8.2.15 The appraisal phase takes place following exploration when the existence of oil or gas has been proved, but the operator needs further information about the extent of the deposit or its production characteristics to establish whether it can be economically exploited. This phase typically can last up to two years or longer; it can take several forms, including additional seismic work, longer-term flow tests, or the drilling of further wells. This may involve additional drilling at another site away from the exploration site or additional wells at the original exploration site. For unconventional hydrocarbons it is likely to involve further hydraulic fracturing or dewatering followed by flow testing to establish the size of the resource and its productive life.

Production

8.2.16 The production phase normally involves the drilling of a number of wells at one or more well pads. This may be well pads used at the sites at the exploratory and/or appraisal stages, or from one or more new well pads. Associated

¹¹⁸ The provisions of the Town and Country Planning (General Permitted Development) (England) (Amendment) Order 2016 amends the Town and Country Planning (General Permitted Development) (England) Order 2015 (“the General Permitted Development Order”) to introduce new permitted development rights allowing the drilling of boreholes for the purposes of carrying out groundwater monitoring; carrying out seismic monitoring, or locating and appraising the condition of mines, which is preparatory to potential petroleum exploration.

equipment such as pipelines, processing facilities and temporary storage tanks are also likely to be required. Production can be up to around 20 years. The production stage may involve the re-fracturing of wells and is likely to require the periodic maintenance of wells which may require the use of drilling equipment.

- 8.2.17 Each phase is likely to include several distinct stages, with associated increases in activity and vehicle movements, including site establishment, delivery and removal of plant and equipment specific to that stage, drilling, and site disestablishment and restoration. However, developments requiring well stimulation may not have the same discrete phases; exploration and appraisal may take place as a single process using the same wells.

THE REGULATORY SYSTEM

- 8.2.18 In addition to obtaining planning permission for the exploration, appraisal and production of hydrocarbons requires a number of approvals to be obtained from the appropriate regulatory bodies. Key bodies include:

North Sea Transition Authority (NSTA)

- 8.2.19 The NSTA regulates the licensing of exploration and development of England's onshore oil and gas resources. The NSTA issues well consents, development programme approvals, completion of work programme approvals and production consents. If hydraulic fracturing is proposed the NSTA will require that operators undertake detailed geological studies and submit a hydraulic fracturing plan (HFP) setting out how the operator will control and monitor the fracturing process and address the risk of induced seismicity.
- 8.2.20 The Petroleum Act 1998 vests all rights to the nation's petroleum resources in the Crown, but the NSTA can grant licenses that confer exclusive rights to 'search and bore and get' petroleum. Whilst a licence holder is obliged to maximise recovery from the licence area, the award of a licence does not confer exemption from other legal and regulatory requirements, including the need to obtain planning permission. Current licence areas within the Plan area are included on Figure 8.2.5. A number of PEDL straddle mineral authority boundaries, liaison under Duty to Co-operate enables any cross-boundary impacts to be taken into account and monitored.

Environment Agency (EA)

- 8.2.21 The EA ensures that hydrocarbon operations are conducted in a way that protects people and the environment. The Environment Agency's

environmental permitting regulations cover: protecting water resources (including groundwater aquifers) as well as assessing and approving the use of any chemicals which form part of the hydraulic fracturing fluid; ensuring appropriate treatment and disposal of mining waste produced during borehole drilling and hydraulic fracturing including waste water; ensure suitable treatment and management of any naturally occurring radioactive materials (NORM) and the disposal of waste gases.

Health and Safety Executive (HSE)

8.2.22 The HSE regulates the safety aspects of all phases of extraction, in particular responsibility for ensuring the appropriate design and construction and upkeep of a well casing for any borehole.

Department of Business, Energy and Industrial Strategy (DBEIS)

8.2.23 Where hydraulic fracturing is involved the DBEIS issues a Hydraulic Fracturing Consent as a final check that all requirements have been met to enable the development to commence.

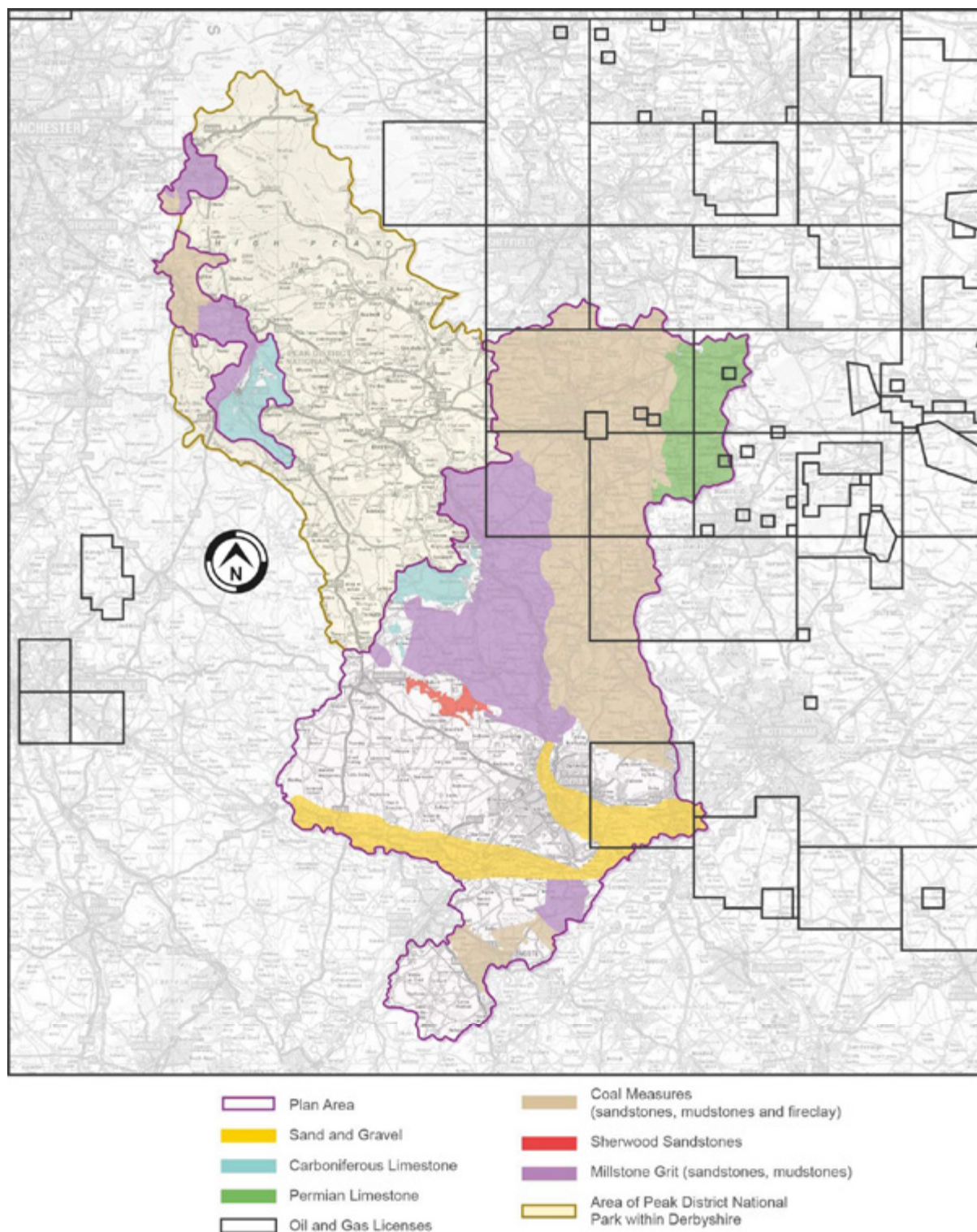
The Coal Authority

8.2.24 The Coal Authority is responsible for issuing licences for access to coal for CBM extraction and UCG. The Authority is also responsible for issuing licences should drilling go through a coal seam.

8.2.25 Other bodies which may be involved in the consenting of the process include:

- Natural England, who may need to issue European Protected Species Licences in certain circumstances
- the British Geological Survey, who need to be notified by licensees of their intention to undertake drilling and, upon completion of drilling, must also receive drilling records and cores, and
- Hazardous Substances Authorities, who may need to provide hazardous substances consents.

8.2.26 National planning guidance is clear that MPAs should not seek to duplicate the controls of regulatory bodies and should assume that other regulatory regimes will operate effectively. However, before granting planning permission the MPA will need to be satisfied that these issues can or will be adequately addressed by taking advice from the relevant regulatory body.

Figure 8.2.5 Petroleum Exploration and Development Licences 2021

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NATIONAL POLICY

NPPF

8.2.27 Government policy and guidance relating to the extraction of all forms of hydrocarbons has been developed in response to the discovery of new resources, such as shale gas, the emergence of new techniques for working resources such as underground coal gasification and the impact of those technologies. The NPPF¹¹⁹ identifies oil and gas (both conventional and unconventional hydrocarbons) as important minerals and requires MPAs to plan for their steady and adequate supply. The relevant paragraphs relating specifically to the exploration and extraction of hydrocarbons, set out in the NPPF, are as follows. *‘MPAs should:*

- a) when planning for onshore oil and gas development, clearly distinguish between, and plan positively for, the three phases of development (exploration, appraisal and production), whilst ensuring appropriate monitoring and site restoration is provided for;*
- d) encourage the capture and use of methane from coal mines in active and abandoned coalfield areas.’*

8.2.28 The NPPF sets out that great weight should be given to the benefits of minerals extraction, but without causing unacceptable adverse impacts on the natural and historic environment.

National Energy and Climate Change Policy

8.2.29 An important consideration relating to the supply of energy minerals is the Government’s Energy Policy which has evolved to put net zero and the efforts to fight climate change at its core. The Climate Change Act in 2008 set the UK’s legally binding 2050 target to reduce greenhouse gas emissions by at least 80% relative to 1990 levels. The Target Amendment Order of 2019 increased the percentage to 100% i.e., net zero emissions. In December 2020 the Government published its energy white paper¹²⁰ entitled *Powering our Net Zero Future*; in terms of the way in which we produce and use energy it promotes a decisive shift away from fossil fuels, as far as it is possible to do so, to using clean energy technologies such as renewables, nuclear and hydrogen. Nevertheless, the paper anticipates that oil and gas will still form

¹¹⁹ National Planning Policy Framework July 2021, Paragraph 215

¹²⁰ DBEIS Energy White Paper *Powering our Net Zero Future* December 2020

part of the energy mix in 2050 and therefore it is important to plan for their continued supply.

- 8.2.30 In the light of Russia invading Ukraine, the resulting restrictions on gas supply to Europe and consequent surge in global energy prices the Government published its Energy Security Strategy in April 2022¹²¹, setting out targets for renewables, nuclear and low carbon energy sources whilst stressing the importance of ‘home grown’ sources of energy to reduce our reliance on imports. Oil and gas is recognised as essential transition fuel to reaching ‘Net Zero’ and an increase in domestic production is supported.

Shale Gas

- 8.2.31 A Government WMS¹²² published in 2019 stated, *‘The Government has always been clear that it will take a precautionary approach and only support shale gas exploration if it can be done in a safe and sustainable way, and that we will be led by the science on whether this is indeed possible. It remains our policy to minimise disturbance to those living and working nearby, and to prevent the risk of any damage’*. It explains that safety regulations in relation to seismic activity has led to the development of a ‘traffic light system’ which requires hydraulic fracturing to be suspended in the event of specified levels of activity. It adds that following seismic events at Cuadrilla’s Preston New Road site, Lancashire in 2018 and 2019 hydraulic fracturing has been suspended at the site and notes that further research is required to investigate the high levels of induced seismicity.
- 8.2.32 The WMS concludes that *“On the basis of the current scientific evidence, the Government has confirmed that it will take a presumption against issuing any further Hydraulic Fracturing Consents. This position, an effective moratorium, will be maintained until compelling new evidence is provided which addresses the concerns around the prediction and management of induced seismicity. While future applications for Hydraulic Fracturing Consent will be considered on their own merits by the Secretary of State, in accordance with the law, the shale gas industry should take the Government’s position into account when considering new developments.”*

¹²¹ DBEIS and PM Office Policy Paper British Energy Security Strategy 7 April 2022

¹²² DBEIS WMS HCWS68 Energy Policy Update November 2019

- 8.2.33 In September 2022, an energy update was published via a Written Ministerial Statement¹²³ (WMS) in which the Secretary of State for BEIS set out that strengthening our energy security is an absolute priority including ensuring that the UK is a net energy exporter by 2040. To achieve this all avenues of energy production will be explored solar, wind and oil and gas production hence the need to lift the moratorium on hydraulic fracturing for shale gas.
- 8.2.34 In October 2022, a WMS¹²⁴ on Shale Gas Exploration published by the new Government stated that, it is reverting to a precautionary approach and will only support shale gas exploration if it can be done in a way that is sustainable and protects local communities. It will be led by the evidence on whether this form of exploration can be done in a way which acceptably manages the risk to local communities. The WMS makes reference to the BGS report on the scientific advances in hydraulic fracturing since 2019 which concludes that forecasting the occurrence of large earthquakes and their expected magnitude owing to shale gas extraction remains a challenge with significant uncertainty.
- 8.2.35 The Government therefore adopts a presumption against issuing further hydraulic fracturing consents, although it does not propose any changes to the planning system. This position, an effective moratorium will be maintained until compelling new evidence is provided which addresses the concerns around the prediction and management of induced seismicity. While future applications for hydraulic fracturing consent will be considered on their own merits by the Secretary of State, in accordance with the law, shale gas developers should take the Government's position into account when considering new developments.

Underground Coal Gasification

- 8.2.36 In 2015, BEIS commissioned a report¹²⁵ to provide it with evidence on the global warming potential that the production and use of syngas from UCG would have, based on the likely end uses of the syngas in comparison to conventional processes and sources of power generation, for heating and chemical feedstocks. Amongst other things, the report found that in terms of power generation, UCG syngas would result in significantly greater GHG emissions than the natural gas fed equivalent in a combined feed power station.

¹²³ DBEIS WMS HCWS 294 Energy Update, Energy Prices Support Package September 2022

¹²⁴ BEIS WMS HCWS346 Shale Gas Exploration 27 October 2022

¹²⁵ Atkins on behalf of DECC: Underground Coal Gasification – Evidence Statement of Global Warming Potential (2015)

The use of CCS was not found to significantly reduce the level of GHG emissions.

8.2.37 In response to a written parliamentary question, in 2016 the then Secretary of State for Environment, Food and Rural Affairs provided a written parliamentary answer (WPA)¹²⁶ which stated: *‘The Government has made a firm commitment to reducing the UK’s carbon emissions, and our recent ratification of the historic Paris Agreement shows we are serious about global action on climate change. The Department for Business, Energy & Industrial Strategy (BEIS) commissioned a report from Atkins into the greenhouse gas implications of underground coal gasification to inform Government policy about its development in the UK. The report was peer reviewed by academics and industry. It finds that emissions from underground coal gasification would be too high to be consistent with our commitment to a low-carbon future. The Government is therefore minded not to support the development of this technology in the UK’.*

Planning Practice Guidance

8.2.38 PPG advises that energy supplies should come from a variety of sources, including onshore oil and gas. It¹²⁷ states that, as an emerging form of energy supply, there is a pressing need to establish through exploratory drilling, whether or not there are sufficient recoverable quantities of unconventional resources such as shale gas and coal bed methane present to facilitate economically viable full-scale production. In terms of the guidance the PPG¹²⁸ encourages mineral planning authorities to make appropriate provision for hydrocarbons in local mineral plans, based on emerging information, to allow them to highlight areas where proposals for extraction may come forward, as well as managing potentially conflicting objectives for the use of land.

8.2.39 Where MPAs lie within a Petroleum Licence area, they are expected to include Petroleum Licence Areas on their policies maps and include criteria-based policies for each phase; that is exploration, appraisal and production, setting clear guidance for the location and assessment of hydrocarbon extraction within those areas. PPG¹²⁹ states that, *‘above ground separation distances are acceptable in specific circumstances where it is clear that, based on site*

¹²⁶UK parliament written questions, answers and statements Coal Gasification question for DEFRA UIN 56962 tabled on 12 December 2016

¹²⁷ PPG Minerals Paragraph: 091 Reference ID: 27-091-20140306 Revision date 06 03 2014

¹²⁸ PPG Minerals Paragraph:105 Reference ID: 27-105-20140306 Revision date 06 03 2014

¹²⁹ PPG Minerals 2014 Paragraph: 126 Reference ID: 27-126-20140306 Revision date 06 03 2014

specific assessments and other forms of mitigation measures (such as working scheme design and landscaping) a certain distance is required between the boundary of the minerals site and the adjacent development.'

- 8.2.40 MPAs may identify specific sites for hydrocarbon extraction through the site allocation process should the oil and gas industry wish to promote specific sites. In contrast to the practice established for other minerals resources, the guidance does not advocate the creation of formal safeguarding areas for hydrocarbons due to the depth of those reserves, the ability to use drilling equipment and the small surface area required for the installations.
- 8.2.41 With regard to the determination of development proposals, MPAs are advised to assess applications for each phase on their respective merits and applications for the exploratory stage of development should not involve the consideration of the potential impacts of extraction. MPAs should take account of Government energy policy, which indicates a preference for energy supplies to be obtained from a variety of sources, including onshore oil and gas. MPAs should use appropriate conditions, having regard to the issues for which they are responsible, to mitigate against any adverse environmental impact.

Policy Approach

- 8.2.42 Modern society and the benefits it enjoys are highly dependent on the continued supply of energy, and whilst the Government seeks to transform energy supply to be derived principally from non-fossil fuel clean technologies, the continued supply of oil and gas will still be required during this transition. Given the recent volatility of the price of energy and the uncertainty about continued availability, especially imported energy supplies, the need to be more self-sufficient is an important requirement and this is reflected in national energy and mineral planning policy. The Government has given its support, in principle, to the onshore oil and gas industry, including the further exploitation of conventional sources and the promotion of oil and gas from unconventional sources. In 2016 the Government stated that it was not minded to support the development of UCG technology and in 2022 it imposed a moratorium on issuing Hydraulic Fracturing Consents. However, no changes been made to national planning policy to reflect these statements.
- 8.2.43 There are no national assessments of need for hydrocarbons, Government guidance is that the volume and mix of energy mineral extraction is a matter for the relevant industries and markets to determine. It is known that limestone and sandstone are sources of conventional oil and gas present in the Plan area. Coal deposits are known to contain unconventional oil and gas resources

and studies have demonstrated that shale bearing gas is present in parts of the Plan area. The scale of all resources available in the Plan area and the commercial viability of those resources are very uncertain and appear to be limited in some cases. However, it is possible that the oil and gas industry will seek to examine and extract these resources, if commercial viability is proven, and the Plan therefore needs to include policies to consider such development proposals should they come forward. In view of the lack of knowledge about the location and scale of economically viable oil and gas resources the Plan adopts a plan wide policy approach which allows for their exploitation subject to meeting a detailed set of criteria.

POLICY SP16: SUPPLY OF CONVENTIONAL AND UNCONVENTIONAL OIL AND GAS

Proposals for the exploration and/or appraisal of onshore conventional and unconventional oil and gas will be supported where they:

- 1) provide details of the extent of the target oil and gas reservoir within the PEDL area including details of the area of search within the target reservoir (informed by the exploration stage results where the proposal is for appraisal);**
- 2) ensure that well sites and associated infrastructure are sited in the least sensitive location from which the target reservoir can be accessed having regard to geological, technical and environmental considerations;**
- 3) demonstrate that there will be no unacceptable adverse impact on the integrity of the underlying geological structure; including disturbance to features such as shafts and seams associated with former coal mining or other mining activity and that measures are included to avoid induced seismicity that may cause the instability of land;**
- 4) include satisfactory arrangements to avoid seepage pollution, to manage and dispose of drilling mud, other drilling residues and waste water including Naturally Occurring Radioactive Material (NORM) and to use or dispose of unwanted gas;**
- 5) ensure that operations are for an agreed, temporary length of time;**

- 6) ensure that well sites and associated infrastructure are restored at the earliest practicable opportunity whether or not oil or gas is found.

Proposals for the production of onshore conventional and unconventional oil and gas will be supported where:

- 7) They satisfy criteria 2 - 6 above; and
- 8) Results from any earlier exploration/appraisal of the target oil and gas reservoir within the PEDL area are provided including an indication of how the proposal is intended to fit within an overall framework for the development of the reservoir;
- 9) The number of well sites and associated infrastructure required for hydrocarbon production sit within the development framework, are justified in terms of their number and extent and are progressively installed, wherever possible;
- 10) The development includes the use of non-road modes of transport such as pipelines or rail for the transport of the oil or gas unless it can be demonstrated that this is not practicable or environmentally preferable;

Where proposals include a novel approach or new techniques for oil and gas extraction,

- 11) the MPA may require the provision of a financial restoration bond appropriate to the scale, nature and location of the development in order to ensure that the site is restored and left in a condition suitable for an appropriate after-use.

Where proposals for the exploration, appraisal or production of oil and gas resources involve hydraulic fracturing they will need to include:

- 12) proposed separation distances referred to in Policy DM1. Where the distance proposed from a well site and associated infrastructure to sensitive receptors is 500 metres or less, proposals will not be supported unless, following a robust assessment of the adequacy of the proposed separation distances and taking account of any proposed mitigation measures, it can be demonstrated that there would be no unacceptable impacts on the local amenity, health, well-being and safety of the sensitive receptors.

Proposals for the exploration, appraisal or production of unconventional oil and gas resources involving underground coal gasification will not be supported.

REASONED JUSTIFICATION

- 8.2.44 The NPPF identifies hydrocarbons as minerals of national and local importance and requires the Plan to clearly distinguish between, and plan positively for, the three phases of development (exploration, appraisal and production), whilst ensuring appropriate monitoring and site restoration is provided for. Policy SP16 sets out the criteria against which all proposals for hydrocarbon development will be assessed and identifies those applicable to particular stages of development. It contains a specific criterion to protect local communities from hydraulic fracturing.
- 8.2.45 It is important that individual planning applications are considered on their own merits and do not take account of any potential future phases for which permission has not yet been sought. Where planning permission is granted for exploration or appraisal it does not carry with it any presumption that production from those wells will be permitted. Additionally, following initial testing not all exploration will necessarily lead to appraisal, and not all appraisal will lead to production.
- 8.2.45 There are a range of environmental, local amenity and health impacts that are likely to be relevant when assessing planning proposals for hydrocarbon development including landscape and visual impacts, impacts from noise, vibration, traffic, lighting, emissions/air quality, land stability and impacts on the natural and historic environment. Many of these impacts are ones which would be common to most other mineral developments and therefore their impacts will be assessed under the relevant Strategic Policies and Development Management Policies of the Plan. The hydrocarbon policy SP16 covers only those matters that specifically relate to the extraction of hydrocarbons.
- 8.2.47 Unlike quarrying the nature of extracting hydrocarbons, and particularly the directional drilling techniques available to operators, offers a degree of flexibility in terms of the location of surface development relative to the location of the mineral resource. This flexibility provides some opportunity to ensure from the outset that well sites are located in the least sensitive location. It will be for the operator to demonstrate that the chosen site location is the least sensitive location to access the mineral through the submission of appropriate evidence.

- 8.2.48 In order to assess the ‘least sensitive’ location it is important at all of the three phases of development that an appropriate level of information is provided about the area of search and the development of the wider oil and gas reservoir within the PEDL area. At the production stage particularly, it is important to establish such information in order to ensure that a strategic approach is taken to the development of the reservoir, which includes directing development, as far as practicable, towards the least sensitive locations.
- 8.2.49 Impacts are likely to increase if commercial quantities are found and a site moves into production. This may involve the construction of more well pads and/or the drilling of more wells on an existing pad or the re-fracturing of existing wells. Associated equipment such as pipelines, processing facilities and temporary storage tanks are also likely to be required. It is important, therefore, that consideration is given to how any proposal fits into a framework for the development of the wider oil and gas reservoir within a PEDL area to ensure that it is developed in an environmentally acceptable way. The framework should include justification for the number, location and time frame for the well sites. Associated processing, dispatch and transport facilities should be sited, designed and operated to minimise environmental and local amenity impacts.
- 8.2.50 Hydrocarbon development can generate waste material which includes drill cuttings i.e. waste rock from the drilling process, waste liquids from the discarded fluids used to help the drilling process, known as drilling muds, and the waste water that returns to the surface after hydraulic fracturing, known as flowback fluid which can include NORM and other contaminants. Waste water will normally be treated off site. Waste gas should be captured and used wherever practicable or disposed of safely. Unplanned releases of gases through leakage should be monitored and strictly controlled. Proposals will need to include satisfactory measures to ensure the control and management of any waste materials arising from the development.
- 8.2.51 Hydrocarbon development can be of relatively short duration (i.e. several weeks or months) for exploration and appraisal or, in the case of production can last up to 20 years. It is important that the timescale of the development is controlled and whatever the duration of the development, but particularly if oil and gas is not found sites will need to be restored at the earliest opportunity to an appropriate after use. Proposals will need to include information about the decommissioning of any wells to prevent the risk of contamination of ground or surface waters or any emissions to air; and how the site will be restored to

an appropriate after use when operations cease, in accordance with Policy DM15.

- 8.2.52 The installation of drilling rigs and associated equipment can generate a significant number of heavy vehicle movements including some involving abnormal loads. It is important therefore to ensure that well sites are located where there is good access to suitable road networks as required by Policy DM3. The use of non-road transport such as pipelines or rail to transport produced gas and large volumes of water required for hydraulic fracturing can reduce road transport movements and proposals should address the feasibility and environmental preferability of using these transport modes.
- 8.2.53 Potential areas for hydrocarbon extraction lie in the eastern part of the County in the former coalfield areas which have been extensively mined for coal. In drilling for oil and gas and particularly if hydraulic fracturing is to take place it is important to establish geological faulting in an area and/or the location of past coal seams or other mining activity to protect the integrity of the geological structure and reduce the likelihood of any induced seismicity resulting in land instability.
- 8.2.54 Hydraulic fracturing, CBM and UCG are relatively new and untried techniques for exploiting hydrocarbons. PPG encourages the use of financial guarantees to cover restoration and aftercare costs only in exceptional circumstances, such circumstances include where a novel approach or technique is to be used which the MPA consider could include hydraulic fracturing, CBM and UCG. However, if an operator contributes to a mutual funding scheme then it should not be necessary for guarantees to be sought. The policy allows for each case to be considered individually depending on the scale, nature and location of the proposal.

HYDRAULIC FRACTURING

- 8.2.55 There are specific impacts raised where hydraulic fracturing is proposed to extract hydrocarbons that the MPA consider should be addressed through the implementation of adequate separation distances. Hydraulic fracturing associated with the exploitation of hydrocarbons is likely to lead to significantly greater impacts on local communities than the exploitation of hydrocarbons where no hydraulic fracturing takes place.

- 8.2.56 The depth of unconventional hydrocarbons, particularly shale gas, and the resultant need for hydraulic fracturing to extract it means that much longer time periods are required thus extending the duration of environmental impacts, for example, night-time light and noise intrusion. Visual impacts are greater due to the need for higher drilling rigs and larger well pads. The quantity (greater numbers of equipment) and their nature (varying types of structures) of associated plant and equipment required to facilitate hydraulic fracturing is greater. Greater traffic movements are associated with hydraulic fracturing from delivery of water and removal of wastewater and NORM, and operations associated with hydraulic fracturing.
- 8.2.57 Hydraulic fracturing associated with the exploitation of hydrocarbons is a relatively new and untried process which has generated significant local concern which impacts on the well-being, health and safety of local communities. One area of concern is the threat of fugitive emissions and Naturally Occurring Radioactive Materials (NORM) on health. Much of the PEDL license areas (and where there has been a permission for shale gas exploration to date) lie within former coal mining areas where the health and well-being of the population is below the county average¹³⁰.
- 8.2.58 A further concern is induced seismicity and land instability. The coalfield areas have been extensively mined and therefore the location of past coal seams or other mining activity may have impacted on the integrity of the geological structure and increased the risk of induced seismicity and land instability. The moratorium on issuing Hydraulic Fracturing Consents has been reinstated and the Government has vowed to maintain it until compelling new evidence is provided which addresses the concerns around the prediction and management of induced seismicity.
- 8.2.59 The MPA consider that in the light of the identified impacts a precautionary approach should be taken towards proposals for the exploitation of hydrocarbons using hydraulic fracturing. The potential for adverse impacts will tend to increase the greater the proximity to ‘sensitive receptors’ and particularly where well sites and associated infrastructure are located 500 metres or less away. The adequacy of proposed separation distances will need to be demonstrated by a robust assessment taking account of adverse impacts on local amenity, health, well-being and safety and the effectiveness of any proposed mitigation measures. The assessment should take into account the location and topography of the site, the nature and duration of the activities

¹³⁰ Derbyshire County Council Observatory District Area Profiles Health and Well Being Indicators

proposed, the need to avoid undue sterilisation of mineral resources, the scale and nature of environmental effects likely to arise and the various mitigation measures that can be applied.

8.2.60 A 500m distance from the well site and associated infrastructure (excluding site access) is considered to represent a reasonable distance of sensitivity taking into account the potential for the range of individual and cumulative impacts that may arise from hydraulic fracturing on local amenity, health, well-being and safety including noise and light pollution, visual intrusion, fugitive emissions and induced seismicity leading to land instability. For the purpose of applying this policy, the 500-metre distance will apply beyond the red line boundary of a planning application which incorporates the surface development of the well site and associated infrastructure but excluding site access. The term ‘sensitive receptor’ can vary depending on whether the impact is visual, noise or dust related but typically include dwellings, retirement/care homes, children/young adult homes, hospitals/hospices, schools/day nurseries, and tourist accommodation.

8.2.61 The Plan acknowledges at 8.2.3 that the exploitation of conventional hydrocarbons can also involve hydraulic fracturing particularly to stimulate the flow of gas. In such cases the typically lesser volumes and pressure of fracturing fluid required may result in a more limited scale of impacts than those associated with the hydraulic fracturing of unconventional hydrocarbons. Nevertheless, the character of those impacts (for example in terms of increased levels of noise, traffic and requirements for plant and equipment) are likely to be similar. The MPA therefore consider that it is inappropriate to differentiate the policy approach where hydraulic fracturing is used to exploit conventional or unconventional hydrocarbons because the planning issues would be the same. The overall scale of any impacts will be considered on a site by site basis.

PROTECTED AREAS

8.2.62 For the purposes of protecting important environmental assets from shale gas exploitation, restrictions have been established in national legislation and implemented through the PEDL and hydraulic fracturing consent regimes for

associated¹³¹ and relevant¹³² hydraulic fracturing. These definitions refer to hydraulic fracturing which involves the injection of—more than 1,000 cubic metres of fluid at any stage, or expected stage, of the hydraulic fracturing, or more than 10,000 cubic metres of fluid in total.

- 8.2.63 Regulations¹³³ ensure, via the hydraulic fracturing consent regime that ‘associated hydraulic fracturing’ cannot take place within 1,200 metres beneath the surface of ‘protected groundwater source areas’ and other ‘protected areas’. Protected areas include National Parks, AONBs, the Broads and World Heritage Sites. Regulations¹³⁴ amend model clauses on new PEDLs to prohibit ‘relevant hydraulic fracturing’ operations from taking place from new or existing wells drilled at the surface in the protected groundwater and protected areas as set out above. The surface restrictions also apply to Sites of Special Scientific Interest, Ramsar sites and European sites (as defined by regulation 8(1) of the Conservation of Habitats and Species Regulations 2010, including Natura 2000 sites protected under the Habitats Directive and sites protected under the Wild Birds Directive. For existing PEDLS the Department of Energy and Climate Change (DECC) issued a policy statement¹³⁵ which states that save in wholly exceptional circumstances Hydraulic Fracturing Consent will not be granted in protected areas.
- 8.2.64 These designated areas benefit from strong national planning policy protection in their own right and, some cases, protective European and other legislation, not just from hydraulic fracturing but from hydrocarbon and other mineral development. They will be protected from the adverse impacts of hydrocarbon development, specifically through the application of Policy SP16 and the Development Management Policies set out at Chapter 11, including any impacts on their wider settings or zones of influence/risk.

¹³¹ As defined in the Infrastructure Act 2015 (1) “Associated hydraulic fracturing” means hydraulic fracturing of shale or strata encased in shale which—(a) is carried out in connection with the use of the relevant well to search or bore for or get petroleum, and (b) involves, or is expected to involve, the injection of—(i) more than 1,000 cubic metres of fluid at each stage, or expected stage, of the hydraulic fracturing, or (ii) more than 10,000 cubic metres of fluid in total.

¹³² As defined in the Petroleum Licensing (Exploration and Production) (Landward Areas) (Amendment) (England and Wales) Regulations 2016 “Relevant Hydraulic Fracturing” means hydraulic fracturing of shale or strata encased in shale which is carried out in connection with the use of a Well to search or bore for or get petroleum, and involves, or is expected to involve, the injection of—more than 1,000 cubic metres of fluid at any stage, or expected stage, of the hydraulic fracturing, or more than 10,000 cubic metres of fluid in total.”

¹³³ The Onshore Hydraulic Fracturing (Protected Areas) Regulations 2016

¹³⁴ The Petroleum Licensing (Exploration and Production) (Landward Areas) (Amendment) (England and Wales) Regulations 2016

¹³⁵ Surface Development Restrictions for Hydraulic Fracturing Appendix A, DECC June 2016

CUMULATIVE IMPACTS

8.2.77 The majority of the areas that have potential for the presence of hydrocarbon resources lie on the exposed and concealed coalfield areas of Derbyshire. Within these areas widespread opencast and deep coal mining has taken place in the past and whilst all the mines and opencast sites have now closed, much of the legacy remains despite the progression of comprehensive remediation, restoration and redevelopment. The commercial production of hydrocarbons, particularly unconventional hydrocarbons may lead to the intensive development of the resource area over time as more well pads are developed, more wells are drilled, existing wells re-fractured and other supporting infrastructure built. Such development may lead to cumulative impacts on the environment and local amenity; these impacts will be assessed under the Development Management Policy DM14.

UNDERGROUND COAL GASIFICATION

8.2.78 In view of the findings of the report¹³⁶ which concluded that underground coal gasification was incompatible with the Government's commitment to a low carbon future and the withdrawal of its support for this method of extraction, the plan adopts the approach of not supporting proposals for the exploitation of unconventional oil and gas resources involving underground coal gasification.

¹³⁶ Atkins for DBEIS Underground Coal Gasification - evidence statement on global warming potential, November 2015

CHAPTER 9: Safeguarding

- 9.0.1 Safeguarding is an important mechanism which helps to ensure that that the mineral resource is not sterilised by, or the mineral related infrastructure lost to, non-mineral development which is proposed over or close to the resource or infrastructure without due consideration being given to the presence of the resource or infrastructure.

9.1: Safeguarding Mineral Resources

INTRODUCTION AND BACKGROUND

- 9.1.1 Minerals are a non-renewable resource and can only be worked where they occur. The NPPF requires that all mineral planning authorities define Mineral Safeguarding Areas (MSAs) so that known locations of specific mineral resources of local and national importance are not sterilised by non-mineral development, such as housing, retail or industry. This will help to ensure that the minerals remain available for possible use by future generations. Where it is considered necessary for non-minerals development to take place, prior extraction of the mineral should be undertaken where practical and environmentally feasible.
- 9.1.2 Mineral Safeguarding Areas (MSA) identify the mineral resources which are worthy of safeguarding and Mineral Consultation Areas (MCA) identify the areas where the District and Borough authorities are required to consult the MPA on planning applications for non-minerals development. The designation of MSAs does not convey any presumption that mineral extraction will be acceptable in these areas; nor do they preclude other development from being permitted; their purpose is to provide a policy tool to ensure that mineral resources are considered fully alongside all other considerations when they are at risk from being lost to proposals for non-mineral development and to ensure that they remain available for future assessment and possible future use. There is also no presumption against mineral extraction in areas that are not safeguarded, as MSAs may not necessarily capture every viable resource.

POLICY SP17: MINERAL SAFEGUARDING AREAS AND CONSULTATION AREAS

Mineral Safeguarding Areas

All known locations of locally and nationally important mineral resources, permitted reserves, permitted mineral operations and allocated mineral sites will be safeguarded from sterilisation by non-minerals development through the designation of mineral safeguarding areas, which include a 500m buffer for hard rock resources and a 250m buffer for other resources, as identified on the

Policies Map. In cases where non-mineral development is proposed within the buffer zones, the ‘agent of change’ principle will apply.

Proposals for non-mineral development in mineral safeguarding areas will be required to demonstrate, through a mineral resource assessment undertaken by a suitably qualified person, that the mineral resource would not be sterilised as a result of the development or that there are other sustainable overriding reasons why the mineral resource should not be extracted prior to that development taking place.

Where this cannot be demonstrated, and where there is a clear and demonstrable need for the non-mineral development, prior extraction of the mineral will be sought where practicable without causing unacceptable impact on the environment or local communities and having regard to the benefits of the restoration of the site.

Mineral Consultation Areas

District and Borough Councils within the Plan area will consult the Mineral Planning Authority on proposals for non-minerals development within the defined Mineral Consultation Area, as shown on the Policies Map. The Councils will not be required to consult on the list of exempt developments as set out in paragraph 9.1.11 below.

The Minerals Planning Authority will object to inappropriate non-minerals development within the Minerals Consultation Areas.

Where non-mineral development would cause an unacceptable impact on an existing mineral operation or mineral allocation, practicable measures should be provided by the applicant to mitigate any adverse impact prior to completion of the development.

REASONED JUSTIFICATION

- 9.1.3 The NPPF sets out the national approach to planning for minerals, including the need to conserve mineral resources in accordance with the principles of sustainable development. It requires MSAs to be defined in planning policy documents to ensure that known locations of specific minerals of local and national importance are not sterilised by non-mineral development, whilst not creating a presumption that resources which are defined will be worked. It sets out that, when it is considered necessary for non-mineral development to take

place, prior extraction of the minerals should be encouraged where practicable and environmentally acceptable

- 9.1.4 It states that other development proposals should not normally be permitted in MSAs if they might constrain potential future use of the resource for mineral working. Annex 2 of the NPPF sets out that minerals of local and national importance include brick clay (especially Etruria Marl and fireclay), silica sand (including high grade silica sands), coal derived fly ash in single use deposits, cement raw materials, gypsum, salt, fluorspar, shallow and deep-mined coal, oil and gas (including conventional and unconventional hydrocarbons), tungsten, kaolin, ball clay, potash, polyhalite and local minerals of importance to heritage assets and local distinctiveness.

It encourages the prior extraction of minerals if it is necessary for non-mineral development to take place in MSAs..

It also sets out that local planning authorities should safeguard:

- existing, planned and potential sites for the bulk transport, handling and processing of minerals; and
- the manufacture of concrete and other concrete products and the handling, processing and distribution of substitute, recycled and secondary aggregate material.

It states that planning policies and decisions should ensure that new development can be integrated effectively with existing businesses and community facilities.

- 9.1.5 PPG sets out that mineral planning authorities should adopt a systematic approach for safeguarding mineral resources, which:
- uses the best available information on the location of all mineral resources in the authority area. This may include use of British Geological Survey maps as well as industry sources.
 - consults with the minerals industry, other local authorities (especially district authorities in two-tier areas), local communities and other relevant interests to define MSAs
 - sets out MSAs on the policies map that accompanies the local plan and define MCAs based on the MSAs, and
 - adopts clear development management policies which set out how proposals for non-minerals development in MSAs will be handled, and what

action applicants for development should take to address the risk of losing the ability to extract the resource. This may include policies that encourage the prior extraction of minerals, where practicable, if it is necessary for non-mineral development to take place in MSAs and to prevent the unnecessary sterilisation of minerals.

- safeguards mineral resources in designated areas and urban areas where necessary to do so.
- requires District/Borough councils to include MSAs on their Local Plan Policies Maps.

9.1.6 The British Geological Survey (BGS) published the document “Minerals Safeguarding in England: Good Practice Advice” in September 2011. This supports and facilitates MPAs in their implementation of national policy with respect to the safeguarding and the prior extraction of minerals. It provides independent advice and a step-by-step methodology on how to define MSAs to prevent the needless sterilisation of minerals, as required by the NPPF. It advises that in most cases MSAs should cover the full extent of mineral resources considered to be of economic importance and that they should also cover urban areas under which mineral resources lie. It recommends the use of buffer zones to protect mineral resources from the effects of proximal development.

9.1.7 Minerals Safeguarding Guidance MPA/Planning Officers Society (POS) Practice Guide sets out the process that developers, local authorities and mineral planning authorities should follow to ensure safeguarding is properly considered in planning decisions (allocating sites in plans and determining applications). It describes the information that is required to inform decisions, how and when to obtain it, and the roles and responsibilities of those involved. It builds on, but does not replace, previous advice issued by BGS, helping to develop a more consistent approach to safeguarding and adding a valuable level of detail for practitioners, particularly regarding implementation.

9.1.8 The guide supports the aims of the NPPF, and is a useful guide for all planning authorities, as well as developers considering carrying out development on mineral-bearing land or near to existing or proposed mineral infrastructure..

SAFEGUARDED RESOURCES

9.1.9 For the purposes of safeguarding, the Plan area has the following mineral resources:

- Glaciofluvial sand and gravel.

- Carboniferous limestone (aggregate, industrial and building stone grades).
- Fluorspar and associated vein minerals (found within the carboniferous limestone).
- Permian limestone (industrial and aggregate grade).
- Surface mined coal.
- Namurian sandstone (building stone).
- Sherwood sandstone.
- Fireclay (found within the coal measures).
- Brick clay (associated with the coal measures)
- Coal derived fly ash (associated with glaciofluvial sand and gravel)

9.1.10 These resources will all be safeguarded. Fire Clay and Brick Clay are found within the surface coal resource and will be safeguarded by virtue of this predominant mineral being safeguarded. Coal derived fly ash has been used in the past to restore glaciofluvial sand and gravel workings and will be safeguarded by virtue of the area covered by the glaciofluvial sand and gravel resource being safeguarded. Deep mined coal, oil and gas resources are not safeguarded because they are not vulnerable to sterilisation as a result of surface development. This is because although the material is extracted from a wide area underground, it is brought to the surface at a single relatively small point on the surface.

EXEMPT DEVELOPMENTS

9.1.11 The main risks to future minerals extraction will arise from proposals to extend built up areas into the countryside and new development in the open countryside. Given that the majority of planning applications are submitted for development within urban areas, the designation of MSAs and MCAs could potentially lead to a large amount of unnecessary notification between district planning authorities and mineral planning authorities. To overcome this, a list of exempt developments is proposed. These are developments which will have no significant implications for mineral safeguarding and therefore on which the district/borough planning authority will not be required to consult the MPA for that purpose. These are:

- Householder development including extensions and conversions.
- Applications that do not constitute major development, as described in The Town and Country Planning (Development Management Procedure) (England) Order 2010, having regard to Policy DM14; Cumulative Impacts.

- Applications for alterations and extensions to existing buildings and for change of use of existing development.
- Infill development.
- Applications for advertisement consent.
- Applications for reserved matters.
- Development which is in accordance with an adopted Local Plan.
- Prior notifications (telecoms, forestry, agriculture, demolition).
- Applications for works to trees.
- Applications for temporary planning permission.
- Applications for variation of condition.
- Applications for Listed Building Consent

9.1.12 No specific thresholds are applied in terms of the area of the development site to be considered for consultation. Doing so may exclude small developments that can sterilise a large amount of mineral or a mineral of national importance.

SAFEGUARDING IN URBAN AREAS

9.1.13 Planning Practice Guidance sets out that safeguarding areas should be defined in designated areas and urban areas where necessary to do so. For example, safeguarding of minerals beneath large regeneration projects in brownfield land areas can enable suitable use of the mineral and stabilisation of the ground before any non-mineral development takes place.

9.1.14 BGS advises that MSAs should be defined to cover all urban areas which are underlain by minerals, in order to highlight the potential for extracting significant quantities of mineral which can exist beneath large urban regeneration projects and brownfield sites, and which may otherwise be overlooked. The Coal Authority supports this approach.

9.1.15 One disadvantage of the approach of MSAs covering urban areas is that it could potentially lead to a large amount of unnecessary consultation between district planning authorities and mineral planning authorities. However, the developments exempted from the consultation process, which have no implications for mineral safeguarding, as set out above, would help to overcome the problem of there being excessive numbers of notifications.

- 9.1.16 There may be cases when the redevelopment of a site within an urban area underlain by mineral provides the opportunity for mineral to be exploited. Extraction of mineral in these cases may be of economic advantage due to the availability of mineral on site for the development proposed or the shorter distance to market if sold. In the case of coal, prior extraction can also help to rectify issues associated with land stability.

DEVELOPMENT CLOSE TO MINERAL RESOURCES

- 9.1.17 Development which is close to, but not actually within, a mineral resource may also lead to the sterilisation of part of the resource. To take account of such risks and to also account for the inexact nature of mapped geological boundaries, particularly for more scarce resources, the MSA is extended beyond the actual resource boundary, by what is known as a buffer. For most mineral resources where blasting is not required, this has been set at 250m. The use of blasting requires the buffer zone for hard rock resources to be greater and has therefore been set at 500m.
- 9.1.18 In cases where non-mineral development is proposed within the buffer zones, the ‘agent of change’ principle will apply. This means that where the operation of an existing business or community facility could have a significant adverse effect on new development (including changes of use) in its vicinity, the applicant (or ‘agent of change’) for the new development should be required to provide suitable mitigation approved by the MPA before the development is completed.
- 9.1.19 It may well be the case that, with modern blasting techniques, the issue can be resolved and development can take place close to mineral workings with neither party being affected to a significant extent, but this approach will ensure that the issue can be considered at an as early stage as possible in the process of determining a planning application.

MINERAL CONSULTATION AREAS

- 9.1.20 Since Derbyshire is a two-tier area, there will also be a need to include Mineral Consultation Areas (MCAs). In the Plan area, the safeguarding and consultation areas are identical. In areas covered by the MCA, the District/Borough Planning Authorities will be required to consult the MPA on planning applications and local plan allocations that arise within this area.

ASSESSMENT AND MITIGATION OF IMPACTS

9.1.21 Where new non-mineral development is proposed in close proximity to a mineral operation, it will be the responsibility of the developer of the proposed development to put in place any measures which will be required to mitigate any potential adverse impacts of the existing minerals operations.

9.1.22 It is expected that the individual or company proposing a development will provide the necessary information to enable the MPA to consider the potential effect of non-exempt development in MSAs/MCAs on mineral safeguarding. This will take the form of a Minerals Resource Assessment and should include the following information:

- The type of mineral resource(s) thought to be present;
- the potential extent of sterilisation which could occur as a result of the development in terms of tonnage;
- Economic value and viability of the mineral, i.e. the market interest.
- Site specific considerations that may affect feasibility or acceptability of extraction from the site;
- Potential options for prior extraction including the amount that could be extracted, nearby operators that could extract and process the material, or opportunities for on-site use.
- Any results of mineral survey or exploration undertaken

PRIOR EXTRACTION

9.1.23 There will be cases where there is a clear and demonstrable need for non-mineral development to take place within mineral safeguarding areas. In such cases, to prevent the unnecessary sterilisation of mineral resources, prior extraction of the mineral will be sought where practicable. It is likely to be an option for relatively shallow deposits (for example sand and gravel, building sand and shallow coal) rather than for hard rock.

9.1.24 The extraction of mineral prior to, or as part of, the development of a site may be of economic advantage due to the availability of mineral on site for use in the development proposed or the shorter distance to market if sold. There will be different issues regarding prior extraction depending on the mineral involved, but it is most likely to be viable for shallow resources such as sand and gravel and surface coal. In the case of coal, in particular, prior extraction can help to rectify issues associated with land stability and post-development

fire and gas hazards associated with the spontaneous combustion of shallow coal.

9.1.25 Although there is a general presumption against the extraction of coal resources, there may be cases where it may be considered acceptable for sustainability reasons to extract it as part of a non-mineral development.

9.1.26 It is acknowledged that there will be cases where prior extraction will not be viable or appropriate. In such cases, the developer will be expected to demonstrate that:

- The non-mineral development is of a minor nature as defined in the categories of exempt developments listed above or;
- The need for the non-mineral development can be demonstrated to outweigh the need to safeguard the mineral; or
- the mineral in the location concerned is no longer of any potential value as it does not represent an economically viable and therefore exploitable resource; or
- the non-mineral development would be on the urban fringe where mineral extraction would be inappropriate; or
- The non-mineral development is of a temporary nature that would not inhibit extraction within the timescale that the mineral is likely to be needed.

9.2: Safeguarding Minerals Related Infrastructure

INTRODUCTION AND BACKGROUND

- 9.2.1 This chapter considers how the minerals supply and transport infrastructure in the Plan area will be safeguarded. It is important to safeguard minerals related infrastructure to ensure that the minerals which are produced within the Plan area and the surrounding areas are supplied to the market in the form required (e.g., concrete or coated road stone), and the potential to transport them in sustainable ways is maintained, including by rail and water. Safeguarding will also ensure that if development is proposed at, or near to, any of the identified locations then the significance of the site in terms of retaining supply can be considered fully before decisions are made.

TYPES OF MINERAL RELATED INFRASTRUCTURE

Transport Infrastructure

- 9.2.2 There are currently three operational railheads, three non-operational railheads and four rail links to quarries in the plan area (see Annual Monitoring Report for a list of the sites). These are already effectively safeguarded as a result of them being located within permitted mineral workings.

Concrete Batching Plants

- 9.2.3 There are currently thirty five concrete batching plants in the Plan area (See Annual Monitoring Report for a list of the sites). Some facilities are located on existing mineral workings, whilst others are standalone facilities on industrial estates in urban areas. The numbers and distribution of the sites involved do not suggest that any individual plant is critical in its own right; each would appear to serve its own relatively limited local area.
- 9.2.4 It can be beneficial in sustainability terms where the batching plant is located within a quarry as the host operation often supplies a large proportion of the raw materials for the manufacture of concrete or asphalt, thereby reducing transportation. Other concrete plants are usually situated within industrial estates. Large development sites often build their own temporary concrete plants to supply the development.

Coated Stone Plant (Asphalt)

- 9.2.5 Asphalt is a vital product as it is used in many different applications. These include road construction and maintenance, pavements, airport runways, school playgrounds, car parks, footpaths and cycleways and the roofing of buildings.
- 9.2.6 There are two coated stone plants in the Plan area. These are listed in the Annual Monitoring Report.

Facilities Producing Secondary and Recycled Aggregate

- 9.2.7 The most common facilities producing secondary and recycled aggregate are the dedicated stand-alone transfer and recycling facilities where crushing and screening of appropriate wastes is undertaken on sites which receive, sort and process a range of high volume, low-value materials. Some of these sites focus entirely on this activity but most sites perform a range of other sorting and recycling operations in addition to aggregate production. During the last twenty years the number of dedicated recycling sites throughout the Plan area has increased significantly. The primary locations are in and around the main urban areas, focused on older industrial estates and other areas of previously developed land at the lower value end of the market. Most of these facilities are relatively small-scale operations. They are listed in the Annual Monitoring Report.
- 9.2.8 The other source of recycled aggregate is from demolition sites where mobile crushing and screening equipment has been used to produce aggregates from the buildings and other site materials which are being removed and used in the reconstruction works at the site. Detailed information about the number of sites where this has taken place and the volume of material produced is very difficult to obtain.
- 9.2.9 Secondary aggregates have also been produced from materials obtained from the reworking of old, former tips associated with heavy industrial businesses. Some materials have been derived from sites where the primary activity has been to obtain more valuable materials (e.g., red shale or coal) contained in tips and which are now in demand and can be worked in an economically viable manner. Other materials have been obtained from tips which have been removed as part of wider remediation projects.

POLICY SP18: SAFEGUARDING MINERALS RELATED INFRASTRUCTURE

Existing, planned and potential rail heads, rail links to quarries, sites for concrete batching, coated stone, block making, all sites associated with processing minerals and the processing and distribution of recycled and secondary aggregate within and outside quarries and on former mineral waste tips are safeguarded, with the addition of a 250m buffer zone, to ensure that they are taken into account when other forms of non-mineral development are proposed in or around the facility. In the event of non-mineral proposals being proposed within the safeguarded area or the buffer zone, then the ‘agent of change’ principle will apply.

Should the facility be removed during the course of the Plan period, or it can be proved that is no longer required, this will be taken into account when considering a proposal on or around the facility.

REASONED JUSTIFICATION

- 9.2.10 The NPPF states that planning policies should safeguard existing, planned and potential sites for: the bulk transport, handling and processing of minerals; the manufacture of concrete and concrete products; and the handling, processing and distribution of substitute, recycled and secondary aggregate material, to ensure that they are taken fully into account when proposals for non-mineral development may threaten their on-going function. PPG states that in two-tier administrative areas such as Derbyshire, responsibility for safeguarding sites for the storage, handling and transport of minerals rests largely with the district or borough planning authority except where these facilities and sites are located at quarries or aggregate wharves or rail terminals. Derby City Council will be responsible for safeguarding mineral related infrastructure in its Local Plan.
- 9.2.11 Secondary processing facilities such as concrete batching plants, coated road stone and aggregates recycling facilities provide materials to maintain both existing infrastructure and new developments. These facilities are relatively small in nature and, whilst some are located within existing mineral workings, many are stand-alone facilities located in employment areas, permitted by the District or Borough Councils. The facilities located within permitted minerals workings, and therefore within the control of the County Council, will be

safeguarded through the designation of mineral safeguarding areas in accordance with Policy SP17. The stand-alone facilities permitted by a District or Borough Council, and which are not specifically linked to existing minerals workings, will be safeguarded by the relevant District or Borough Council in accordance with national policy and guidance. These are shown for information within the Annual Monitoring Report.

- 9.2.12 Most District and Borough Council Local Plans contain policies designed to protect existing employment land and these types of facilities would also be protected by the agent of change principle. This requires that existing businesses and facilities should not have unreasonable restrictions placed on them by new development permitted after they were established and that the applicant (agent of change) for the new development should be required to provide suitable mitigation if necessary, which has been approved by the MPA before the development is completed.
- 9.2.13 Development which is close to, but not actually within, the safeguarded facility may also lead to the sterilisation of part of the resource. To take account of such risks, the designation of a 250m buffer zone around the safeguarded facilities will ensure that when proposals for any development in this 250m zone are considered, full account is taken of the safeguarded facility. It will be the responsibility of the developer of the proposed new development (agent of change) to seek approval for and put in place any measures which may be required to mitigate any potential adverse impacts of the existing mineral related operation on the new development.
- 9.2.14 The County Council will respond to planning applications for non-mineral development which may affect minerals related infrastructure when consulted by District and Borough Councils to highlight safeguarding issues and ensure that the presence of the facility is taken into account along with all other considerations.
- 9.2.15 Safeguarding a facility which is currently in operation cannot guarantee that it will remain in operation until the end of the Plan period and beyond. It may be the case that a particular site is no longer required for valid reasons, for example a new supply source may have been developed elsewhere, the company may be consolidating or relocating, or the specific project being worked on has ended and the infrastructure is no longer required. In such cases, it would not be appropriate to prevent alternative, productive forms of development from using the site, as this may stifle future economic growth.

- 9.2.16 It is also possible that other forms of development could be allowed if it can be shown that the loss of the particular infrastructure site would not affect the provision of the resource to which it relates in overall terms or would be replaced elsewhere or there is shown to be sufficient provision of that particular type of facility in the area that it serves. This ensures that safeguarding can be maintained but will allow for the importance and role of the facility to be considered at the planning application stage, taking account of the potential contribution of alternative types of development.

CHAPTER 10: Restoration of Sites in the River Valleys

INTRODUCTION AND BACKGROUND

- 10.1 The river valleys in the south of the Plan area, which include the Trent, Derwent and Dove Valleys, face increasing pressure from new development. The need to identify further sites for mineral extraction and the allocation of land for new housing growth and infrastructure will place further demands on the landscape in the short and long-term.
- 10.2 At the same time, evidence points to the growing importance of the valleys as an important resource of green and blue infrastructure, serving existing and new communities, helping to enhance natural capital through the creation of networks of wetland and woodland habitat for nature conservation, largely as a result of the restoration of sand and gravel workings, as well as the improved management of the existing landscape not affected by quarrying.
- 10.3 There will be a number of elements of this landscape that will help to address the challenges of climate change, for example river braiding and widening can reduce the risk and scale of flooding by providing increased storage for flood water. Also, the planting of reed beds and trees at restored sites provide benefits for the climate, including carbon storage and improved water quality.
- 10.4 Until now, sand and gravel workings in the Plan area have been restored to after-uses with an approach that has concentrated on the requirements of the specific site rather than also considering fully its context within the wider surrounding landscape of the river corridor. As sand and gravel workings have developed over a wider area, this approach has resulted in a landscape which has become progressively fragmented; the overall environmental and cultural integrity of the landscape is gradually being altered.
- 10.5 The approach set out proposes a longer-term strategy for the restoration of sand and gravel workings in the Trent, Derwent and Lower Dove Valleys, indicating what the valleys should look like in the future and how the restoration of individual sites will fit into this. This will promote a more coordinated strategic landscape scale approach to minerals planning. It will play an important part in helping to achieve the long-term vision for the area, as set out in the emerging Trent Valley Vision, which is being developed by the County Council.



Restored sand and gravel workings at Trent Farm, Long Eaton

- 10.6 It will, therefore, help to contribute to the delivery of a new, more connected landscape, improving life for existing communities, where people will want to live, with new economic and recreational opportunities, and which is rich in history and wildlife and attracts visitors to the area. A new, robust landscape framework would be better able to deal with the increasing demands being placed on the landscape and take advantage of the opportunities presented by these changes.
- 10.7 Adjoining authorities, through which the River Trent flows, are either in the process of developing or considering similar approaches. Authorities will work together to ensure that the strategies are coordinated across the valleys. The Central Rivers Initiative is part of the wider Transforming the Trent Valley Project led by Staffordshire Wildlife Trust that aims to secure a multifunctional end use for sand and gravel extraction sites in the sub region, and to integrate the sites into landscape scale management of the river valleys.
- 10.8 The area covered by the Strategy for the River Valleys is shown on Figure 10.1 below.

Figure 10.1 Trent Valley Restoration Study Area



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POLICY SP19: RESTORATION OF SAND AND GRAVEL SITES IN THE RIVER VALLEYS

When considering the restoration of sand and gravel sites in the Trent, Derwent and Lower Dove Valley areas, the overall wider context of the site in the valley should be taken fully into account where practicable, including the potential for taking a coordinated approach with the restoration schemes of other sand and gravel workings in the area.

The Mineral Planning Authority will work with communities and mineral operators and other stakeholders to help ensure that proposals for mineral working in the Trent, Derwent and Lower Dove Valleys show how the restoration of sites will fit in with this long-term restoration strategy for sand and gravel sites in the river valleys.

REASONED JUSTIFICATION

- 10.9 National planning policy requires that land worked for minerals is restored at the earliest opportunity, taking account of aviation safety and that high quality restoration and aftercare of mineral sites takes place.
- 10.10 Objective 9 of the Plan seeks to ensure that the sustainable restoration of mineral sites takes place. It sets out that mineral development will support the high-quality restoration and aftercare of sites to the most appropriate after use, taking into account aviation safety, providing maximum local and strategic benefits to the wider area and local communities, including measures to address climate change.
- 10.11 Policy SP1; Sustainable Development, supports proposals for mineral development where they contribute towards a strategic approach to restoration within the Trent Valley area. It is an area where planned sand and gravel extraction coincides with significant planned housing growth, including proposals for a new garden village and new transport infrastructure. It is considered important to adopt a co-ordinated approach to the restoration of sand and gravel sites in the context of the changing landscape of this area and to consider the wider benefits that mineral restoration can contribute towards in terms of landscape character, biodiversity, historic environment, recreation and public access.

- 10.12 The strategy has been informed by a key project undertaken by the County Council to map Environmentally Sensitive Areas in the Trent Valley area. This has identified:
- areas of landscape considered to be of multiple environmental sensitivity relating to ecology, historic environment and landscape attributes
 - areas of some environmental value with respect to one of the datasets used but weaker in other areas.
 - those areas which might be considered comparatively less sensitive, although there may be pockets of land of some environmental value.
- 10.13 It concluded that the opportunity exists to create more resilient landscapes, firstly through the conservation of the areas identified as being of the highest environmental value (where mineral working is unlikely to be acceptable). Secondly, with robust mitigation and management in the less sensitive areas where some change is proposed and thirdly through the planning and enhancement of areas currently deficient in these environmental qualities. Environmental, economic and community benefits are likely to result in all cases. More detailed information on this project can be found in the Background Paper: A Methodology to Map Environmentally Sensitive Areas in The Trent Valley
- 10.14 The strategy will help to achieve the overarching vision for the Trent Valley, as set out in the emerging Trent Valley Vision, which is being developed by the County Council and which has gained the support of key stakeholders.
- 10.15 It will also help to support, and be part of, the development of Nature Recovery Networks (NRN), the ultimate aim of which is to create a national network of wildlife-rich places.
- 10.16 The strategy will help to maintain and encourage a thriving minerals industry, providing it with a greater degree of certainty regarding the available mineral resource and clarity about the physical constraints that exist on mineral working in the valleys.
- 10.17 It may also encourage mineral operators to revisit former extraction areas (possibly restored) to undertake additional work that might further benefit the broad long-term objective for the valleys, for example connecting existing water bodies or providing a link to the river.
- 10.18 At this stage, a broad policy is included in the Local Plan and the detail of the strategy will be included in a Supplementary Planning Document.

Part 3:

Non-Strategic Policies



CHAPTER 11: Other Mineral Related Issues and Development Management Policies

11.1 Other Mineral Related Issues

- 11.1.1 In setting out policies for non-strategic matters the NPPF¹³⁷ requires local plans to include detailed policies for, amongst other things, types of development¹³⁸. The following policies cover general mineral related issues which are not considered to be strategic.

BORROW PITS

- 11.1.2 Borrow pit is the term used to describe temporary mineral extraction which is used in association with a specific major building or engineering project, such as the construction of a new road, railway, or reservoir. Borrow pits are used solely to supply mineral based construction materials for these projects. They normally involve the excavation of large quantities of material over a short period from a site lying adjacent or very close to the development site. Typically, the materials are used to provide bulk fill, but they can also be used for specialist purposes, for example, the supply of clay with particular qualities for placement around bridge supports over water courses. Past examples, in the Plan area, include the borrow pits used in connection with the construction of the A50 Stoke-Derby link between the M1 motorway and Doveridge.
- 11.1.3 Borrow pits can have a number of advantages over established quarries. Major construction projects such as road schemes are normally intensive developments and require large quantities of material over a relatively short period. For a developer, the use of a borrow pit operated under their control can ensure the availability of the material that is required in the right quantities and the right times to serve the needs of the construction project. In contrast, an established quarry may have a number of existing supply contracts and may not be able to guarantee delivery in the volumes which

¹³⁷ Paragraph 18, NPPF, July 2021

¹³⁸ Paragraph 28, NPPF, July 2021

are required, especially if the quarry output is limited and controlled by the terms of the planning permission. Additionally, the void created by the mineral extraction can sometimes be used to dispose of surplus excavation materials from the construction site and the land restored at a much shorter timescale than at a conventional quarry. Furthermore, sourcing the material from an adjacent site reduces the volume of traffic on public roads and the associated impacts that can have. Minerals won from borrow pits contribute towards the Plan area's aggregate requirements and may help to conserve reserves at established quarries by ensuring that the construction project uses minerals of an appropriate quality.

- 11.1.4 Planning permission is required for all borrow pits apart from smaller ones which are developed within the boundary of construction sites, including highways and railways. Proposals for borrow pits will be considered in the same way as other mineral development and therefore they must be justified in terms of being the most sustainable way of supplying mineral to meet demand, taking into account appropriate socio-environmental safeguards covering both working and restoration.
- 11.1.5 The need for and the supply of borrow pits can only be established on an individual construction project basis and where borrow pits are proposed information should be provided to demonstrate the relationship between the proposal and the specific project to be served. It is particularly important to plan early for borrow pit development in order that it can be developed in the timescales required for each project. Borrow pits should not be used to serve the wider market for minerals.
- 11.1.6 The main impacts associated with borrow pits is that they usually involve greenfield sites and may lie in semi-urban areas where mineral working would not normally be acceptable. It is an important principle, therefore, that proposals for borrow pit development provide significant benefits that offset any adverse impacts of mineral extraction in such locations. They should also set out a clear and acceptable method of operation with appropriate mitigation measures and provide for an appropriate form of restoration. Policy OM1 covers only those matters that relate specifically to the extraction of minerals by borrow pit; all other policies of the Plan apply to borrow pit development where relevant.

POLICY OM1: BORROW PITS

Proposals for borrow pits associated with specific construction projects will be supported where:

- 1) The site is adjacent to or sufficiently close to the project so that the material can be conveyed to or from the site without using the public highway;**
- 2) The material extracted will only be used in connection with the project or will be used to receive material from the project**
- 3) It can be demonstrated that the supply of material from the borrow pit could not be obtained from other permitted sites nearby or would provide significant net economic, social and environmental benefits than if it were supplied from an existing source;**
- 4) The borrow pit can be restored to an appropriate after use, at the earliest opportunity, without the use of imported material, other than that generated from the construction project; and**
- 5) The use of the borrow pit is limited to the life of the project.**

REASONED JUSTIFICATION

11.1.7 Borrow pits provide a way of contributing to the sustainable supply of minerals for specific construction projects. The issue of borrow pits is not addressed explicitly in the NPPF or PPG; borrow pits, however, are a form of mineral development and the guidance in these documents relating to the need to maintain the supply of minerals whilst protecting the environment and local amenity applies to these developments.

11.1.8 Policy OM1 allows for the working of borrow pits subject to proposals meeting strict criteria relating to their location, the use of the mineral, the need for the mineral, restoration of the site and duration of the operation. In considering need the quantities and specifications of materials required for the construction project will be assessed, by the MPA, in the context of the level and location of existing permitted reserves. In general, it should usually be possible to meet requirements from local established quarries or from secondary/recycled aggregates. In such circumstances, borrow pits can normally only be justified where they offer clear net sustainability benefits over alternative existing sources of supply. The MPA will take into account

such benefits, for example, where borrow pits are adjacent to construction sites, the most obvious benefit will be the avoidance of heavy good vehicles on the road network. There may also be economic and energy savings because of reduced haulage costs. These factors may also provide benefits for reducing carbon emissions in the context of climate change. Sites will need to be restored to an appropriate after use which may include using waste material from the construction project. The use of the mineral and the duration of proposed operation will be strictly controlled in relation to the construction project.

REWORKING OF FORMER SPOIL TIPS

- 11.1.9 The Plan area contains a number of historic spoil tips associated with former large-scale manufacturing and heavy engineering industries. Advances in processing technology now make it possible to recover the minerals from these tips, although the viability varies in accordance with the price and the quantity available. Proposals usually involve the re-tipping of waste material within the original tipping area. The recent reworking of one of the former spoil tips at the St Gobain site (formerly the Stanton and Staveley works) to the south of Ilkeston is a recent example of this form of development within the Plan area. Tarmac is also reworking tipped material at Hindlow Quarry.
- 11.1.10 The reworking of spoil tips has a number of benefits. It supports the important sustainability principle of re-using waste material to supply minerals which assists in reducing the need for other minerals to be obtained from new sites, thus retaining primary minerals for use in the longer-term. It could extend the life of established quarries and even avoid or delay the need for additional extraction sites. Furthermore, the reworking of former spoil tips has the potential to facilitate the improvement of those sites that did not benefit from a high standard of reclamation at the time and which detract from the environment and local amenity of an area.
- 11.1.11 However, whilst the reworking of former spoil tips may represent a small-scale development compared to traditional mineral extraction sites, the operations can involve substantial engineering works requiring the use of large machinery and other plant such as screening and washing equipment. They may also seek to operate over a 24-hour period to make the operation economically viable. These activities therefore have the potential to generate a range of adverse socio-environmental impacts including visual intrusion, HGV movements, noise and dust similar to those for more regular mineral extraction sites. The impacts of obtaining the mineral by such development

needs to be weighed against the benefits, which could include opportunities for landscape or habitat enhancement particularly where sites have not benefited previously from effective restoration schemes.

- 11.1.12 A further consideration is that in recent years, many of the older spoil tips have been well restored and are now an established feature of the landscape. Re-working of these tips could negate the benefits derived from the earlier restoration programme and this would need to be taken into consideration in the overall assessment of benefits. Policy OM2 covers only those matters that specifically relate to the extraction of minerals from former spoil tips, excluding colliery spoil tips which are covered by policy SP15: Coal and Colliery Spoil Disposal; all other policies of the Plan apply to this type of development where relevant. Spoil tips can also be re-worked to produce secondary and recycled aggregates. Proposals that fall within this category will be assessed against Policy SP3 the supply of recycled and secondary aggregates and all other policies of the Plan where relevant.

POLICY OM2: REWORKING OF FORMER SPOIL TIPS

Proposals for the extraction of minerals previously deposited in spoil tips will be supported where:

- 1) It can be demonstrated that the development would provide significant net economic, social and environmental benefits; and**
- 2) They would not adversely affect any previous restoration that has been carried out on the site, or, if so, they would result in further, significant improvements to the previous restoration scheme**

REASONED JUSTIFICATION

- 11.1.13 The NPPF and PPG do not specifically address the issue of the reworking of former spoil tips directly but do advocate the sustainable and prudent use of mineral resources and highlight the advantages of using secondary materials in preference to the extraction of primary materials.
- 11.1.14 The reworking of former spoil tips is, in principle, similar to other types of mineral development and mineral related development and the guidance of these documents relating to the need to maintain the supply of minerals to

support economic growth and provide for the needs of society whilst protecting the environment and local amenity applies to these developments.

- 11.1.15 The reworking of former spoil tips is a way of contributing to the sustainable supply of minerals by reusing waste sources. Policy OM2 allows for the working of minerals from former spoil tips where the economic, social and environmental benefits of the proposal, including any environmental improvements to the site outweigh the socio-environmental impacts of the development. In assessing the benefits of the development, the MPA will take into account any adverse impacts on previous restoration schemes and proposals will be expected to negate such impacts by providing further significant improvements to previous restoration schemes.

INCIDENTAL AND PRIOR WORKING OF CLAY

- 11.1.16 Clays are the amongst the most widespread sedimentary rocks present throughout the Plan area. Policies to enable the working of Brick Clay and Fireclay are set out at Chapters 7.3 and 8.1 however other types of clay, although of less importance can be of commercial value for use in engineering applications e.g. clay linings. This section is about the working of such deposits where they are found in association with other primary minerals such as sand and gravel and some crushed rock types. It also covers the prior extraction of such clay to enable the commencement of another approved development. Chapter 9.1 safeguards minerals of national and local importance, including Brick Clay and Fireclay from sterilisation by non-mineral development. It also includes a policy to enable their prior extraction.
- 11.1.17 In some mineral workings the primary mineral occurs alongside clay deposits which need to be removed to access that primary target mineral. Similarly, clay deposits may lie on sites that are being redeveloped for non-mineral development. Where such clay deposits are of commercial value it may be justifiable for them to be extracted and used off site or even used on-site. In principle, recovering minerals as an incidental element to the working of another mineral or prior to or part of a non-mineral development proposal promotes sustainable development by helping to use mineral resources that might otherwise be lost.
- 11.1.18 It is important that extracting and removing incidental clay off-site would not significantly increase the overall environmental impacts of extracting the primary mineral especially in relation to any impacts on the restoration of the site. Clay materials are often retained on site and replaced in worked out

areas to provide a satisfactory final landform. Incidental clay working could lead to additional visual, noise and dust impacts and increased HGV traffic from the site.

- 11.1.19 Similarly, where clay is removed prior to the development of a site for non-mineral development it is important to consider any additional adverse impacts from extracting the clay over and above those from the implementation of the approved development. It is necessary, therefore, to consider the location, scale, nature of such adverse impacts against the benefits of the mineral obtained. Prior extraction could also lead to additional visual, noise and dust impacts and increased HGV traffic from the site.

POLICY OM3: THE INCIDENTAL AND PRIOR WORKING OF CLAY

Proposals for the extraction of clay will be supported where they:

- 1) Involve the incidental extraction of clay in association with the production of other minerals and where the extraction would help to ensure the most sustainable use of resources and would not significantly increase any adverse environmental or local amenity impacts associated with the primary working, or the subsequent restoration and after use of the site; or**
- 2) Involve the prior extraction of clay in advance of non-mineral development and where the extraction, would avoid the permanent long-term sterilisation of the clay resource and would not significantly increase any adverse environmental or local amenity impacts associated with the proposed non-mineral development.**

REASONED JUSTIFICATION

- 11.1.20 The NPPF requires that, when preparing local plans, local planning authorities should include policies to provide for the extraction of minerals of national and local importance and to make the best use of them to ensure their long-term conservation. It also requires local plans to set out policies to encourage the prior extraction of minerals, where practical and environmentally feasible, if it is necessary for non-mineral development to take place. In turn, it also provides guidance on the issues that mineral

planning authorities should take into account when determining mineral development proposals.

- 11.1.21 The incidental and prior working of clay is a way of contributing to the sustainable supply of minerals by using minerals that might be sterilised or left unworked. Policy OM3 allows for the incidental working of clay in association with other minerals provided that extracting and removing the incidental clay off-site would not significantly increase the overall environmental and local amenity impacts compared with extracting the primary mineral, including any impacts on the reclamation and after use of the site. The policy also allows for the prior extraction of clay in advance of non-mineral development in order to avoid the long-term sterilisation of the clay resource and provided that the proposal would not significantly increase any adverse environmental or local amenity impacts associated with the proposed non-mineral development.
- 11.1.22 Proposals for the incidental working of clay alongside other minerals will be determined by the MPA. Where clay is worked prior to non-mineral development, whether a separate planning application will need to be made for mineral extraction to the MPA or whether the extraction will be considered as part of the non-mineral development, to be determined by the relevant City/Borough/District Council, will be decided on a case-by-case basis. The prior extraction of clay is not precisely defined in terms of quantity of mineral worked or duration. It does not, however, apply to mineral development simply because it is small scale or short term. If mineral extraction is a significant reason for justifying or promoting the development, the proposal will need to be assessed against the relevant policies applicable to the mineral being worked.

MINERAL RELATED DEVELOPMENT

- 11.1.23 Quarries and mines usually need ancillary mineral related development close by, such as plant machinery and buildings, for the treatment, preparation and use of minerals produced at the site. Examples include plant to crush, and screen raw mineral to a specified size or to wash raw mineral to remove impurities, and bagging plants to weigh and bag the raw mineral ready for export. In addition to ancillary development directly associated with the working of the mineral, there are often a number of ‘industrial type’ plants associated with the use of the mineral such as ready-mix concrete plants, concrete products and asphalt plants. At quarries which extract ‘industrial

limestone’ additional development, such as cement and lime kilns, milling and powders plants may also be present.

PERMITTED DEVELOPMENT RIGHTS

- 11.1.24 Not all mineral or mineral related development requires a formal application for planning permission. The Town and Country Planning (General Permitted Development) (England) Order (GPDO) 2015 Part 17, as amended, permits certain types of minerals and mineral related development, as well as some limited mineral exploration, to take place without the need for express planning permission. These are commonly referred to as ‘permitted development rights’. To qualify, the development must be for purposes principally in connection with the winning and working of minerals from the mine, and includes the treatment, storage or removal of minerals and derived wastes. A wider range of other developments, including secondary industry ancillary to the mining operations, e.g. road coatings plants and storage silos, are also permitted under the GPDO subject to the prior approval of the MPA and where the MPA has not formed a view that it is Environmental Impact Assessment development. Where such approval is required, the MPA will have regard to the development management policies of the Plan as set out below.
- 11.1.25 Other forms of ancillary mineral related development do require planning permission. For some mineral extraction sites, particularly those of a limited duration, the range of ancillary equipment may have been identified in the original planning application and the use would be included in the planning permission. Some of the quarries in the Plan area, however, are substantial in size and will continue to operate for many years. The need for ancillary development at these quarries will vary over time and may involve the installation of new or replacement plant on different locations within the quarry.
- 11.1.26 There are a number of operational reasons why it is advantageous to co-locate ancillary mineral related development with the main mineral extraction operation. Additionally, it can reduce overall transport requirements and concentrate development on one site rather than a number of separate sites. However, the siting of additional plant, buildings and machinery (sometimes substantial in scale) usually in countryside locations can generate adverse socio-environmental impacts, for example, in terms of visual intrusion, noise, dust and traffic generation, which can be particularly detrimental where the extraction site is not well related to the highway network.

- 11.1.27 A further consideration is that some types of mineral related development is not constrained to a particular location in the way minerals extraction is and, in some instances, plant of this type may be in ‘freestanding’ locations, such as on industrial or employment land. In some cases, this can represent a more sustainable approach, particularly where a wide range of minerals or other raw materials, not available at the primary quarry site, are required as part of the process. Such sites may be better located in terms of transport networks and key markets for the products.
- 11.1.28 Where mineral related development is to be sited at a quarry or mine, it is important that the siting of such development in what would normally be a countryside location can be justified any that any benefits of co-location are not outweighed by environmental and local amenity impacts. Where such development is located in the ‘green belt’ it will need to satisfy Development Management Policy DM11. Where mineral related development is justified it should be time limited to coincide with the cessation of mineral extraction at the associated site.

POLICY OM4: MINERAL RELATED DEVELOPMENT

Proposals for mineral related development will be supported where they can demonstrate the need for a close link between the mineral related development and the mineral extraction and provided that they:

- 1) would not have significant adverse environmental and local amenity impacts;**
- 2) would not unacceptably increase the overall amount of road transport to the mineral site;**
- 3) are linked to the overall life of associated minerals extraction; and**
- 4) where applicable, support and promote the efficient use of energy and resources including renewable energy schemes, water management, waste minimisation and recycling and water efficiency measures.**

Proposals for mineral related development should be supported by a transport statement and/or transport assessment, proportionate to the scale of the development, in order to understand their impact on

existing transport networks and a travel plan in order to demonstrate how these impacts will be mitigated.

REASONED JUSTIFICATION

- 11.1.29 The issue of mineral related development is not addressed explicitly in the NPPF or PPG. Both, however, provide policy and guidance on the issues that MPAs should take into account when determining mineral and mineral related development proposals, particularly in relation to the need to ensure acceptable environmental and local amenity impacts.
- 11.1.30 There are recognised benefits from the location of mineral related development at mineral extraction sites. Policy OM4 supports such proposals provided they demonstrate the need for a close link between the proposed development and the mineral site. Particular consideration will be given by the MPA to ensure that impacts on the environment, local amenity and the highway network are acceptable. Where planning permission is granted for mineral related development, it will be time limited to expire on the cessation of mineral extraction at the site.
- 11.1.31 In assessing proposals for mineral related development the MPA will also have particular regard to Policy SP2 Climate Change which requires proposals for mineral related development to demonstrate how they can contribute towards reducing greenhouse gas emissions and provide for resilience and adaptability in responding to the impacts of climate change with particular reference to energy efficient, low carbon powered and sustainably designed and constructed plant and buildings.
- 11.1.32 Whilst some forms of mineral related development will be small scale, unlikely to generate traffic or have energy requirements, other forms of mineral development, including extensions to existing structures and buildings, will potentially be more substantial, requiring additional employees and energy requirements and operating on a 24 hour a day basis. In such circumstances, in line with the requirements of Policy SP2: Climate Change, the MPA will expect applicants to demonstrate that measures to improve the environmental performance of the mineral related development have been taken. Such improvements could include maximising energy efficiency or, where possible, adding on-site renewable energy generation capacity. Other approaches could include water management, waste minimisation and recycling and water efficiency measures. Where it is demonstrated that the

use of low carbon and renewable energy is not possible, carbon off setting should be considered.

- 11.1.33 Mineral related development can, in some circumstances, lead to significant levels of HGV traffic as well as employee vehicle movements. Where a proposal is located at a quarry site, such traffic could also result in cumulative impacts associated with quarry traffic. The MPA will therefore require proposals for minerals related development to be accompanied by either a transport statement or transport assessment, depending on the scale of the development. A travel plan will also be required, setting out how any impacts will be mitigated.

MINERAL EXPLORATION

- 11.1.34 Exploration is essential to prove the existence and extent of mineral resources and prior to development, it is necessary to ensure that a resource is economically viable and that it can be worked. Many proposals for mineral exploration are small scale, for temporary periods and have limited impact on their surroundings. Certain types and scales of development of this nature are classed as ‘permitted development’ and as explained in this Chapter, at 11.1.24, do not require a formal planning application for planning permission. Larger scale proposals will normally require planning permission. PPG identifies ‘exploration’ as a distinct stage for oil and gas development proposals. The exploration stage usually involves substantial operations and deep drilling and will generally require planning permission. Where this is the case, proposals for such development will be considered against Policy SP16: The Supply of Conventional and Unconventional Oil and Gas at Chapter 8.2. However, initial mineral exploration operations, including the undertaking of seismic surveys, can also be ‘permitted development’.
- 11.1.35 Seismic surveys are the most common type of geophysical survey, mainly associated with the exploration of coal, oil and gas. They provide useful information about the geology of an area and its potential to contain mineral resources rather than their existence. Most seismic surveys have little environmental impact; however, noise and vibration can raise concerns when carried out in sensitive areas and when carried out for a prolonged period. Most seismic surveys have permitted development rights but there are several exceptions relating to sensitive areas, proximity to buildings, size of the explosive charge and the duration of operations. In these cases, planning permission is required. In any event, operators are encouraged to notify local residents at an early stage, prior to surveys being carried out to

allay concerns and unnecessary fears. They are also required to submit a prior notification to the MPA if the development is over a certain scale and duration.

- 11.1.36 Trial pits and shallow boreholes are the main methods of surface mineral exploration which obtain data on the depth, extent and quality of the mineral, the make-up of overburden and hydrological data. After the information is recorded, the pits are backfilled and reinstated. These methods of exploration are mainly permitted development; exceptions to this include operations in close proximity to buildings and operations in environmentally sensitive locations. There are also limits on the intensity of drilling, the use of explosives and the heights of rigs.

POLICY OM5: MINERAL EXPLORATION

Proposals for mineral exploration will be supported where:

- 1) they are for a temporary period only;**
- 2) they would not have significant adverse environmental and local amenity impacts; and**
- 3) any land disturbed is satisfactorily restored at the earliest opportunity.**

REASONED JUSTIFICATION

- 11.1.37 The issue of mineral exploration is not addressed explicitly in the NPPF or PPG. Both, however, provide policy and guidance on the issues that MPAs should take into account when determining mineral and mineral related development proposals, particularly in relation to the need to ensure acceptable environmental and local amenity impacts.
- 11.1.38 Mineral exploration has an important role in the identification of economically viable mineral resources. Where such development requires planning permission proposals will be supported in principle subject to particular consideration by the MPA in relation to impacts on the environment and local amenity. Where planning permission is granted, it will be for a temporary period and subject to the requirement to satisfactorily restore any land disturbed at the earliest opportunity

11.2: Development Management

- 11.2.1 Development management refers to the process of determining planning applications, the subsequent monitoring of authorised development with planning permission as well as the investigation and enforcement against breaches of planning control. Planning applications should clearly explain the purpose of the development, provide details of how the operations will be managed and any measures proposed to reduce or remove adverse effects. The Plan will consider all social, economic and environmental issues that are relevant to each development proposal.
- 11.2.2 The development management policies are designed to assist in the delivery of sustainable mineral development (Chapter 4) and the strategic priorities (set out in the vision and objectives (Chapter 3)) of the Plan by providing detailed criteria against which proposals for mineral development and mineral related development will be assessed. In general, the development management policies relate to specific, site level criteria such as environmental impacts and standards and provide guidance about how planning applications for minerals development and minerals related development and applications for the review of mineral planning permissions in the Plan area will be assessed.
- 11.2.3 In the preparation of planning applications, applicants should consult the MPA's local list of information requirements for the validation of planning applications¹³⁹ and are encouraged to discuss their proposals with the MPA before submitting a planning application. Early informal consultation with the MPA and statutory consultees will help to identify potential impacts of proposals and potential measures to avoid or minimise them as well as the range of technical assessment work that may be required. Pre-application engagement with the local community and local interest groups can also help to establish potential impacts of a proposed development and improve the quality of decisions on planning applications. The MPA's Statement of Community Involvement provides information on how consultation on planning applications will be carried out¹⁴⁰.

¹³⁹ Derbyshire County Council, Planning Services Local List of Information requirements, Revision 4 (2021).

¹⁴⁰ Derbyshire County Council, 1st revised Statement Community Involvement, December 2021; Derby City Council, Revised Statement of Community Involvement, July 2017.

REVIEW OF MINERAL PERMISSIONS

- 11.2.4 Minerals development can take place over an extended period of time and many quarries in the Plan area are currently worked under planning permissions dating from the 1950s and 1960s. Provision for the review of old mineral planning permissions (ROMPs) is contained in the Planning and Compulsory Purchase Act 1991 and the Environment Act 1995. The purpose of the ROMP process is to enable the MPA to apply modern conditions to older permissions which reflect sustainability aspirations and offer appropriate environmental protection. ROMP submissions cannot be refused, and compensation liabilities may apply if working rights are unreasonably affected. However, a ROMP determination process will be conducted by the MPA in a similar way to the planning application process and the more general policies of the Plan will apply during its determination. PPG provides some guidance regarding the ROMP process¹⁴¹. ROMP applications may also need to be subject to an Environmental Impact Assessment, further information about which is set out in paragraph 11.6 below. PPG also provides some guidance about how the EIA regulations should be applied to ROMP applications¹⁴².

TRANSITIONING TO 2042 AND BEYOND

- 11.2.5 The Town & Country Planning (Minerals) Act 1981 introduced a provision to impose an end-date on all those mineral planning permissions that were granted prior to 22 February 1982 without a specific end-date. The new end date was set at 22 February 2042, 60 years after the power came into effect. The Plan Area contains more than 40 active or dormant mineral sites whose planning permissions are set to expire in 2042. Whilst some of those sites will have exhausted their reserves prior to 2042, many will still be both operational and contain commercially viable reserves with the potential for working many years beyond 2042.
- 11.2.6 The Plan covers the period up to and including 2038, which is close to the 2042 deadline. This presents a number of challenges for the MPA and mineral operators, in terms of certainty of continuity of supply as well as managing long-term working and restoration requirements through the ROMP process. At the current time no guidance has been produced by government about how to approach the 2042 deadline or regarding any

¹⁴¹ PPG, Paragraph 178, Ref ID: 27-178-20140306 onwards

¹⁴² PPG, Paragraph 013, Ref ID 4-013-20170728

potential legislative changes. It is therefore proposed that this issue will be annually reviewed post-adoption of the Plan with the potential for further guidance to be produced at that time. In the meantime, operators are encouraged to enter into discussions with the MPA regarding the long-term plans for their sites at the earliest opportunity.

MONITORING AND ENFORCEMENT

- 11.2.7 The effective monitoring of mineral sites to ensure compliance with their planning permissions and conditions and, where necessary, taking enforcement action against breaches of planning control, is very important. The MPA will work closely with other regulators and statutory bodies, such as the Environment Agency, in monitoring and exercising appropriate control over mineral sites, particularly where there is some overlap in respect of their regulatory responsibilities e.g. storage of contaminants or infilling operations. Efficient and effective monitoring can often identify potential problems early and ensure that they are resolved satisfactorily without the need for formal action. However, where it is considered appropriate and expedient to do so enforcement action will be taken. In undertaking its monitoring and enforcement responsibilities, the MPA will have regard to the development plan, including the Minerals Local Plan and any other material considerations. In undertaking its duties, the MPA will also undertake monitoring and enforcement in accordance with the procedures set out in its Local Enforcement Plan¹⁴³, where available.

ENVIRONMENTAL IMPACT ASSESSMENT

- 11.2.8 Due to their scale and nature, many proposals for minerals development are likely to require an Environmental Impact Assessment (EIA). EIA is a process undertaken by applicants as a means of understanding the likely significant environmental effects of the development proposal whether singly or in combination with other development. The results of the EIA in the form of an Environmental Statement (ES) are then submitted to the MPA with the planning application
- 11.2.9 Where there is potential for a proposal for minerals development or minerals related development to require an EIA, applicants are advised to consult the MPA well in advance of the planned submission and formally request an

¹⁴³ Derbyshire County Council, Local Enforcement Plan 2021 [Local enforcement plan 2021 \(derbyshire.gov.uk\)](https://www.derbyshire.gov.uk/local-enforcement-plan-2021)

opinion as to whether an EIA is required (referred to as a screening opinion) and, if so, its scope (a scoping opinion). The procedures for doing this are set out in the Town and Country Planning (Environmental Impact Assessment) Regulations 2017. Development is categorised by type and size and is either Schedule 1 or Schedule 2. Development of a type listed as Schedule 1 is automatically considered EIA development. Development of a type listed under Schedule 2 will be assessed under the criteria listed in Schedule 3 of the Regulations. Further information and guidance on the Environmental Impact Assessment can be found in PPG – Environmental Impact Assessment¹⁴⁴.

DEVELOPMENT MANAGEMENT POLICIES

- 11.2.10 The NPPF requires that planning policies should ‘*set out criteria or requirements to ensure that permitted and proposed operations do not have unacceptable adverse impacts on the natural and historic environment or human health, taking into account the cumulative effects of multiple impacts from individual sites and/or a number of sites in a locality*’¹⁴⁵.
- 11.2.11 The following sections present a range of development management policies for minerals development and minerals related development. These policies should not be read in isolation and should be applied in conjunction with the strategic policies of the Plan.

PROTECTING LOCAL AMENITY, HEALTH, WELL-BEING AND SAFETY

- 11.2.12 Minerals development and minerals related development can often have the potential to cause adverse impacts - including noise, dust, blast vibration and visual impacts - to the amenity, health, wellbeing and safety of local communities. Minerals can only be worked where they exist, and this can sometimes lead to the development of quarries or other mineral workings in close proximity to communities. A key element of the Plan is to ensure that, where such development does need to take place, impacts associated with it can be appropriately managed and controlled so they do not become unacceptable.

¹⁴⁴ PPG, Paragraph 001 Ref ID: 4-001-20170728 – Paragraph 058 Ref ID: 4-058-20150326 inclusive

¹⁴⁵ Paragraph 210(f), revised NPPF, July 2021

POLICY DM1: PROTECTING LOCAL AMENITY, HEALTH, WELL-BEING AND SAFETY

Proposals for minerals development and minerals related development will be supported where it can be demonstrated that there will be no unacceptable impacts to local amenity, health, well-being and safety arising as a result of:

- **Noise;**
- **Dust;**
- **Vibration, including blast vibration and air over pressure;**
- **Emissions to air and air quality;**
- **Ground contamination and water contamination;**
- **Land instability;**
- **Visual impacts and intrusion;**
- **Flooding;**
- **Light pollution; or**
- **Transport.**

Where appropriate, separation distances between a development and other land uses, including sensitive receptors, may be applied.

All proposals for minerals development and minerals related development will be expected to be accompanied by information sufficient to understand the impacts of the development on local amenity, health, well-being and safety.

REASONED JUSTIFICATION

- 11.2.13 Ensuring that new development is appropriate for its location is a key aspect of national planning policy. The likely effects of pollution on health, living conditions and the natural and built environment as well as the ability of the site and its surrounding area to accommodate impacts arising from the development must be taken into account when determining planning applications. New and existing development should not contribute to, or be put at risk from, pollution or other sources of nuisance or intrusion which could adversely affect local amenity.

- 11.2.14 The impacts generated by minerals development and minerals related development will vary according to the location and the nature of the development proposed. Issues that will need to be considered in respect of any planning application include the local topography; proximity to, and compatibility with, other surrounding land uses and the degree to which any adverse impacts on sensitive receptors¹⁴⁶ are capable of being mitigated.
- 11.2.15 In line with national planning policy and guidance, all proposals for minerals development and minerals related development should ensure that any unavoidable noise, dust and particle emissions and any blasting vibrations/impacts from air-over pressure are suitably controlled, mitigated or removed at source. Appropriate measures to control and mitigate potential noise impacts can include the establishment of appropriate noise limits for minerals extraction and related activity at identified noise sensitive properties; the use of noise suppression equipment on plant and machinery or restrictions on site operating hours. Further guidance on noise assessment for minerals development is provided within PPG¹⁴⁷ and the Explanatory Note of the Noise Policy Statement for England (NPSE)¹⁴⁸. British Standard BS4142:2014+A1:2019: Methods for rating and assessing industrial and commercial sound (June 2019) also provides detailed information on how to rate and assess industrial and commercial sound.
- 11.2.16 Quarries can generate significant dust emissions associated with blasting and the handling, movement and processing of minerals within sites as well as on the surrounding highway network. Quarry plant and the movement of minerals to market by road can also generate carbon emissions. All proposals will need to demonstrate that they will not have an adverse impact on air quality through either dust deposition or emissions to air. Where necessary, applications will be required to include an assessment of the likely impacts of dust on air quality during the construction, operation and restoration phases of the development. It is expected that this should include details of appropriate mitigation measures such as the use of dust suppression equipment, the temporary suspension of dust-causing activities during unfavourably dry or windy conditions and the use of road sweepers and wheel-washing equipment to limit the spread of dust or mud off-site. Dust monitoring may need to be carried out where dust generating activities

¹⁴⁶ Sensitive receptors can vary depending on whether the impact is visual, noise or dust related but typically include dwellings, retirement/care homes, hospitals, schools, tourist accommodation etc

¹⁴⁷ PPG - Minerals, Paragraph 020 onwards, Reference ID: 27-020-20140306 (March 2014)

¹⁴⁸ [Noise policy statement for England - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/364212/noise_policy_statement_for_england.pdf)

are to be carried out close to nearby sensitive properties. Sensitive properties can include dwelling houses, hospitals and schools, but can also include other buildings e.g. dust sensitive businesses or heritage assets or museums with collections that are sensitive to dust. Dust sensitive properties will need to be identified on a case-by-case basis. Careful design of quarry site layout, maintenance and operations, as well as sustainable modes of transport, can all assist in reducing emissions to air. Further information about air quality assessment is set out in PPG¹⁴⁹.

- 11.2.17 Quarry blasting can result in impacts such as vibration and air-over pressure. HGV movements can also cause vibration. These have the potential to impact on local amenity and safety. Proposals will be expected to demonstrate that such impacts are capable of being kept to a minimum using appropriate mitigation measures such as blast design. Blast vibration limits may be imposed and blast monitoring undertaken where development is proposed close to neighbouring properties. Further guidance on the effects of blast vibration and appropriate upper limits can be found in the following publications: British Standard BS6472-2:2008, Guide to Evaluation of Human Exposure to Vibration in Buildings Part 2: Blast-Induced Vibration; and British Standard BS7385-2: 1993 Evaluation and measurement for vibration in buildings – Part 2: Guide to damage levels from groundborne vibration. Whilst PPG¹⁵⁰ indicates that the environmental effects of blast vibration should be considered, it does not offer any specific guidance, either on assessment methodology or allowable limits.
- 11.2.18 Minerals development and minerals related development can have the potential to lead to impacts associated with emissions to air through the use of quarry plant and machinery, the use of HGVs to transport mineral products from site the use of kilns and cement plants. Certain forms of mineral development can also result in the release of greenhouse gases into the atmosphere. This can be directly e.g. through the flaring of waste gas for safety reasons or indirectly, due to the design of a facility. Dependent on the type of mineral development proposals, overall responsibility for regulating such emissions may not fall directly to the MPA, instead coming under the Environmental Permitting regime regulated the Environment Agency. However, paragraph 186 of the NPPF requires planning policies and decisions to sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence

¹⁴⁹ PPG, paragraph 005 onwards, reference ID 32-005-20191101 (November 2019)

¹⁵⁰ PPG-Minerals, paragraph 013 Reference ID:27-013-20140306 (March 2014)

of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas. Proposals for minerals development and minerals related development will be expected to demonstrate that they would not result in adverse impacts associated with emissions to air and be compliant with any local air quality action plan. Opportunities to improve air quality or mitigate impacts should be identified. Further information about air quality assessment is set out in PPG¹⁵¹.

- 11.2.19 Minerals development and minerals related development can involve the storage of pollutants such as fuels or explosives. Inappropriate storage of these substances could result in ground contamination and pollution of ground and surface waters. Other activities at quarries, such as the storage of silt resulting from dewatering operations could also result in pollution to watercourses. Mineral workings can also take place on previously contaminated land or, in the case of coal or hydrocarbons, act as a contaminant themselves. Proposals will be expected to demonstrate that they would not result in ground contamination or water pollution. Where the use and storage of potential sources of pollution are proposed, the likely pathways through which contamination could travel and any receptors (people and environmental) which may be affected should be identified and mitigation measures, including containment, appropriate storage and management, should be provided. These issues might also be required as part of the Environmental Permitting regime which is separate to the planning process and regulated by the Environment Agency. Where an Environment permit is required, developers should engage with the Environment Agency at the earliest opportunity. Twin tracking of the permit and planning application processes is encouraged as it can ensure all regulatory regimes are being assessed at the same time.
- 11.2.20 Proposals should provide evidence to demonstrate that mineral workings have been designed to protect the stability of land and prevent landslip both within the site and on adjoining land. Where land instability is likely to be an issue, a geotechnical report should be provided setting out appropriate measures, including appropriate designed quarry slopes and tip slopes, proposed methods of working etc to ensure the continued stability and integrity of any slopes and to ensure the risk of instability is kept to a minimum. Where risks of instability cannot be adequately mitigated, there may be a need to leave some parts of the site unworked, or to allow for

¹⁵¹ PPG, paragraph 005 onwards, reference ID 32-005-20191101 (November 2019)

margins within or around the site. Parts of the Plan area have been subject to extensive underground working which has resulted in subsidence issues. Subsidence generally occurs through a loss of support beneath the ground and is more likely to occur where underground working has taken place or as a result of the underlying geology. Advice on how to ensure that development is suitable to its ground condition and how to avoid risks caused by unstable land or subsidence can be found in PPG¹⁵²

- 11.2.21 The Coal Authority has identified a number of Development High Risk Areas¹⁵³ where past coal mining activities have led to a higher likelihood of land instability issues. In these areas, development proposals (other than those identified on the Development High Risk Exemptions list), will be required to be accompanied by a Coal Mining Risk Assessment. The Coal Mining Risk Assessment should identify the site-specific coal mining risks, the risks these pose to new development, the mitigation measures required and how coal mining issues have influenced the proposed development scheme. In the 'Low Risk Areas' there is no requirement to provide a Coal Mining Risk Assessment but the relevant standing advice from The Coal Authority will be applicable. Proposals for hydraulic fracturing in former coalfield areas which have been extensively mined for coal have the potential to exacerbate existing issues associated with subsidence and land instability. In line with the requirements of Policy SP16: The Supply of Conventional and Unconventional Oil and Gas, the MPA will require applicants to establish the extent of geological faulting in an area and/or the location of past coal seams or other mining activity to protect the integrity of the geological structure and reduce the likelihood of induced seismicity, particularly where hydraulic fracturing is proposed.
- 11.2.22 Visual impacts associated with minerals development and minerals related development will be dependent on the duration, scale and nature of the development proposed as well as the sensitivity of its surrounding environment. All proposals should be designed to ensure that they are located in the least visually sensitive location possible and include measures to minimise any potential visual impacts. Such measures could include the colour and location of buildings and fixed processing plant or the location and height of stockpiles. Landscape treatments such as rollover slopes or additional screen planting, as appropriate, may also assist in minimising visual impacts. Further guidance on assessing the likely landscape and

¹⁵² PPG, Paragraph 001, Ref ID: 45-001-20190722 onwards (July 2019)

¹⁵³ [Planning applications and Coal Mining Risk Assessments - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/404441/Planning_applications_and_Coal_Mining_Risk_Assessments_-_GOV.UK.pdf)

visual impacts of development has been published by the Landscape Institute in collaboration with the Institute of Environmental Management and Assessment (IEMA)¹⁵⁴.

- 11.2.23 Minerals development and minerals related development can result in negative impacts associated with flooding. Unless appropriately designed and sited minerals related development, soil and overburden mounds and stockpiles can reduce flood storage capacity and interrupt flood conveyance routes, excavations close to river corridors can impact on natural flood processes. Hard surfaced areas and haul roads could also result in more localised issues with surface water flooding. In line with the requirements of the NPPF and Policy DM8: Water Management and Flood Risk, all proposals will be expected to ensure that they are designed to minimise flood impacts, either at the site or elsewhere. Guidance on how to assess flood risk and how to design development proposals accordingly can be found in Planning Practice Guidance¹⁵⁵. Further information is also set out in respect of Policy DM8: Water Management and Flood Risk below.
- 11.2.24 The use of external lighting in quarries can result in light pollution during periods of darkness. This can affect the amenity of local communities, be harmful to wildlife and detract from the enjoyment of the countryside and the night sky. It can also affect the setting of heritage assets, especially if the asset is experienced at night or is floodlit. The effects of light pollution can be mitigated through restricting hours of use, adjusting the height and angle of lighting and using shields and guidance, such as that from the Institute of Lighting Professionals Guidance Notes for the Reduction of Obtrusive Light¹⁵⁶), should be considered before submitting an application. The circumstances where a lighting assessment may be required will be dependent on the scale and location of a proposal and the sensitivity of the surrounding area. Proposals located in the open countryside, close to heritage assets or where they may result in an adverse effect on biodiversity or which are in close proximity to residential dwellings that could result in an adverse effect on local amenity will normally be required to include a lighting assessment.

¹⁵⁴ Landscape Institute/Institute Environmental Management and Assessment document '*Guidelines for Landscape and Visual Impacts Assessment*' 3rd edition (2013)

¹⁵⁵ PPG, paragraphs 001- 080 Reference ID: 7-001-20220825 onwards (August 2022)

¹⁵⁶ [Guidance Note 1 for the reduction of obtrusive light 2021 | Institution of Lighting Professionals \(theilp.org.uk\)](https://theilp.org.uk/Guidance%20Note%201%20for%20the%20reduction%20of%20obtrusive%20light%202021%20-%20Institution%20of%20Lighting%20Professionals.pdf)

- 11.2.25 The movement of heavy goods vehicles to and from quarry sites can result in increases in traffic and congestion, damage to roads and their verges, vibration, noise, dust and mud. Perceived risks to human safety can also occur, particularly on rural roads with no pedestrian footway or close to areas of population. Such impacts can be mitigated through control of vehicle routing and numbers; hours of operation; the sheeting of lorries; wheel cleaning facilities; and highway improvements and maintenance. Some of these measures may need to be secured via planning obligation, particularly where they relate to matters outside the development site.
- 11.2.26 In specific circumstances, proposals for minerals development or minerals related development close to residential property or other sensitive receptors may not provide adequate protection. In such cases, it may be justified to consider adequate separation distances. Any such distance should be effective but reasonable, taking into account: the nature and duration of the activity proposed; the need to avoid undue sterilisation of mineral resources; location and topography; the characteristics of the various environmental effects likely to arise; and the various mitigation measures that can be applied. Notwithstanding this, operations in proximity to residential property may be necessary where there are clear, specific achievable objectives such as the removal of instability and preparing land for subsequent development. Such operations should be for a limited and specified period, without scope for extension.

CRITERIA FOR ASSESSING THE BENEFITS OF MINERALS DEVELOPMENT

- 11.2.27 National policy states that it is essential that there is a sufficient supply of minerals to provide the infrastructure, buildings, energy and goods that the country needs¹⁵⁷. It goes on to say that, when determining planning applications, great weight should be given to the benefits of minerals extraction, including to the economy¹⁵⁸. The exception to this is in relation to the extraction of coal, which, it says, should not be granted planning permission unless it is environmentally acceptable or, if not, then it provides national, local or community benefits which outweigh its likely impacts

¹⁵⁷ Paragraph 209, revised NPPF, July 2021

¹⁵⁸ Paragraph 211, revised NPPF, (July 2021)

(taking all relevant matters into account, including any residual environmental impacts)¹⁵⁹.

- 11.2.28 In line with the requirements of the NPPF, with the exception of proposals for coal extraction (where environmental acceptability must be established prior to assessing any benefits that a development proposal might bring), the benefits of proposals for mineral extraction will be given great weight in the decision-making process and balanced against any environmental effects, including environmental harm, in accordance with the other policies of the Plan.
- 11.2.29 Where proposals are for coal extraction, the weight to be attached to any potential benefits will be assessed on a case-by-case basis in line with the requirements of Policy SP15: Coal and Colliery Spoil Disposal. As set out in Policy SP15, only sub-paragraphs 2 and 3 of policy DM2 will apply. More information on proposals for coal extraction and the disposal of colliery spoil is set out in Chapter 8.1.

POLICY DM2: CRITERIA FOR ASSESSING THE BENEFITS OF MINERALS DEVELOPMENT PROPOSALS

- 1) **With the exception of development proposals involving coal extraction, the MPA will give great weight to the benefits of minerals extraction.**
- 2) **In assessing the benefits of all proposals for minerals development, including coal extraction, consideration will be given to the extent to which the development proposal would, where relevant, deliver the following matters:**
 - a) **The economic benefits of maintaining a steady and adequate supply of mineral to meet national, sub national and local need, including contributions to economic growth, maintaining existing employment and the creation of new employment opportunities either directly or indirectly as a result of the proposal;**

¹⁵⁹ Footnote 71 and paragraph 217, NPPF (July 2021).

- b) The relinquishment of historic mineral planning permissions in Sensitive Areas¹⁶⁰;**
- c) The sustainability benefits associated with the conservation of minerals resources of local and national importance through the prioritisation of the provision of recycled and secondary aggregates;**
- d) Environmental enhancements to the site and its surrounding area, including the delivery of enhancements to the historic environment and/or heritage assets, biodiversity net gain, the enhancement of landscape character, ecological networks and natural capital and enhanced public access within the Plan area, through the appropriate restoration and after-use of the site;**
- e) The avoidance of a mineral resource being sterilised by non-mineral development or in the case of prior extraction, the contribution this can make to enabling a non-mineral development taking place;**
- f) The contribution towards the reclamation of areas of derelict or contaminated land and/or the remediation of legacy issues associated with historic mineral working;**
- g) The extent to which the proposal is consistent with meeting carbon reduction targets specified in national and local carbon budgets through the use of sustainable technologies, climate change adaptation and mitigation measures (during both the operational and restoration phases), carbon off-setting or other appropriate mechanism;**
- h) The extent to which the proposal would assist in reducing flood risk or contributing towards flood alleviation measures;**

¹⁶⁰ For the purposes of this Plan, the term sensitive areas will reflect the definition set out in Regulation 2: Interpretation of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 and will include land notified under section 28(1) (Sites of Special Scientific Interest) of the Wildlife and Countryside Act 1981; the Peak District National Park; the Derwent Valley Mills World Heritage Site; a Scheduled Monument within the meaning of the Ancient Monuments and Archaeological Areas Act 1979; and a European Site within the meaning of The Conservation of Habitats and Species Regulations 2017.

- i) **The use of rail transport, water transport, conveyors and pipelines where these methods are used instead of road transport; and**
 - j) **Community benefits where they can be demonstrated to be necessary and directly related to the development.**
- 3) Other benefits that are not listed in (2) above but which are considered material planning considerations relevant in respect of a proposal will be considered on a case-by-case basis where evidence of these other benefits can be provided in support of a planning application.**

REASONED JUSTIFICATION

- 11.2.30 In addition to providing a steady supply of minerals, minerals development can also bring other, sometimes significant, social, economic and environmental benefits including employment opportunities, the reclamation of contaminated/derelict land and the delivery of environmental enhancements, including significant biodiversity net gain, improved public access and enhanced flood alleviation measures.
- 11.2.31 Policy DM2 seeks to identify the key matters or benefits that will be given weight when determining planning applications within the Plan area for minerals development. The criteria set out in Policy DM2 are not intended to be an exhaustive list of the benefits of minerals extraction and the MPA acknowledges that other benefits, specific to an individual proposal, may exist. Where an applicant puts forward other benefits which are not listed in Policy DM2, they will be considered by the MPA where they are material planning considerations and are directly relevant to the proposal.
- 11.2.32 The Plan area contains a number of historic mineral planning permissions, mostly dating from the 1950s to 1970s, that are located on land which has subsequently been recognised as being environmentally sensitive due to its importance for nature conservation or the historic environment. Many of these sites were registered as ‘dormant’ as a requirement of Schedule 13 of the Environment Act 1995 and haven’t been actively worked since the early 1980s. Where proposals for new quarry sites, or extensions to existing quarry sites come forward, the MPA will seek to negotiate with applicants the relinquishment of any historic mineral planning permissions in their

ownership where they are located in a sensitive area and/or close to the application site.

- 11.2.33 In line with the requirements of Policy SP2: Climate Change, all proposals will be expected to demonstrate how they will assist in reducing carbon emissions and incorporate climate change adaptation and mitigation measures.

TRANSPORT

- 11.2.34 Minerals development and minerals related development can generate large volumes of HGV traffic which can adversely impact local communities through noise, dust, vibration and air pollution. Increased levels of traffic can also result in damage to the highway, increase levels of greenhouse gas emissions impacting on climate change and cause potential safety issues and issues of severance for other users of the highway. In order to ensure that such impacts are kept to a minimum, the Plan seeks to encourage more sustainable forms of transport.

POLICY DM3: TRANSPORT

Proposals for minerals development and minerals related development should seek to maximise sustainable modes of transport, including rail, barge, conveyor and pipeline. Proposals should also seek to maximise measures to reduce emissions through the use of efficient logistics, low carbon fuels and vehicles to extract and transport the mineral to market.

Applications should be accompanied by a Transport Assessment (TA) or Transport Statement (TS), proportionate to the scale and nature of the development proposed, identifying the likely predicted transport issues in order to understand their impact on existing transport networks and a travel plan in order to demonstrate how these impacts will be mitigated.

Proposals for new minerals development and minerals related development utilising road transport will only be supported where it can be demonstrated that:

- 1) Road transport is the only practicable or environmentally preferable alternative;**

- 2) Proposed access arrangements would not have any significant adverse impacts on highway safety, air quality including carbon emissions, local and residential amenity, the environment or the effective operation of the highway network;
- 3) The highway network is of an appropriate standard for use by the traffic generated by the development or can be suitably improved.

All proposals will be expected to provide details, proportionate to the scale of the development, of proposed climate change adaptation and mitigation measures required to reduce or offset carbon emissions generated by vehicle movements associated with the development, consistent with national and local carbon budgets and targets. Information provided will be expected to include internal quarry traffic as well as off-site traffic movements.

In order to ensure these requirements are met and maintained, developments may be subject to the completion of appropriate planning obligations relating to signage, traffic routing, any necessary improvements to the highway or climate change adaptation and mitigation measures where these cannot be secured by planning condition.

REASONED JUSTIFICATION

11.2.35 The NPPF¹⁶¹ requires that, in order to help reduce congestion and emissions, improve air quality and public health, significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel or by offering a choice of transport modes. It acknowledges that opportunities to maximise sustainable transport solutions will vary between urban and rural areas. Specifically, with regard to minerals, the NPPF¹⁶² says that MPAs should ensure that permitted or proposed operations do not have unacceptable adverse impacts on the natural and historic environment or human health.

11.2.36 Two Local Transport Plans (LTP) have been produced for the Plan area, both covering the period 2011 to 2026. They are the Derbyshire Local

¹⁶¹ Paragraph 105, revised NPPF, July 2021

¹⁶² Paragraph 210(f) revised NPPF, July 2021

Transport Plan 3 2011-2026 (April 2011) and the Derby Local Transport Plan, LTP3 2011-2026. Both LTP share a common set of goals which can be summarised as: supporting a resilient local economy; tackling climate change; contributing to better safety, security and health; promoting equality of opportunity; and improving quality of life and promoting a healthy natural environment.

- 11.2.37 Minerals can only be worked where they are found and this can often be in a remote location, away from the strategic road network or other transport links. As a consequence, whilst some sites do export via rail, the majority of minerals extracted in the Plan area are currently transported to market by road.
- 11.2.38 In order to minimise overall transport distances, as well as the potential for adverse impacts on local communities, proposals for minerals development and minerals related development should be located as close to their end markets as possible. The MPA acknowledges, however, that this is not always possible, particularly where the site is needed to supply a regional or national market. In these circumstances, alternative, more sustainable forms of transport, such as rail freight, should be considered. All planning applications for minerals development and minerals related development will be expected to demonstrate that potentially more sustainable non-road based options for transporting minerals have been considered. Where such options have been discounted, proposals will be expected to demonstrate the reasons for doing so, why road transport is the preferred option and whether there is potential for future review during the lifetime of the development. Applicants will be encouraged to consider the use of sustainable haulage practices such as promotion of the Fleet Operator Recognition System (FORS), or equivalent; back-hauling; the adoption and promotion of low emission HGV fuel choices e.g. hydrogen and electric and infrastructure as the technology develops. Proposals should also consider sustainable travel to work modes such as secure and covered cycle and e-scooter parking, providing electric vehicle (EV) charging points or car share schemes.
- 11.2.39 The MPA recognises that more sustainable, non-road transport options such as rail, pipeline, conveyor and barge can potentially generate adverse environmental impacts, or give rise to other land use issues, themselves. For example, conveyors can be noisy and unsightly, particularly where they are located above ground or travel for long distances. In some instances, they may also require significant amounts of fuel to operate. Rail freight requires

a feasible connection to the existing railway network as well as sufficient space to create new sidings and other infrastructure such as hoppers, silos and lifting equipment. Careful consideration therefore needs to be given to the appropriate siting and use of alternative, more sustainable, modes of transport where they are proposed. In considering proposals for minerals development and minerals related development where more sustainable modes of transport are proposed, the MPA will assess the benefits on a case-by-case basis.

- 11.2.40 Where road traffic is unavoidable every effort should be undertaken to avoid residential and minor roads. It would not be desirable to allow proposals which could exacerbate any existing transport impacts or create unacceptable new impacts. The transport implications of the proposed development will be taken into account including the suitability of the road network to accommodate the traffic that would be generated and the effect on highway safety.
- 11.2.41 All proposals should be accompanied by a Transport Assessment (TA) or Transport Statement (TS), proportionate to the scale and nature of the development proposed, identifying the likely predicted transport issues and what measures will be needed to manage those issues. Such measures may include, but are not limited to, works to improve junction visibility or vehicle capacity, the use of routeing agreements to control traffic movement and direct vehicles away from sensitive areas such as residential areas or important habitats, or improvements to the existing transport infrastructure. A travel plan will also be required, setting out how any impacts will be mitigated. Guidance relating to the production of transport assessments as well as the environmental impacts of transport is set out in PPG¹⁶³.
- 11.2.42 Applicants are encouraged to undertake pre-application discussions with the relevant Highway Authority which, dependent on a site's location within the Plan area, would be Derby City Council or Derbyshire County Council for the local highway network and Highways England for the Strategic Road Network), to establish whether a TA is required, and, if so, the scope of the assessment required to consider the transport and related environmental impacts of the proposed development.

¹⁶³ PPG, paragraph 001 onwards, Reference ID: 42-001-20140306 (March 2014)

- 11.2.43 Where proposals involve the transport of minerals via rail or barge, early engagement with the relevant statutory consultee such as Network Rail, the Canal and Rivers Trust, or the Environment Agency is advised.
- 11.2.44 Pipelines can be used to transport minerals underground. Most obviously this could be the export of oil and gas for further processing or direct to market. However, they could also be used to bring water to a site (where large volumes of water would be required as part of the development) or to transport mineral tailings (in the form of a slurry) away from site for final disposal. In the past they have also been used to import restoration materials directly from their point of origin. Dependant on their scale and nature, some pipelines may also be considered a Nationally Significant Infrastructure Project (NSIP) requiring a Development Consent Order. Where that is the case the Planning Inspectorate would be responsible for determining the application.
- 11.2.45 Where the MPA considers that the road network is inadequate for the amount or type of movements associated with a development proposal, legal agreements will be sought to achieve appropriate improvements to mitigate the adverse impacts. Pre-commencement condition surveys of the highway may be required to enable the MPA to accurately monitor direct impacts of increased HGV use associated with a development on the surrounding highway network and, where appropriate contribute to the maintenance of the highway network. Where necessary, routeing agreements will also be used to ensure that adequate/appropriate routes are used to prevent unacceptable adverse impacts on local communities. The developer may also be required under S278 and S38 agreements of the Highways Act 1980 to make alterations to the highway network.

LANDSCAPE

- 11.2.46 The Plan area is characterised by its diverse landscapes, some of exceptional quality and natural beauty, ranging from the upland moors of the Peak District to the expansive floodplains of the Trent Valley. Parts of the Plan area have also been subject to significant levels of past human activity, including the exploitation of minerals or heavy industry, which has resulted in those landscapes becoming fragmented through loss of its intrinsic character. Such diversity is largely a result of the varied underlying geological conditions that also make the Plan area mineral resource rich and, as a consequence, mineral extraction has been widespread throughout.

- 11.2.47 Landscape can also be valued for more than its natural beauty, providing habitats for wildlife and evidence of historic activity. It also has a social and community value, providing space for recreation and exercise as well as an economic value, providing the context for economic activity and often being a central factor in attracting business and tourism.
- 11.2.48 The scale and nature of mineral development and minerals related development means it can have both temporary and permanent impacts on existing landscapes, depending on the type of mineral, how sites are worked and subsequently restored. Landscape features such as trees, hedgerows or drystone walls, water bodies and footpaths might be altered and new landforms are likely to be created. Whilst such changes have the potential to be harmful to landscape character, carefully designed mineral development can also result in positive changes, providing the opportunity to repair fragmented landscapes and enhance wider views or local landscape character and distinctiveness.

POLICY DM4: LANDSCAPE

Proposals for minerals development and minerals related development should seek to protect and enhance the character, quality or sensitivity of the landscape or important features or views, or other perceptual qualities such as tranquillity. Development that would have an unacceptable impact on the landscape will only be supported where it can be demonstrated that there is no reasonable alternative; the benefits of the development clearly outweigh the impacts and appropriate landscape mitigation is provided.

All proposals will be expected to be accompanied by information, in the form of a Landscape and Visual Impact Assessment, sufficient to understand the impacts of the development on landscape character, historic landscape character, visual amenity and landscape sensitivity having regard to the content of the relevant local landscape character assessment, historic landscape characterisation (where available) and supporting technical documents and contribute, where appropriate, to the conservation and enhancement, or restoration and recreation of the local landscape.

Proposals located within the setting of the Peak District National Park will also be expected to be sensitively located and designed, having

regard to the content of any relevant landscape strategies, to avoid or minimise adverse impacts on the National Park.

Proposals located within the Lower Derwent, Lower Dove and Trent Valleys will be expected to have regard to the requirements of Policy SP19: Restoration of Sand and Gravel Sites in the River Valleys.

Proposals for minerals development and minerals related development will be expected to balance their economic need/value against any landscape/visual harm to the wider landscape and any subsequent harm that that may have to its enjoyment and the wider visitor economy.

REASONED JUSTIFICATION

- 11.2.49 National planning policy¹⁶⁴ seeks to conserve and enhance the natural and local environment. In landscape terms this should be achieved through the protection and enhancement of valued landscapes, recognising the intrinsic character and beauty of the countryside. Great weight is also given to conserving and enhancing landscape and scenic beauty in national parks, and development in their setting should be sensitively located and designed to avoid or minimise adverse impacts¹⁶⁵. In order to implement this policy, both mineral working and restoration schemes should be informed by the landscape character of the area, ensuring that the schemes fit into, respect and connect with the surrounding landscape.
- 11.2.50 Landscape and, in the case of Derby City, townscape character assessments, have been produced which cumulatively cover the entire Plan area. A further landscape character assessment has also been produced by the Peak District National Park Authority¹⁶⁶. The Landscape Character of Derbyshire¹⁶⁷ has identified ten broad National Character Areas (NCAs) – Dark Peak; White Peak, Derbyshire Peak Fringe and Lower Derwent; Nottinghamshire, Derbyshire and Yorkshire Coalfield; Southern Magnesian Limestone; Needwood and South Derbyshire Claylands; Trent Valley Washlands; Melbourne Parklands; Leicestershire & South Derbyshire

¹⁶⁴ Paragraph 174, revised NPPF, July 2021

¹⁶⁵ Paragraph 176 of revised NPPF, July 2021

¹⁶⁶ [Landscape Strategy: Peak District National Park](#)

¹⁶⁷ The Landscape Character of Derbyshire, 4th edition, Derbyshire County Council (December 2013) [Introduction \(derbyshire.gov.uk\)](https://www.derbyshire.gov.uk/)

Coalfields and Mease-Sence Lowlands - each of which includes a number of smaller Landscape Character Types (LCTs) each with its own landscape characteristics. The document also provides woodland and tree planting, landscape management and habitat creation guidance appropriate to the each LCT.

- 11.2.51 The documents are intended to be used as guidance to assist developers to identify and, ultimately, design development proposals that include appropriate mitigation measures and restoration schemes, based on locally distinctive landscape features and elements.
- 11.2.52 Historic landscape characterisation work has been undertaken for parts of the Plan area. It is currently held as a series of GIS datasets which can be accessed through the Derbyshire Historic Environment Record. Further guidance on historic landscape character assessments can also be found on the Historic England website.¹⁶⁸
- 11.2.53 National planning policy does not define what is meant by the term ‘valued landscapes’. However, as set out in paragraph 11.2.47 above, landscape (and the wider countryside in general) is often valued for reasons other than its natural or aesthetic qualities, even where the landscape would be considered fragmented or not of exceptional quality. These can include ‘perceptual qualities’ such as its sense of wildness, remoteness, dark skies or tranquillity; the opportunities it provides to local communities and visitors to the Plan area for health, outdoor recreation and emotional and physical wellbeing; its importance to biodiversity and locally distinctive ecological networks; and evidence of historic human activity and influence. Derbyshire County Council has produced two technical support documents, relating to Areas of Multiple Environmental Sensitivity and Tranquillity¹⁶⁹ which, working within the established framework of landscape character types, have been designed to enable the adoption of an holistic approach to identify those areas of landscape of ‘multiple environmental sensitivity’ relating to ecology, the historic environment, and visual unity. Similar work has been undertaken for Nottinghamshire.
- 11.2.54 The Plan area contains a number of large quarries that are either located close to or cross the administrative boundary of the Peak District National

¹⁶⁸ [Historic Landscape Characterisation: a Tool for Understanding and Managing Whole Areas | Historic England](#)

¹⁶⁹ Technical Support Document 1: Areas of Multiple Environmental Sensitivity, Derbyshire County Council, (2013), and Technical Support Document 2: Tranquillity, Derbyshire County Council, (2013).

Park. For development proposals located within the setting of the Peak District National Park, national policy¹⁷⁰ requires development located in the setting of a national park to be sensitively located and designed to avoid or minimise adverse impacts to that designation. In exercising any of its functions, including planning matters, Part III, paragraph 62, of the Environment Act 1995 places a duty on local authorities to have regard to the purposes for which National Parks are designated, stating that, where there appears to be a conflict between those purposes, it shall attach greater weight to the purpose of conserving and enhancing the natural beauty, wildlife and cultural heritage of the National Park. Proposals for mineral development or minerals related development located within the setting of the Peak District National Park will be required to give consideration to the specific landscape sensitivities of the National Park, or any other feature or attribute which makes up its special quality and sense of place. When designing proposals in such locations, applicants should give consideration to the flow of landscape character across and into the National Park boundary. In addition to the Landscape Character of Derbyshire, consideration should also be given to the Peak District National Park Landscape Strategy and European Landscape Convention Action Plan¹⁷¹.

- 11.2.55 Landscapes within the Plan area, particularly around the Peak District and the Derwent Valley, are also of significant importance to tourism, generating millions of pounds for the local economy. Proposals for minerals development and minerals related development will be expected to balance their economic need/value against any landscape/visual harm to the wider landscape and any subsequent harm that that may have to its enjoyment and the wider visitor economy.
- 11.2.56 It is recognised by the MPA that some landscapes in the Plan area are already at significant risk of harm, either through the legacy of past industry and development or as a result of current development pressures for new housing, employment land and transport infrastructure. The Trent Valley, both in the Plan area and in adjacent counties including Nottinghamshire and Staffordshire, which has long been a focus for the exploitation of its sand and gravel resources, is under particular threat. The Plan therefore seeks to adopt a strategic approach to restoration through the preparation of a

¹⁷⁰ Paragraph 176, revised NPPF, July 2021.

¹⁷¹ [Landscape Strategy: Peak District National Park](#)

Supplementary Planning Document setting out a strategy for the restoration of sand and gravel sites in the River Valleys, as set out at Chapter 10.

- 11.2.57 To ensure that new minerals development and minerals related development considers existing landscapes and visual impact, a landscape and visual impact assessment, proportionate to the scale and nature of the proposal, will be required for all proposals to identify potential impacts on the surrounding areas. All proposals for the restoration of minerals sites, such as earthworks, after-use and planting, should reflect the landscape character type and national character area as well as taking into account those other qualities for which landscape is valued. Further guidance on how to undertake landscape and visual impact assessments (LVIA) is contained in PPG¹⁷² and in the following Landscape Institute/Institute Environmental Management and Assessment document ‘*Guidelines for Landscape and Visual Impacts Assessment*’ 3rd edition (2013).

BIODIVERSITY AND GEODIVERSITY

- 11.2.58 The Plan area contains a rich and diverse range of biodiversity and geodiversity assets. In addition to the locally distinct range of flora and fauna within the Plan area, biodiversity can bring other environmental and socio-economic benefits, including carbon sequestration, health and well-being and tourism. It is essential, therefore, that proposals for minerals development and minerals related development are appropriately managed to ensure that sites of biodiversity and geodiversity value are protected and enhanced.

POLICY DM5: BIODIVERSITY AND GEODIVERSITY

Proposals for minerals development and minerals related development should seek to protect and enhance the nature conservation interest by ensuring that they do not give rise to unacceptable adverse impacts on biodiversity and geodiversity and by providing significant and measurable net gains for biodiversity. Proposals for development will be expected to be accompanied by information, in the form of an Ecological Impact Assessment, sufficient to enable a proper assessment of the implications for biodiversity and geodiversity. The information should be appropriate

¹⁷² PPG, paragraph 036, Reference ID: 8-036-20190721 (July 2019)

to the scale of the proposed development and proportionate to the level of designation or the habitats/species likely to be affected.

Proposals for minerals development and minerals related development will be supported where it can be demonstrated that significant harm to biodiversity and/or geodiversity can be avoided or, if that is not possible, adequately mitigated and, where applicable, that they would:

- i) not adversely affect, either alone or in combination with other plans and projects, the integrity of any European Site (Natura 2000 sites) unless:
 - a) there are no alternative solutions; and
 - b) there are imperative reasons of overriding public interest; and
 - c) adequate compensatory measures can be taken to ensure the overall coherence of Natura 2000 is protected.
- ii) avoid harm to any nationally and regionally designated nature conservation sites, such as the Regionally Important Geological Sites (RIGS) or Sites of Special Scientific Interest (SSSI)
- iii) avoid harm to locally designated sites including Local Wildlife Sites (LWS) and Local Nature Reserves (LNR)
- iv) not give rise to the loss or deterioration of irreplaceable habitats or geological/geomorphological networks

The level of protection to be afforded to the nature conservation interest will be commensurate with its level of importance and contribution to wider ecological or geological/geomorphological networks.

Where development proposals do not comply with the above they will only be supported if it has been clearly demonstrated that there is an overriding public need for the proposal which outweighs the need to safeguard biodiversity and/or geodiversity and there is no satisfactory alternative with less or no harmful impacts. In such cases, as a last resort, compensatory measures will be secured to ensure a measurable biodiversity net gain.

Proposals will be supported where they deliver significant and measurable net gains for biodiversity (based on the government's

published biodiversity metric) and contribute to the establishment of coherent and resilient ecological networks subject to compliance with other policies in the Plan. In achieving this, all proposals will be expected to have regard to the ecological diversity and distinctiveness of the Plan area. Where necessary, these matters may need to be secured using planning obligations.

REASONED JUSTIFICATION

- 11.2.59 National policy seeks to ensure that planning should contribute to and enhance the natural and local environment by protecting and enhancing sites of biodiversity or geological value (in a manner commensurate with their statutory status or identified quality)¹⁷³, minimising impacts on, and providing net gains for, biodiversity including through the establishment of coherent ecological networks that are more resilient to current and future pressures¹⁷⁴. Plans should clearly distinguish between the hierarchy of international, national and locally designated sites and promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity¹⁷⁵.
- 11.2.60 The Plan area possesses an extensive network of statutory and non-statutory sites designated for their biodiversity and/or geodiversity interest. The most significant of these, the ‘European sites’ (previously known as Natura 2000 sites), are designated at the international level. European sites are considered to be of exceptional importance in respect of rare, endangered or vulnerable natural habitats and species and include Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). Within the Plan area there are three European sites – Peak District Dales SAC, Peak District Moors SPA and South Pennine Moors SAC, with a further two (Bees Nest & Green Clay Pits SAC and Gang Mine SAC) located within the Peak District National Park. The River Mease SAC is located on the Derbyshire/Staffordshire border. The Birklands and Bilhaugh SPA and the Sherwood Forest potential (pSPA) are in Nottinghamshire.

¹⁷³ Paragraph 174(b), revised NPPF, (July 2021)

¹⁷⁴ Paragraph 174 (d), revised NPPF (July 2021)

¹⁷⁵ Paragraph 179, revised NPPF, (July 2021)

- 11.2.61 The Conservation of Habitats and Species Regulations 2017 confer specific protection on sites of international importance and any proposal that would be likely to have a significant effect on the integrity of a European site, either alone or in combination with other plans or projects would need to ensure that all impacts can be mitigated. Adverse impacts can result from both direct and indirect effects, especially where there are known functional linkages or pathways to the designated site. National policy¹⁷⁶ makes it clear that these protections apply to candidate sites as well as those that have already been designated. Any development that is not directly connected with the management of any European sites, but likely to have a significant effect on them, will require a Habitats Regulations Assessment to be carried out at the planning application stage to ensure that any such effects can be mitigated.
- 11.2.62 The Plan area also contains, either partially or wholly, a number of sites that are statutorily designated at a national level including over 53 Sites of Special Scientific Interest (SSSIs) which are designated and protected under the Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way Act 2000. SSSIs can be notified for their biodiversity or geodiversity interest and the Plan area contains examples of both. The Plan area also has one National Nature Reserve (NNR) at Calke Park in South Derbyshire.
- 11.2.63 In addition to the above, there are over 1400 non-statutory sites within the Plan area including 1196 Local Wildlife Sites (LWS), 52 Local Nature Reserves (LNR) and 198 Regionally Important Geological Sites (RIGS). These sites support and protect habitats, populations of species or geological formations of at least local/County importance or greater. They play a key role in maintaining the ecological networks and corridors found across the County.
- 11.2.64 The Plan area also contains other habitats and species that fall outside the scope of the designated sites identified above but which are conferred protection under Section 41 of the Natural Environment and Rural Communities Act 2006. These are known as Habitats of Principal Importance for Conservation in England and Species of Principal Importance in England and are derived from those species and habitats which were previously included in the UK Biodiversity Action Plan (UKBAP). These, together with LWS, LNRs and RIGs are considered to represent important ecological resources, themselves combining to form part of the natural

¹⁷⁶ Paragraph 181 (a), revised NPPF, (July 2021)

capital of the Plan area, that occur outside of sites receiving statutory protection and are therefore important material considerations in the determination of planning applications. Derbyshire County Council has recently commenced work on gathering an evidence base to enable it to produce a Natural Capital Strategy and Local Nature Recovery Strategies for the Plan area outside Derby City.

- 11.2.65 National policy¹⁷⁷ also sets out a sequential approach to decision making in respect of biodiversity, the so-called ‘mitigation hierarchy’. This requires, in the first instance, that significant harm from development be avoided (usually through relocating a development proposal to an alternative site with fewer harmful impacts), adequately mitigated, or, as a last resort, compensated for. Where this cannot be achieved, then planning permission should be refused.
- 11.2.66 In those circumstances where applicants consider that compensation is the only option, the MPA will expect any proposal to demonstrate that it would: not lead to any net loss of habitat, provide the same or better type of ecological features as those which will be affected with equivalent or enhanced levels of ecological ‘functionality’. Compensation should also be provided as close as possible to the location where the likely impacts will occur and benefit the same habitats and species as those affected. Proposals incorporating ecological compensation should also recognise that, dependant on the type and scale of any habitats and species concerned, these may take a number of years to achieve the quality of the habitats lost.

BIODIVERSITY NET GAIN

- 11.2.67 In addition to the sequential approach, in line with national policy¹⁷⁸ the MPA will expect all proposals for mineral development and mineral related development to deliver significant and measurable biodiversity net gain. For the purposes of this plan the MPA considers that ‘significant’ means more than the mandatory minimum of 10% BNG which is required under the Environment Act 2021. Biodiversity net gain delivers measurable improvements for biodiversity by creating or enhancing habitats in association with development and can be achieved on-site, off-site or through a combination of on-site and off-site measures. Alongside

¹⁷⁷ Paragraph 180, revised NPPF, (July 2021)

¹⁷⁸ Paragraph 111, revised NPPF (July 2021)

enhancing the biodiversity of a site or local ecological networks, biodiversity net gain can also assist in the delivery of some of the strategic and sustainability objectives of the Plan including building natural capital, assisting in adapting and mitigating the effects of climate change, improving flood alleviation measures and increased health and well-being of local communities. In order to achieve this, the MPA will expect applicants to demonstrate that any benefits promised will lead to demonstrable gains for biodiversity for current and future generations, will be resilient to future pressures from further development or climate change and have appropriate maintenance measures in place. Where it is not possible to secure biodiversity net gain through the use of planning conditions, the MPA may seek to secure them using planning obligations.

- 11.2.68 Further guidance on how to achieve biodiversity net gain can be found in PPG¹⁷⁹ and in the following documents: *'Biodiversity net gain. Good practice principles for development. Part A: A practical guide'* (2019) produced by CIRIA¹⁸⁰ and British Standard BS 8683: 2021 *'Process for designing and implementing Biodiversity Net Gain'* (August 2021). The MPA will expect applicants to assess Biodiversity net gain using the Government's published biodiversity metric tool (currently the DEFRA Biodiversity Metric 3.0 but subject to update and refresh) - which is designed to provide a means of assessing changes in biodiversity value brought about by development or changes in land management. The MPA will also be producing a guidance note, designed to accompany the Plan, which will set out its approach to securing Biodiversity Net Gain.
- 11.2.69 To ensure that new proposals for minerals development and minerals related development assess the impacts of biodiversity and geodiversity, an ecological assessment, proportionate to the scale and nature of the proposal, will be required. Further guidance on how to undertake ecological assessment is set out in PPG¹⁸¹ and in the CIEEM document *'Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine'* (2018).

¹⁷⁹ Paragraph 022 onwards (Ref ID 8-022-20190721), PPG, (July 2019).

¹⁸⁰ 'Biodiversity net gain. Good practice principles for development. Part A: A practical guide' (2019) CIEEM

¹⁸¹ Paragraph 036 onwards (reference ID: 8-036-20190721), PPG, (July 2019)

TREES, WOODLAND AND HEDGEROWS

- 11.2.70 Trees, woodland and hedgerows are important landscape features which, in addition to nature conservation, make a valuable contribution to the wider landscape, contribute to the setting of heritage assets and are also of great amenity value to local communities. Trees also play an important role in adapting and mitigating the effects of climate change through carbon sequestration.
- 11.2.71 Minerals development can have the potential to result in the loss of, or damage to, trees, woodland and hedgerows. Such impacts can be a direct result of, but are not limited to, such operations as the creation of new working areas or the use of heavy plant and equipment without appropriate root protection areas being put in place. Mineral development can, however, also make a positive contribution to the creation of new, woodland, hedgerows, and trees during restoration. Works to existing trees and hedgerows, to strengthen and improve existing linkages and plant specimens or advance planting schemes, are also often undertaken by mineral operators as part of an agreed wider package of works..

POLICY DM6: TREES, WOODLAND AND HEDGEROWS

Proposals for minerals development and minerals related development should seek to protect trees, woodland and hedgerows from loss or damage unless it can be demonstrated that their removal is necessary and appropriate mitigation can be achieved. Proposals for development will be expected to be accompanied by arboricultural information sufficient to enable an assessment of the implications for trees, woodland and hedgerows. Assessments should also identify any trees, woodland and hedgerows of value.

Development that would result in the loss or deterioration of ancient woodland or the loss of aged or veteran trees found outside of ancient woodland will not be supported unless it can be demonstrated that there are wholly exceptional reasons for such losses and a suitable compensation strategy exists.

Where the loss of trees, woodland and hedgerows can be justified, replacement provision will be required which, as a minimum, should be of equivalent quality and quantity to the trees and hedgerows to be lost. All new and replacement woodland, tree and hedgerow

planting will be expected to be of a species appropriate to the local character and distinctiveness of the site and appropriately managed to ensure that it reaches full maturity. Where necessary, these matters may need to be secured using planning obligations.

All proposals should contribute to the protection, enhancement, and where possible expansion of woodlands, trees and hedgerows in the area. Wherever possible, trees, hedgerows and woodland of value should be retained and integrated within proposals for development

REASONED JUSTIFICATION

- 11.2.72 National policy requires local plans and planning decisions to contribute to and enhance the natural and local environment by recognising the intrinsic character and beauty of the countryside, as well as the wider benefit, which can include economic and other benefits, derived from trees and woodland¹⁸². It goes on to say that development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused unless there are wholly exceptional reasons and a suitable compensation strategy exists¹⁸³. This issue is dealt with under Policy DM5: Biodiversity and Geodiversity.
- 11.2.73 Section 197 of The Town and Country Planning Act 1990 places a general duty on planning authorities to ensure, whenever it is appropriate, that in granting planning permission for any development, adequate provision is made, by the imposition of conditions, for the preservation or planting of trees. Some hedgerows are given special protection under the Hedgerow Regulations 1997, which prevent the removal of most substantial hedgerows if they are deemed important in terms of their archaeological, historical, landscape or wildlife value and are at least 30 years old. Other hedgerows, whilst not meeting the criteria set out in the 1997 Regulations, are of considerable value for wildlife and do qualify as Habitats of Principal Importance.
- 11.2.74 Where proposals for minerals development and minerals related development are likely to affect trees, woodland and hedgerows, applicants will be required to identify those trees, woodland or hedgerows that may

¹⁸² Paragraph 174(b), revised NPPF, (July 2021)

¹⁸³ Paragraph 180(c), revised NPPF (July 2021)

potentially be affected. Removal of trees, woodland or hedgerows should be avoided where possible. Areas identified for woodland conservation or enhancement and trees covered by Tree Preservation Orders (TPOs) will be afforded particular protection. A tree survey will often be required for proposals affecting trees or proposals to fell trees. Where trees, hedgerows or woodland are intended to be lost as part of a proposal, appropriate compensatory planting should be provided as part of the development. The MPA will support new tree and hedgerow planting and new woodland creation where this expands tree cover in the Plan area where it has regard to local distinctiveness.

- 11.2.75 Where necessary, the MPA may seek to secure appropriate management and maintenance regimes for trees, woodland and hedgerows via planning obligation where this is not possible through the imposition of planning conditions

HISTORIC ENVIRONMENT

- 11.2.76 The historic environment is about more than just individual buildings, monuments or sites; it includes places, areas or landscapes that have historic significance and the connections between them. Heritage assets and their settings contribute to sense of place, are valued by communities, and can contribute to the economic prosperity of an area. They are an irreplaceable resource which is vulnerable to damage or loss from development and great weight should be given to their conservation so that they can be enjoyed for their contribution to the quality of life of existing and future generations.
- 11.2.77 Minerals can only be worked where they exist and, as a consequence, there is potential for proposals for minerals development and minerals related development to be located in close proximity to heritage assets, including buried archaeology, or within their settings which may lead to harm to the significance of those assets.

POLICY DM7: HISTORIC ENVIRONMENT AND ARCHAEOLOGY

Proposals for mineral development and minerals related development should seek to conserve and enhance the significance of designated and non-designated heritage assets (including those of archaeological interest) and their settings and, where applicable,

the outstanding universal value of the Derwent Valley Mills World Heritage Site. The MPA will place great weight upon the conservation of the significance of designated heritage assets relative to the importance of the heritage asset affected.

Proposals affecting heritage assets and their setting will be expected to be accompanied by a heritage impact assessment or heritage statement, sufficient to understand the significance of the heritage assets and their setting and the magnitude of any direct or indirect impact(s) to that significance and setting from the proposed development. The information should be appropriate to the scale of the proposed development and proportionate to the importance of the heritage asset. Where there is potential for archaeological interest to be present, information should also include an appropriate desk-based assessment and, where necessary, a field evaluation.

Proposals for minerals development and minerals related development will be supported where it can be demonstrated that they would:

- i) avoid causing substantial harm, or total loss of significance to designated heritage assets or undesignated archaeological sites of national importance and their setting. Proposals likely to result in substantial harm, or total loss of significance of, designated heritage assets and their settings will not be supported unless it can be demonstrated that the substantial harm or total loss of significance are necessary to achieve substantial public benefits that outweigh that harm or loss.
- ii) avoid causing less than substantial harm to designated heritage assets or undesignated archaeological sites of national importance. Proposals resulting in less than substantial harm to the significance of designated heritage assets and their settings will only be supported where it can be demonstrated that the public benefit of the development would outweigh the harm to the significance of the heritage assets and their setting.
- iii) avoid causing unacceptable harm, either directly or indirectly, to non-designated heritage assets, including non-designated archaeological sites of less than national importance. Proposals will be assessed according to the scale of any likely harm or loss and the significance of the non-designated heritage asset.

- iv) **provide for the enhancement of specific features of the historic environment, including individual heritage assets or historic landscapes, as part of their approved restoration scheme or as part of a wider package of mitigation measures associated with the proposal.**

Conditions may be attached to planning permissions to secure an appropriate programme for the investigation and recording of archaeological or built heritage remains prior to and/or during development, or for other mitigation measures including preservation in situ, and for the information thus gathered to be made publicly accessible through subsequent analysis, publication, dissemination and archiving of results. Where it is not possible to control these issues via condition, the MPA will seek to secure them using planning obligations.

REASONED JUSTIFICATION

- 11.2.78 The Planning (Listed Buildings and Conservation Areas) Act 1990 places a duty on planning authorities to have special regard to the desirability of preserving a listed building or its setting (Section 66(1)) and for special attention to be paid to the desirability of preserving or enhancing the character or appearance of a Conservation Area (Section 72).
- 11.2.79 National policy ¹⁸⁴ requires that, when considering the impact of a proposed development on the significance of a designated heritage asset, irrespective of the level of potential harm to significance, great weight should be given to the asset's conservation. It goes on to say that, the more important the asset, the greater the weight should be.
- 11.2.80 The Plan area possesses a significant number of designated heritage assets. The most important of these, the Derwent Valley Mills World Heritage Site, has been inscribed at the international level because of its Outstanding Universal Value. Designated heritage assets at the national level include listed buildings and registered Historic Parks and Gardens, both of which can have Grade I, Grade II* or Grade II status depending on their importance; Scheduled Monuments; and Conservation Areas. The MPA is

¹⁸⁴ Paragraph 199, revised NPPF (July 2021)

aware of a further site, Creswell Crags, which is currently on the UK Government's tentative list to become a candidate World Heritage Site.

- 11.2.81 Where a proposal for minerals development or minerals related development is likely to lead to substantial harm to, or total loss of significance of, a designated heritage asset, planning permission will not be granted unless it can be demonstrated that the substantial harm or total loss is necessary to achieve substantial public benefits that outweigh that harm or loss or where all of the following apply:
- a) the nature of the heritage asset prevents all reasonable uses of the site; and
 - b) no viable use of the heritage asset itself can be found in the medium term through appropriate marketing that will enable its conservation; and
 - c) conservation by grant-funding or some form of not for profit, charitable or public ownership is demonstrably not possible; and
 - d) the harm or loss is outweighed by the benefit of bringing the site back into use¹⁸⁵.
- 11.2.82 Where the harm to the significance of a designated heritage asset resulting from minerals or minerals related development is assessed as being less than substantial, the MPA will weigh this against the public benefits of the proposal including, where appropriate, securing its optimum viable use¹⁸⁶.
- 11.2.83 The Plan area also contains non-designated heritage assets. PPG defines non-designated heritage assets as buildings, monuments, sites, places, areas or landscapes identified as having a degree or heritage significance meriting consideration in planning decisions, but which do not meet the criteria for designated heritage assets¹⁸⁷. When considering development proposals, the MPA is required to take into account the effect of the development on the significance of a non-designated heritage asset. In weighing applications that directly or indirectly affect non-designated heritage assets, the MPA is required to make a balanced judgement having regard to the scale of any harm or loss and the significance of the heritage asset¹⁸⁸. An exception to this approach is made for non-designated heritage

¹⁸⁵ Paragraph 201, revised NPPF (July 2021)

¹⁸⁶ Paragraph 202, revised NPPF (July 2021)

¹⁸⁷ PPG, paragraph 039 (Reference ID: 18a-039-20190723) July 2019.

¹⁸⁸ Paragraph 203, revised NPPF, (July 2021)

assets of archaeological interest which are demonstrably of equivalent significance to scheduled monuments. Under those circumstances, the MPA is required to consider these subject to the policies for designated heritage assets¹⁸⁹

- 11.2.84 More information about designated and non-designated heritage assets in the Plan area can be found on the Derbyshire Historic Environment Record (HER) at the following link [Home - Derbyshire Historic Environment Record](#), which holds information for the entire Plan area. Detailed information about the Derwent Valley Mills World Heritage Site, including the overarching Statement of Outstanding Universal Value (OUV) and a list of the attributes of the OUV, and the elements of which they are formed, can be found in the ‘Derwent Valley Mills World Heritage Site Management Plan 2020-2025’¹⁹⁰
- 11.2.85 The MPA will assess the need for preservation in situ of archaeological sites and remains against their importance and the impact that their loss would have upon the overall archaeological resource of the Plan area. Although the preservation of archaeological sites is a primary objective, it is clearly impracticable to preserve them all. Equally, sites should not be destroyed without careful consideration and appropriate mitigation. Where preservation in-situ is not feasible, the MPA will expect sites to be surveyed, excavated or otherwise appropriately recorded. These provisions can only be assessed after the archaeological characteristics of proposed development sites have been evaluated. The MPA will seek to secure these matters via planning condition or, where necessary, planning obligation.
- 11.2.86 Where a development proposal has the potential to affect the significance of a heritage asset, the MPA will expect the planning application to be accompanied by a Heritage Impact Assessment (HIA), proportionate to the scale of the development and importance of the asset likely to be affected. Where an application site is known to include, or has the potential to include, heritage assets with archaeological interest, the MPA will expect the application to include an appropriate desk-based assessment and, where desk-based research is insufficient, to properly assess the interest, a field evaluation. In all instances, and as a minimum, applicants will be expected to consult the Derbyshire Historic Environment Record. Further information regarding the production of a Heritage Impact Assessment is set out in PPG. For proposals either located in, or likely to affect the OUV of the Derwent

¹⁸⁹ Footnote 68, revised NPPF (July 2021)

¹⁹⁰ [Derwent Valley Mills Management Plan 2020–2025](#)

Valley Mills World Heritage site, it is recommended that the HIA be produced using the guidance and toolkit for impact assessments in a world heritage context set out on the UNESCO World Heritage Convention website¹⁹¹.

WATER MANAGEMENT AND FLOOD RISK

- 11.2.87 Minerals development and minerals related development has the potential to impact upon the flow and quality of surface water features such as rivers, ditches and lakes as well as groundwater movement. It is important, therefore, that these impacts are avoided through good design and management of minerals sites.
- 11.2.88 Climate change is likely to lead to increased and new risks of flooding within the lifetime of planned developments. Minerals development and minerals related development need to be appropriately planned and designed to avoid, reduce and where necessary manage flood risk. However, the restoration of existing and new mineral workings in flood risk areas to increase flood water storage and enhance the natural environment can sometimes be beneficial.

POLICY DM8: WATER MANAGEMENT AND FLOOD RISK

Proposals for minerals development and minerals related development will be supported where it can be demonstrated that they would not result in unacceptable impacts on:

- **surface water quality, quantity and flows;**
- **groundwater quality, quantity, levels and flows;**
- **flood flows and conveyance routes, flood storage capacity, the integrity of flood defences and local land drainage systems; or**
- **where development proposals are located close to river corridors, the physical integrity of watercourses through suitable easements between a river bank and the proposed excavation area.**

Proposals will be expected to:

¹⁹¹ [World Heritage Centre - Guidance and Toolkit for Impact Assessments in a World Heritage Context \(unesco.org\)](https://whc.unesco.org/en/guidance/).

- i) incorporate flood risk protection, flood resilience measures appropriate to the character and biodiversity of the area and the specific requirements of the site, ensuring that the development would not increase flood risk to the site, or to others.
- ii) demonstrate how water quality, both surface and groundwater, will be managed to ensure no deterioration, and where possible enhancement, to help support and meet the wider requirements of the Water Framework Directive.
- iii) demonstrate that all phases of development, including restoration, have been designed to enhance the water management of the site and alleviate the risk of flooding in the long-term.
- iv) where development proposals are located close to river corridors, provide a site-specific geomorphology assessment to determine the minimum stand-off required between mineral excavations and any watercourse.
- v) incorporate Sustainable Drainage Systems (SuDS) to manage surface water drainage unless it can be demonstrated that it is impracticable to do so.
- vi) Where practicable, provide for the incorporation of flood risk reduction measures e.g. flood plain storage and reconnection, flood defence structures, and land management practices to benefit local communities, as part of their approved restoration scheme or as part of a wider package of mitigation measures associated with the proposal.

Where it is not possible to control these issues via condition, the MPA will seek to secure them using planning obligations.

REASONED JUSTIFICATION

Flood risk

11.2.89 National policy on flood risk is set out in the NPPF¹⁹². Detailed guidance on assessing flood risk is also set out in PPG¹⁹³. The aim is to steer inappropriate development away from areas at risk of flooding by directing

¹⁹² Paragraphs 159 – 169, revised NPPF, (July 2021)

¹⁹³ PPG, paragraphs 001- 080 Reference ID: 7-001-20220825 onwards (August 2022)

development away from areas at highest risk (whether existing or future) and to reduce the causes and impacts of flooding. It says that where development is necessary in high-risk flood areas, the development should be made safe for its lifetime without increasing flood risk elsewhere¹⁹⁴. The NPPF also sets out a sequential, risk-based approach¹⁹⁵ for assessing appropriate locations for development, based on the indicative Flood Maps prepared by the Environment Agency¹⁹⁶; an Exception Test¹⁹⁷, to assess whether development should be permitted in higher risk areas; and a “hierarchy of options”, to reduce and manage surface water run-off from development sites in high rainfall events¹⁹⁸. Strategic Flood Risk Assessments have been carried out in 2012, 2021 and again in 2022 to inform the preparation of the Plan¹⁹⁹.

- 11.2.90 Proposals for minerals development and minerals related development that are not allocated in the Plan which fall in identified areas of flood risk will be required to undergo a sequential test and, where appropriate, the Exception test, before deciding upon a preferred location. However, because minerals can only be worked where they are found, mineral operations are often, by necessity, located in areas at risk of flooding. For this reason, national policy²⁰⁰ classifies minerals working and processing (except for sand and gravel working) as ‘Less Vulnerable Development’ and sand and gravel working as ‘Water compatible development’. As a consequence, minerals development can, subject to appropriate design and management, be permitted within Flood Zones 1, 2 and 3a. Sand and gravel quarries are also appropriate in Flood Zone 3b.
- 11.2.91 Where appropriate, mineral operators should take the sequential approach into consideration when siting ancillary equipment or buildings, which may be vulnerable to flood risk even if the quarrying itself is water compatible, and the design of the phasing of working.

¹⁹⁴ Paragraph 159, NPPF (July 2021)

¹⁹⁵ Paragraph 161, revised NPPF (July 2021)

¹⁹⁶ [Flood map for planning - GOV.UK \(flood-map-for-planning.service.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/544444/flood-map-for-planning-service.gov.uk)

¹⁹⁷ Paragraphs 163 – 166, revised NPPF (July 2021)

¹⁹⁸ Paragraphs 167 and 169, revised NPPF (July 2021)

¹⁹⁹ Derbyshire County and Derby City Councils SFRA Level 1 Aug 2012, January and December 2022

²⁰⁰ Annex 3: Flood Risk Vulnerability Classification, NPPF (July 2021)

11.2.92 As set out in national policy²⁰¹, the MPA will require applicants to produce an appropriate Site Specific Flood Risk Assessment to be undertaken for any development proposal where the following criteria apply:

- All development located within Flood Zones 2 or 3
- Development proposals over 1 hectare in Flood zone 1;
- Land which has been identified by the Environment Agency as having critical drainage problems;
- Land identified in a strategic flood risk assessment (SFRA) as being at increased risk of future flood risk; or
- land that may be subject to other sources of flooding, where its development would introduce a more vulnerable use.

11.2.93 Further information regarding the content of site-specific flood risk assessments is set out in PPG²⁰² and also on the Government website²⁰³.

11.2.94 In the Plan area, a number of different bodies have responsibilities in terms of managing flood risk. The Environment Agency is responsible for managing the risk of flooding from main rivers and reservoirs and prepares national and regional flood risk guidance and strategies. Derbyshire County Council and Derby City Council also each have a statutory role as Lead Local Flood Authority (LLFA) for their respective administrative areas. LLFA are responsible for developing, maintaining and applying a strategy for local flood risk management in their areas and for maintaining a register of flood risk assets. They also have lead responsibility for managing the risk of flooding from surface water, groundwater and ordinary watercourses. When considering proposals for minerals development and minerals related development, the MPA recommends that applicants engage with these bodies at the earliest opportunity.

11.2.95 Mineral extraction within floodplains has the potential to temporarily reduce storage capacity, impede flows and therefore increase the risk of flooding elsewhere. Potential obstructions can include soil and overburden mounds and fixed plant. In addition, buildings and hard standing associated with minerals development can lead to an increase in surface run-off and

²⁰¹ Footnote 55, revised NPPF (July 2021) and [Flood risk assessments if you're applying for planning permission - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/flood-risk-assessments-if-youre-applying-for-planning-permission)

²⁰² PPG, paragraphs 001- 080 Reference ID: 7-001-20220825 onwards (August 2022)

²⁰³ [Flood risk assessments if you're applying for planning permission - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/flood-risk-assessments-if-youre-applying-for-planning-permission) (February 2017)

therefore contribute to flooding. Careful site design at the planning application stage will be required to address potential flood issues to ensure that flood risk is not increased on the site or elsewhere. Where possible, buildings and other obstructions should be located in parts of the site a lower risk of flooding.

- 11.2.96 In addition to flooding from watercourses, surface water flooding from rainfall onto hardstandings can occur. Surface water flooding events would normally involve a much smaller volume more local to the site. Where appropriate, Sustainable Drainage Systems (SuDS) capable of storing and controlling the discharge of water, including that arising from surface water flooding should be incorporated into the design of proposals. Wherever possible, SuDS should be designed to deliver multifunctional benefits including biodiversity, amenity and water quality enhancements.
- 11.2.97 When assessing the impacts of minerals development and minerals related development on surface water discharges, the MPA will require applicants to consider both water quality and quantity issues. The primary aim when considering the design of SuDS should be to reduce surface water discharge by appropriate soakaways and other infiltration systems, followed by attenuating (i.e. holding back) high flows of water during heavy rainfall. Discharging (uncontaminated) water to suitable water courses or surface water sewers are both more sustainable than discharging to combined sewers.
- 11.2.98 The MPA will require development proposals to be accompanied by appropriate management and maintenance regimes for surface water drainage systems. On greenfield sites, applicants will be expected to demonstrate that the current natural discharge solution from a site is at least mimicked. On previously developed land, applicants should target a reduction of surface water discharge.
- 11.2.99 The restoration of mineral workings can also bring multifunctional environmental enhancements, including the minimisation of flood risk to the site and others and enhancement of natural capital both within the site and its surrounding area. The MPA will expect restoration schemes to explore opportunities for delivering wider environmental benefits, including adapting to and mitigating the impacts of future flood risk through site restoration schemes. Appropriate landscaping of a site can also assist in reducing surface water discharge.

11.2.100 Restoration schemes involving semi-natural wetland or lake habitats close to river corridors can also potentially impact on the efficacy of natural flood processes, flood defences or other flood alleviation measures. Operators should ensure that restoration schemes are designed to enable natural processes and river-plain interaction to recover following the cessation of mineral extraction operations. The former mineral workings at Attenborough Nature Reserve (located in the Plan area and in Nottinghamshire) provide a good example of a high nature conservation value restoration which also provides significant flooding benefit to local communities.

WATER QUALITY

11.2.101 Minerals and waste developments also have the potential to deplete or pollute surface waters as a result of mineral extraction below the watercourse, chemicals or waste contaminants, soil and silt carried in surface water run-off during construction activities, or erosion of river banks due to excess water run-off.

11.2.102 The Environment Agency is the main body responsible for maintaining water quality and resources in the UK and provides advice on the protection of surface and groundwater protection zones²⁰⁴. It also publishes information on groundwater vulnerability and the location of source protection zones for water supply. Groundwater Protection uses aquifer designations (reflecting the importance of aquifers in terms of groundwater as a resource and also their role in supporting surface water flows) which are consistent with the Water Framework Directive²⁰⁵. A key aim of the Water Framework Directive is to prevent deterioration in the status of water bodies, improve their ecological and chemical status and prevent further pollution.

11.2.103 The MPA will require all proposals for mineral development and minerals related development to satisfactorily assess potential impacts on the water environment during all phases (e.g. construction, operational and restoration) of the proposed development. Hydrological or, where required, hydrogeological assessments will be required to take account of likely impacts to surface water quality, quantity and flows and ground water quality and levels resulting from minerals development and minerals related development. Such impacts could result from operations such as dewatering operations, water discharge or through the inappropriate storage of

²⁰⁴ [Groundwater source protection zones \(SPZs\) - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/topics/groundwater)

²⁰⁵ [Groundwater \(europa.eu\)](https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX:32000/06/05:CELEX:32000/06/05:EN:NOT)

fuels and other pollutants. Mineral workings below the water table could also result in adverse impacts. Assessments should also set out appropriate mitigation measures, including at the restoration stage, to ensure that minerals development and minerals related development would not adversely affect surface and ground waters. The restoration of mineral sites can offer opportunities for multifunctional enhancements which can include the opportunity to provide water quality improvements.

SOIL QUALITY AND AGRICULTURAL LAND

- 11.2.104 Minerals development and minerals related development often takes place on agricultural land and depending on the scale and nature of a proposal, can result in its damage or permanent loss through inappropriate restoration schemes and techniques. The movement, handling storage and mixing of soils (including topsoils, subsoils and overburden) to access underlying minerals can also lead to their damage or degradation if undertaken inappropriately or in the wrong conditions.

POLICY DM9: SOIL QUALITY AND AGRICULTURAL LAND

Proposals for minerals development and minerals related development will be supported where it can be demonstrated that they will protect and conserve soil resources and their quality and safeguard the long-term potential of best and most versatile agricultural land, including, where relevant, its availability for food production. Proposals should prioritise the managed recovery, retention, storage, conservation and treatment of soil including soil making resources for beneficial and, where appropriate, reuse within the site.

REASONED JUSTIFICATION

- 11.2.105 Soil is a finite resource that is essential for growing food and other crops, supporting biodiversity, contributing to landscape character, storing water, capturing carbon as well as acting as buffer against pollution. It is also a natural capital asset that provides important ecosystem services. National policy requires the MPA to protect and enhance valued soils and prevent the adverse effects of unacceptable levels of pollution. It also requires the MPA to take into account the economic and other benefits of best and most

versatile agricultural land²⁰⁶. Where significant development of agricultural land is demonstrated to be necessary, the MPA should seek the use of areas of poor quality land in preference to that of higher quality²⁰⁷ to ensure that the long-term potential of ‘best and most versatile land’ is safeguarded for future generations.

- 11.2.106 The quality of agricultural land is classified by Defra and Natural England using the Agricultural Land Classification (ALC). The ALC system classifies land into five grades, with grade 3 subdivided into sub-grades 3a and 3b. The best and most versatile land is defined as Grades 1, 2 and 3a in the NPPF²⁰⁸. This is the land which is most flexible, productive and efficient in response to inputs and which can best deliver future crops for food and non-food uses such as biomass, fibres and pharmaceuticals.
- 11.2.107 The MPA will assess the impact of proposals for minerals development and minerals related development on soils, their intrinsic character and the sustainability of the many ecosystems they deliver. Where proposals involve the disturbance of soils, subsoils and overburden arisings, they will be expected to be accompanied by sufficient information to demonstrate that soil quality will be protected and maintained throughout the life of the development particularly during operations involving stripping, handling, storage, management and final placement.
- 11.2.108 Where proposals are located on best and most versatile agricultural land, the MPA will expect the planning application to include sufficient information, including an agricultural land assessment, to demonstrate that the development will prioritise the development of poorer-quality land, avoiding significant development of best and most versatile agricultural land unless it is demonstrated to be necessary; safeguard the long-term potential of best and most versatile agricultural land by enabling the land to retain its longer-term capability for agricultural use where practicable; and optimise the restoration of agricultural land quality where the proposed after-use returns sites to an agricultural after use so that the potential of the BMV land can be maintained.
- 11.2.109 Further guidance on soils and assessment of agricultural land is set out in PPG and on the Natural England website²⁰⁹. The Institute of Quarrying has

²⁰⁶ Paragraph 174, revised NPPF (July 2021)

²⁰⁷ Footnote 58, revised NPPF (July 2021)

²⁰⁸ Annex 2: Glossary, revised NPPF

²⁰⁹ [Guide to assessing development proposals on agricultural land - GOV.UK \(www.gov.uk\)](https://www.gov.uk/guidance/guide-to-assessing-development-proposals-on-agricultural-land)

also recently published revised good practice guidance on the handling of soils in mineral workings²¹⁰

AVIATION SAFETY

11.2.110 Where minerals development and minerals related development is located close to an airport, one of the main hazards is bird strike, particularly where the site is restored to open water or wetland habitats. Tall buildings or structures located on mineral sites may also represent a hazard. It is important, therefore, that the development is designed carefully in order to maintain aviation safety.

POLICY DM10: AVIATION SAFETY

Minerals development and minerals related development within an airport safeguarding area will only be supported where it can be demonstrated that the development, including the form of restoration, would not constitute a significant hazard to aviation safety.

Restoration proposals for sites in these areas will be expected to balance the need to minimise the attractiveness of the site to birds that constitute a risk to aviation safety with other environmental considerations including climate change, landscape or biodiversity.

All proposals within an airport safeguarding area will be expected to operate in accordance with the provisions of an agreed Bird Hazard Management Plan.

REASONED JUSTIFICATION

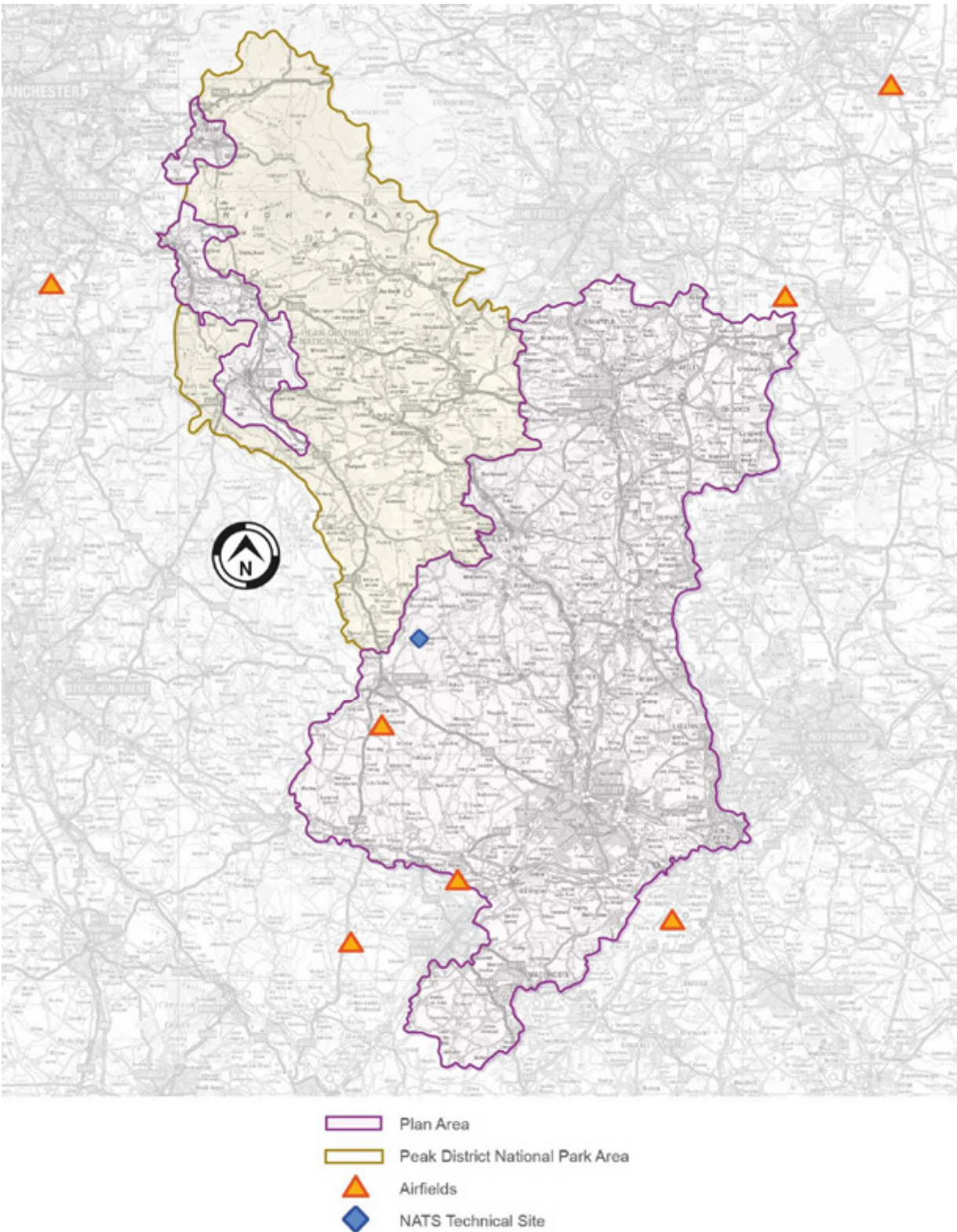
11.2.111 The Town and Country Planning (Safeguarding Aerodromes, Technical Sites and Military Explosives Storage Areas) Direction 2002 seeks to ensure that the operation and development of civil and military aerodromes and technical sites is not impeded through inappropriate development including buildings and structures that obscure runway approach or impede navigation aids or telecommunications systems; lighting with the potential to distract pilots; or development which has the potential to increase the number of birds/the bird hazard risk such as the restoration of mineral workings. National policy

²¹⁰ [Soils Guidance \(quarrying.org\)](https://www.quarrying.org/soils-guidance)

requires mineral working, restoration and after-use proposals to take account of aviation safety.

- 11.2.112 Where proposals for minerals development and minerals related development are located within 13km of officially safeguarded civil aerodromes, 8 miles of military aerodromes, delineated safeguard areas for (NATS) Technical Sites or within the identified safeguarding areas of other aerodromes, the MPA must consult the appropriate authority. In the event that proposals for mineral development or minerals related development results in unacceptable adverse impacts on aviation safety, planning permission should not be granted
- 11.2.113 Open water and wetland-based restoration schemes for minerals sites have the potential to attract increased numbers of large flocking birds such as gulls and geese, which can increase the overall risk of bird strike to aircraft. Some species of birds associated with bird strike can also be found on agricultural land. Water-based restoration can be achieved without constituting an unacceptable risk to aviation safety, through the incorporation of measures such as the creation of reed beds or fragmented ponds, instead of open water, as these are generally less attractive to the flocking birds that present a bird strike hazard. It is important, therefore, that careful consideration be given to the restoration of mineral sites located in airport safeguarding areas. Schemes should aim to balance local landscape and biodiversity distinctiveness with the need to minimise the risk of bird strike.
- 11.2.114 The MPA will continue to work closely with airport authorities and other interested bodies to ensure that sites close to airports are designed and restored in ways which minimise the risk of bird strike. In the Plan area, the only officially safeguarded civil or military aerodrome is East Midlands Airport. Safeguarded NATS technical sites are also located in Derbyshire Dales. Other aerodromes in, or close to the Plan area, that need to be taken into account include Derby Aerodrome at Egginton, Tatenhill aerodrome near Burton-on-Trent in Staffordshire and Netherthorpe Aerodrome near Worksop in Nottinghamshire. These are set out on Figure 11.2.1 below.

Figure 11.2.1: Safeguarded aerodromes



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GREEN BELT

11.2.115 Within the Plan area, there are four areas of Green Belt – the Derby/Nottingham Green Belt, the North East Derbyshire Green Belt (also known as Sheffield/South Yorkshire Green Belt), the North West Derbyshire Green Belt and the South Derbyshire Green Belt. These are set out on Figure 2.1 in Chapter 2: Spatial Overview. As set out in the NPPF, the fundamental aim of Green Belt policy is to prevent urban sprawl by keeping land permanently open and its essential characteristics are its openness and permanence.

POLICY DM11: GREEN BELT

Proposals for minerals development and minerals related development will be supported where it can be demonstrated that they will maintain the openness of the Green Belt and the purposes of including land within it.

Inappropriate development will not be approved except in very special circumstances. Very special circumstances will not exist unless the potential harm to the Green Belt by reason of inappropriateness, and any other harm, is clearly outweighed by other considerations.

REASONED JUSTIFICATION

11.2.116 Minerals can only be worked where they are found. Within the Plan area, a range of minerals are found in the Green Belt including building stone, coal and hydrocarbons in the North East Derbyshire Green Belt, hydrocarbons and sand and gravel in the Nottingham-Derby Green Belt and, brick clay and sandstone in the North West Derbyshire Green Belt. It is possible, therefore, that proposals for minerals development and minerals related development in the Green Belt will come forward during the plan period.

11.2.117 The NPPF²¹¹ states that minerals extraction is not inappropriate in the Green Belt where this preserves its openness and does not conflict with the purposes of including land within it. Appropriately designed and restored

²¹¹ Paragraph 150, revised NPPF (July 2021)

mineral working is therefore capable of being accommodated within the Green Belt where this does not conflict with national policy.

- 11.2.118 All proposals will need to demonstrate that the location, scale and impacts of the development will not harm the openness of Green Belt or the purposes of including land within it. Such assessment should be proportionate to the nature, location, duration and size of the proposed development and any potential harm it may bring to the openness of the Green Belt. Consideration should be given to how all stages (construction, operation and restoration) of the proposal would affect the characteristics of the Green Belt and the purposes of including land within it; whether any part of the proposal would constitute inappropriate development in the Green Belt; and if, in the event that any part of the development would be inappropriate, what very special circumstances might exist to justify that development.
- 11.2.119 Very special circumstances will not exist unless the potential harm to the Green Belt by reason of inappropriateness, and any other harm, is clearly outweighed by other considerations. Very special circumstances will need to be considered on a case-by-case basis and will depend on the circumstances of any proposed development. The presence of minerals - which can only be developed where they exist - and the contribution they can make to maintaining a steady and adequate supply, may be capable of being relevant considerations, depending on the circumstances at the time of any application. Minerals related development not directly associated with the winning and working of minerals e.g. concrete batching plants are unlikely to be considered appropriate development in the Green Belt.
- 11.2.120 Following mineral extraction, sites should be restored to a use compatible with Green Belt objectives and seek to enhance its appropriate use. This could include opportunities for biodiversity net gain, enhancement of ecological networks and natural capital, measures to enhance existing landscapes and visual amenity and to increase public access and opportunities for outdoor sport and recreation. Such opportunities will not negate the need to comply with protective Green Belt policy.

GREEN AND BLUE INFRASTRUCTURE

- 11.2.121 Green (and blue) infrastructure can be defined as a network of strategically planned multi-functional green and blue (water) spaces and other natural features, and the connections between them, that are capable of delivering, through appropriate design and management, a wide range of environmental, economic, health and wellbeing benefits for nature, climate,

local and wider communities and prosperity. The green and blue infrastructure network may comprise spaces in public or private ownership, with or without public access.

- 11.2.122 Green and blue infrastructure is also a natural capital asset that provides multiple benefits at a range of scales. Natural capital refers to the elements of the natural environment (often referred to as ‘natural assets’) which provide benefits (‘ecosystem services’) to local communities. Maintaining and enhancing the resilience of natural assets is essential to community health and well-being at both the local and strategic level.
- 11.2.123 Whilst poorly planned and managed minerals and minerals related development have the potential to result in the loss or deterioration of green and blue infrastructure through intensive and long-term environmental disturbance, well designed schemes also have the potential to contribute significantly to the extent and quality of local and strategic green and blue infrastructure networks within the Plan area and, through them, enhance its natural capital.

POLICY DM12: GREEN AND BLUE INFRASTRUCTURE

Proposals for minerals development and minerals related development will be supported where it can be demonstrated that they will not compromise the integrity of existing strategic and local green and blue infrastructure assets or the natural capital of the Plan area.

All proposals for minerals development and minerals related development will be expected to take account of, and provide opportunities to create, maintain and enhance green and blue infrastructure provision in the Plan area and, where possible, improve accessibility to these assets. Proposals should aim to incorporate a range of green and blue infrastructure to maximise the delivery of multi-functionality and ecosystem services, incorporate water quality improvements and/or opportunities to improve the water environment, support climate change adaptation and encourage healthy and active lifestyles. Where applicable, the MPA will expect the proposals to have regard to the content of existing green and blue infrastructure strategies or other approved strategies promoting change at the landscape scale.

Where new green and blue infrastructure assets are proposed details of the arrangements for the long-term management of the asset will need to be provided prior to the determination of any planning application. Where necessary, these matters may need to be secured using planning obligations.

REASONED JUSTIFICATION

11.2.124 National policy requires that strategic policies should set out an overall strategy for the pattern, scale and quality of development, and make sufficient provision for green infrastructure²¹². It also requires the MPA to take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries²¹³

11.2.125 PPG²¹⁴ outlines the types of land use that comprise green (and blue) infrastructure and recognises the benefits (ecosystem services) that it can bring to local communities. The guidance identifies the following planning goals which green infrastructure can help achieve²¹⁵:

- Building a strong, competitive economy;
- Achieving well-designed places;
- Promoting healthy and safe communities;
- Mitigating climate change, flooding and coastal change; and
- Conserving and enhancing the natural environment.

11.2.126 The extent to which green and blue infrastructure is capable of providing these benefits is largely dependent on how well it is designed and maintained. Whilst individual assets can serve a useful purpose in isolation, direct connectivity between multiple green and blue infrastructure assets can help maximise the benefits that they generate and reduce issues associated with fragmentation and severance. In line with the requirements of policy SP1: Sustainable Minerals Development, Policy DM12 seeks to establish a comprehensive and well managed network of multifunctional green and

²¹² Paragraph 20, revised NPPF (July 2021)

²¹³ Paragraph 175, revised NPPF (July 2021)

²¹⁴ Paragraph 004, Reference ID 8-004-20190721 & Paragraph: 005 Reference ID: 8-005-20190721

²¹⁵ Paragraph: 006 Reference ID: 8-006-20190721

infrastructure assets for the Plan area and, through them, enhance its natural capital.

11.2.127 Although there is no single overarching strategy, green infrastructure strategies have been adopted for parts of the Plan area. The 6C's Green Infrastructure Strategy²¹⁶, which takes in the counties of Leicestershire, Derbyshire and Nottinghamshire, is relevant to Derby City Council, Amber Valley Borough Council, South Derbyshire District Council and Erewash Borough Council. The Greater Nottingham Green and Blue Infrastructure Strategy includes the administrative area of Erewash Borough Council²¹⁷. Green infrastructure studies have also been undertaken as part of local plan preparation by Derbyshire District Council, High Peak Brough Council and Chesterfield Borough Council. Derbyshire County Council is also currently building an evidence base to assist in the production of a Natural Capital Strategy which, it is hoped, will be adopted by 2023. The MPA will utilise the studies and adopted strategies when assessing the impact of development proposals on existing green infrastructure assets as well as any potential linkages to those assets.

11.2.128 Proposals for mineral development and, where appropriate, mineral related development, will be expected to contribute to the extension or enhancement of the green and blue infrastructure network in the Plan area, helping to address deficiencies in existing provision and providing good quality connections to the network and throughout the development. The MPA will expect green infrastructure principles to be considered and incorporated into proposals for minerals development at the earliest possible opportunity. They should be considered at every scale (e.g. local or strategic) and be capable of delivering a wide range of environmental, health and quality of life benefits for local communities. Applicants should assess the site context for green infrastructure functions and take opportunities to achieve multi-functionality by bringing green infrastructure functions together.

11.2.129 In developing proposals for minerals development and minerals related development, the MPA will expect applicants to have regard to the content of existing green infrastructure strategies, or other strategies approved during the Plan period, promoting change at the landscape scale. These should be viewed and considered alongside other relevant policies of this Plan to identify opportunities for protecting, enhancing and connecting green

²¹⁶ 6cs Green Infrastructure Strategy (July 2010)

²¹⁷ Greater Nottingham Green and Blue Infrastructure Strategy Part 1 (July 2020)

infrastructure assets as part of new development. Further guidance on planning for green and blue infrastructure, as well as a green infrastructure framework, is provided by Natural England.²¹⁸

- 11.2.130 Green and blue infrastructure requires sustainable management and maintenance arrangements to be put in place if it is to provide benefits and services in the long term and ensure operations deliver biodiversity net gains and other environment enhancements and benefits. The protection, enhancement and creation of green and blue infrastructure should be considered at an early stage of a mineral development proposal. Planning conditions or, if necessary, planning obligations will be required to secure and fund new and existing green and blue infrastructure assets both on site and, if necessary, offsite.

PUBLIC ACCESS

- 11.2.131 Minerals development and minerals related development can have significant direct or indirect impacts on public rights of way, open spaces and informal outdoor recreational land and their users. Public access to such routes and areas may be restricted for health and safety reasons or to prevent criminal damage. Where rights of way are affected, arrangements for their temporary or permanent diversion must be put in place as part of proposals. Restoration of mineral workings may provide an opportunity to provide new or enhanced rights of way and outdoor recreational uses.

POLICY DM13: PUBLIC ACCESS

Proposals for minerals development and minerals related development will be supported where it can be demonstrated that they will not have an unacceptable impact on the existing rights of way network and its users. Where this is not practicable, satisfactory proposals for temporary or permanent diversions, which are of at least an equivalent convenience, quality or interest must be provided.

Improvements and enhancements to the rights of way network will be sought and, where possible, recreational access to restored minerals workings will be increased. Opportunities will be taken for the provision of new routes and links between existing routes, especially at the restoration stage with priority given to meeting the

²¹⁸ [Green Infrastructure Home \(naturalengland.org.uk\)](https://naturalengland.org.uk)

objectives of any adopted Rights of Way Improvement Plans covering the Plan area as well as any adopted strategies for greenways and/or cycle networks. Where necessary, these matters may need to be secured using planning obligations.

REASONED JUSTIFICATION

- 11.2.132 National policy²¹⁹ states that policies should protect and enhance public rights of way and access. Opportunities to provide better facilities for users, such as adding links to the existing rights of way, should be sought. Where appropriate, manned crossing points will be required to ensure that the existing rights of way network is not compromised during development. Proposals for new rights of way will need to consider how they can best link into the existing rights of way network. All proposals for new or improved rights of way will also need to consider the needs of people with mobility problems and other disabilities and comply with the requirements of the Equality Act 2010.
- 11.2.133 The Plan area has a diverse network of footpaths, bridleways and byways which, when combined, provides approximately 3,000 miles of routes. Combined with the many other paths, trails, greenways and areas of open access land, this unique resource is an important tourism and recreation asset offering local communities and visitors the opportunity to explore the countryside as well as providing a sustainable means of access to schools, shops, work places and other community facilities. Despite this, parts of the Plan area also suffer from a poor-quality environment, or a lack of publicly accessible green space. Therefore, efforts to improve public rights of way and access within, or as part of the restoration of, mineral developments should be targeted to help address existing shortfalls as well as providing new infrastructure.
- 11.2.134 When designing restoration schemes incorporating enhanced public access, new rights of way or new links between existing rights of way/multi-user routes, reference should be made, where appropriate, to the objectives of the appropriate Rights of Way Improvement Plan (RoWIP) or adopted greenway strategies. Within the Plan area there are two RoWIP which should be taken into account - the Rights of Way Improvement Plan for the City of Derby 2014-2017 and the Rights of Way Improvement Plan for

²¹⁹ Paragraph 100, Revised NPPF, July 2021

Derbyshire 2007 – 2012, both of which are still relevant. The County Council also produced a Statement of Action to accompany the RoWIP covering the period 2013-2017. Derbyshire County Council has also produced the Derbyshire Cycling Plan 2016-2030 covering the entire Plan area, which sets out key priorities for strategic and local cycle routes within Derby and Derbyshire.

- 11.2.135 Advice should be sought from the MPA's rights of way officers regarding the need for temporary or permanent diversions associated with a development proposal at the earliest possible stage. The statutory process for footpath diversion or closure is separate from the planning process and as such delays or failures to secure any required amendments to the rights of way network could affect the implementation of future minerals development.
- 11.2.136 Enhancements to the rights of way network will be secured through planning obligations rather than planning conditions to ensure that the enhanced rights of way are available in perpetuity. Similarly, permissive paths (paths created as part of a restoration scheme which have no legal status as a right of way) will not be considered for temporary or permanent diversions to an existing definitive right of way.

CUMULATIVE IMPACTS

- 11.2.137 Dependant on the type of mineral, the scale and nature of the mineral working and the abundance of the resource, the effects of minerals development and minerals related development on the environment, local communities and the surrounding area can last for many years. Within the Plan area, this has resulted in some areas experiencing a concentration of workings, both historic and current, the effects of which continue to be felt today. The cumulative impact of several mineral workings either on one site or in close proximity to each other may, therefore, be a factor that needs to be considered; as well as the effects of these types of developments in conjunction with other developments in an area.

POLICY DM14: CUMULATIVE IMPACTS

Proposals for minerals development and minerals related development will be supported where it can be demonstrated, taking into account the potential sensitivity of the site, that there are no unacceptable cumulative impacts on the wider and local environment including landscape character, the local amenity of nearby

communities including health and well-being and the economic prosperity of the local and wider area.

In assessing cumulative impacts, all proposals will be expected to have regard to both the collective effects of different impacts generated by that proposal (intra-project effects) as well as the effects of other developments occurring concurrently or successively (inter-project effects).

REASONED JUSTIFICATION

11.2.138 The NPPF requires new development to be appropriate for its location, *‘...taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site, or the wider area to impacts that could arise from the development’*²²⁰. Specifically with regard to minerals development, it requires local policies to *‘set out criteria or requirements to ensure that permitted and proposed operations do not have unacceptable adverse impacts on the natural and historic environment or human health, taking into account the cumulative effects of multiple impacts from individual sites and/or a number of sites in a locality’*²²¹

11.2.139 PPG²²² acknowledges that some parts of a MPA area may have been subjected to successive mineral development over a number of years, stating that MPAs should include appropriate policies in their minerals local plan to ensure that the cumulative impact of a proposed minerals development on the community and environment will be acceptable.

11.2.140 Cumulative impacts associated with minerals development and minerals related development can occur in a number of ways including the cumulative impact of a number of environmental effects (e.g. noise, dust, vibration, odour, lighting, transport movements) associated with a single site; the combined effects from more than one site that are active simultaneously; the combined effect on local land use, landscape character and biodiversity following the restoration of mineral workings leading to a long term change in the characteristics and distinctiveness of an area; and impacts on the amenity of local communities who have experienced many years of either

²²⁰ Paragraph 185, revised NPPF (July 2021)

²²¹ Paragraph 210(f), revised NPPF, (July 2021)

²²² Paragraph 017 ID: 27-017-20140306, PPG

continual mineral extraction or the adverse effects resulting from poorly restored or unrestored mineral workings.

- 11.2.141 The MPA will consider the appropriateness of granting permission for new minerals development and minerals related development where they are located in close proximity to other minerals sites or where the legacy of historic mineral working remains having regard to both the collective effects of different impacts generated by that proposal (intra-project effects) as well as the effects of other developments occurring concurrently or successively (inter-project effects).
- 11.2.142 The ability of a local area to absorb further minerals development and minerals related development will be dependent on the location of existing mineral sites as well as pressures from other, non-mineral type development; the scale and nature (including phasing and duration) of the operations proposed; and the proposed restoration and after-use of the site and will be assessed by the MPA on a case-by-case basis.

RESTORATION, AFTERCARE AND AFTER-USE

- 11.2.143 Minerals development is a temporary use of the land and, as a consequence, it is important that site restoration is properly designed at the earliest stage to ensure that proposals are achievable, environmentally acceptable and that long-term benefits are secured. Satisfactory restoration of minerals sites is also essential in ensuring the sustainable use of land following the completion of minerals development. The after-use of a site should be designed on a case-by-case basis, dependant on location, geology and local characteristics, as should the aftercare arrangements.

POLICY DM15: RESTORATION, AFTERCARE AND AFTER-USE

Proposals for minerals development and minerals related development will be supported where it can be demonstrated that provision has been made for the reclamation of the site at the earliest opportunity to result in high quality restoration, aftercare and the appropriate after-use of the site.

All restoration proposals will be expected to deliver significant* biodiversity net gain, contribute towards the enhancement of natural capital within the Plan area and assist in mitigating the effects of

climate change through the inclusion of appropriate climate change adaptation and mitigation measures. Where appropriate, restoration proposals should also seek to contribute to the enhancement of heritage assets and/or historic landscapes.

Restoration

As a minimum, all restoration proposals will be required to demonstrate the following:

- 1) that the scheme has had regard to the character and distinctiveness of the surrounding landscape and historic environment, its biodiversity and geodiversity and existing land uses.
- 2) a restoration masterplan, including details of final landform, the drainage system and landscaping (including the retention of any existing, important landscape features) and a timescale for restoration works, including phasing.
- 3) that restoration material placement has been carefully planned to avoid sterilisation of the mineral resource, minimise double handling of material where possible, or lead to the imposition of artificial constraints to restoration.
- 4) where restoration will involve the use of imported materials to achieve the intended ground levels, that sufficient infill materials are likely to be available to restore the site within an acceptable timescale; provide the optimum restoration solution, using no more material than necessary to attain the required landform.
- 5) that, wherever possible, it seeks to maximise all opportunities for phased or progressive restoration and how this is to be achieved.
- 6) how the proposal makes provision for the appropriate retention or replacement of soils and, where agricultural restoration is proposed, how the scheme will retain, enhance and/or replace areas of the best and most versatile agricultural land.
- 7) that, wherever possible, opportunities to incorporate natural flood storage and alleviation are maximised, taking into account existing flood defence assets and the continued effective operation of such assets.

- 8) that, for proposals located in close proximity to river corridors, the proposal seeks to enable natural processes and river-floodplain interaction to recover following the cessation of extraction operations.
- 9) where sites lie within an Airport Safeguarding Zone, how the scheme has been designed to minimise the issue of bird strike.
- 10) where sites lie within the National Forest, that the scheme seeks to provide additional native deciduous woodland planting.

Aftercare

All proposals will be subject to a minimum five-year period of aftercare. Where proposals, or elements of proposals require a longer period of management a proposal will only be supported where it clearly sets out details of the period of extended aftercare and how this will be managed and secured. Where these cannot be secured through planning condition, the MPA will seek to secure them via planning obligation.

After-use

Proposals should seek to provide benefits to the local and wider community including enhanced natural capital, enhancement and creation of biodiversity and geodiversity interests, linkages to other green infrastructure initiatives and ecosystems, enhanced landscape character, improved public access, recreation or tourism opportunities.

REASONED JUSTIFICATION

11.2.144 National policy²²³ requires that land worked for minerals is reclaimed at the earliest opportunity, taking account of aviation safety, and that high-quality restoration and aftercare of mineral sites takes place.

11.2.145 PPG²²⁴ advises that the most appropriate form of site restoration to facilitate different potential after-uses should be addressed in firstly both local minerals plans, which should include policies to ensure that worked land is reclaimed at the earliest opportunity and that high quality restoration and

²²³ paragraph 210(h) revised NPPF, (July 2021)

²²⁴ Paragraph 37 PPG, (Reference ID:27-037-20140306), 06 03 2014

aftercare of mineral sites takes place, and secondly on a site-by-site basis following discussions between the minerals operator and the MPA. It goes on to set out²²⁵ the key stages involved in the restoration and aftercare of minerals sites and describe the level of detail that should be submitted regarding restoration and aftercare at the planning application stage.

- 11.2.146 Well considered restoration proposals should have regard to the wider context of the site, to ensure that the restored site integrates with the character and distinctiveness of the surrounding landscape, mitigates any visual intrusion, and enhances biodiversity. Well-designed restoration schemes can also play a key part in building and enhancing natural capital and ecological networks at both the site level and at the more strategic level and establish the long-term potential of the land for a wide range of after-uses, such as conservation, recreation, flood alleviation and improved access, that can be of benefit to local communities and the economy. The MPA will expect all proposals to contribute, where appropriate, to the creation of new green infrastructure and opportunities for increased public accessibility in the Plan area in accordance with policies DM12: Green Infrastructure and DM13: Public Access.
- 11.2.147 The term significant biodiversity net gain, as referred to in policy DM15 above, means a requirement for restoration schemes to provide for the delivery of BNG in excess of the statutory minimum 10% (as calculated using the most up to date version of the government’s approved Biodiversity Metric and subsequent approval of the Biodiversity Net Gain Plan).
- 11.2.148 Where mineral sites are located close to heritage assets and contribute towards the setting of those assets, the MPA will expect restoration proposals to provide for the enhancement of specific features of the historic environment, including individual heritage assets or historic landscapes in accordance with the requirements of policy DM7: Historic Environment.
- 11.2.149 In line with the requirements of policies SP2: Climate Change and DM8: Water Management and Flood Risk, the MPA considers that, where possible, restoration schemes should seek to maximise opportunities for natural flood storage and flood alleviation. Where such measures are proposed, the MPA will require applicants to demonstrate that they would not adversely impact the effective operation of existing flood defence assets in the locality of the site. In addition, where sites are located close to river

²²⁵ Paragraph 38, PPG Minerals 2014, Reference ID: 27-038-20140306 revision date 06 03 2014

corridors and include new ponds and/or water bodies as part of the proposed restoration, the applicant must demonstrate that consideration has been given/modelling undertaken of the interrelationship between the new pond and the adjacent water course. The MPA considers that returning lateral connectivity between rivers and their natural floodplain is vital to ensure the delivery of multiple benefits, including natural capital and climate change resilience.

- 11.2.150 On some occasions planning applications will be submitted with a restoration scheme designed to be compatible with commercial/residential after-uses. In such instances, schemes usually include large development platforms with few landscape features or restricted habitat creation. Whilst this can represent a practicable approach, particularly where the minerals extraction is required as part of a wider site remediation, they can also be problematic with timings or certainty that the later scheme proceeds. The MPA will generally not be supportive of such schemes unless a corresponding application has been submitted to the relevant district/borough planning authority.
- 11.2.151 All restoration schemes should include landscaping proposals, which ensure that sites can be assimilated into the surrounding landscape and which are compatible with the proposed after-use. These should be based on the local landscape character of the site and its surroundings. When designing landscaping schemes, applicants should have regard to the 'Landscape Character of Derbyshire' document or other local town/landscape character assessment relevant to the Plan area. The MPA will expect all restoration schemes to have regard to the requirements of policy DM4: Landscape.
- 11.2.152 At the planning application stage, applicants will be required to demonstrate that the site can be restored to an acceptable condition and after-use. A restoration and after-use scheme, which is integrated fully with the extraction programme from the start of the process, will be expected to be submitted as part of the planning application for the working of the site. This should provide comprehensive details of the order and timing of phases of mineral working, restoration and of the final main after-uses. The scheme should also aim to integrate and facilitate the delivery of any relevant mitigation measures, as identified in assessments undertaken to support the planning application. It is strongly advised that these matters are discussed with the MPA at the pre-application stage, and where possible involve input from relevant key stakeholders to resolve any potential conflicts of interest

- 11.2.153 At sites where there is a high volume of mineral extraction, it may not be possible to restore the land to pre-extraction levels without the use of imported materials. The ability to restore land to original ground levels will impact on the options for site restoration, particularly where restoration to agricultural use is the preferred option.
- 11.2.154 Inert infill material, such as construction material (builders' rubble and soils from ground excavations) has commonly been used to restore land to the required level, although this type of material is becoming increasingly scarce as a consequence of greater incentives to recycle materials and since the introduction of Landfill tax. The location of some sites also means that the delivery of infill material by road may not be possible or could result in further and unacceptable adverse impacts. The MPA will expect potential or limitations on the ability to restore ground levels to be addressed in the planning application documents and be taken into consideration in the design of the development at the earliest opportunity. Mineral operators should be able to demonstrate that sufficient infill material is likely to be available and within an acceptable period to avoid delays in restoration.
- 11.2.155 Whilst mineral extraction may be considered appropriate in a particular location, the use of waste material as a restoration/infill material may not be. This could be because of site location e.g. a site in the Green belt or the proximity of local communities. Where an operator proposes to import waste material for infilling purposes, an Environmental Permit from the Environment Agency will be required. National policy seeks to ensure that recyclable materials are put to beneficial use ('waste recovery') rather than being disposed of ('waste disposal'). Operators will also need to ensure that restoration schemes involving the use of waste materials are designed to keep waste materials to a minimum to ensure the restoration phase is kept to a minimum, that restoration is the optimum solution for the site and that no more material than necessary is used to achieve the required landform.
- 11.2.156 Wherever possible, site restoration must be undertaken progressively, with sections of the site worked and then restored at the earliest opportunity. The aim should be to minimise the area of land disturbed and the overall period of mineral operations. Progressive restoration can also assist in gauging the success/rate of establishment of approved planting schemes as well as any habitat creation measures. It can also help to offset any impacts of the development on biodiversity, the landscape and visual amenity, as well as helping to maintain and enhance local distinctiveness during the life of the development.

- 11.2.157 The MPA will expect soils to be adequately protected and maintained throughout the life of the development, particularly if a site comprises land that qualifies as best and most versatile agricultural land (see Policy DM9: Soil quality and Agricultural land).
- 11.2.158 Where sites are located in airport safeguarding zones, the MPA will expect restoration schemes to be designed to incorporate appropriate bird hazard management measures in order to minimise impacts to aviation safety in accordance with Policy DM10: Aviation safety.
- 11.2.159 In order to ensure that a restored site is fit for purpose and remains so, it is important that they are properly managed afterwards. Aftercare can include the processes of cultivating, fertilising, planting, draining and otherwise treating the land. An appropriate period of aftercare is needed to ensure mineral sites are restored to a standard suitable for their intended after-use. The length of the aftercare period will normally be at least five years, although this can be extended, and will be negotiated on a case-by-case basis, depending on the restoration scheme and after-uses agreed for the site. Longer term management will be required for those elements of a restoration scheme designed to deliver biodiversity net gain. From November 2023, it is expected that extended aftercare and management period of 30 years will be required in order to ensure that the biodiversity led enhancements are successfully established and in appropriate management. Where appropriate, the MPA will seek to ensure that the long-term management of the site is secured through a Planning Obligation.
- 11.2.160 National policy²²⁶ requires that financial guarantees are only provided in exceptional circumstances such as mineral extraction techniques utilising new technologies. Large mineral operators tend to be members of trade associations such as the Mineral Products Association which have their own Restoration Guarantee Fund (although this is limited to £1 million). However, for a variety of reasons, many large mineral operators are concentrating their resources on larger sites. They are also selling or transferring smaller sites to smaller operators towards the end of the extraction phase or during the restoration phase. For these reasons, it is important to ensure that the developers or land owners left in control of the sites have adequate financial provision to fulfil the final restoration and aftercare requirements. This can

²²⁶ Paragraph 211(e), revised NPPF (July 2021)

be through membership of a trade association with an adequate Restoration Guarantee Fund or by providing an equivalent guarantee bond.

PLANNING OBLIGATIONS

- 11.2.161 In order to ensure that all proposals for minerals development and minerals related development meet the sustainable development objectives of the Plan, additional measures may be required to make a proposed development acceptable. Such measures may be identified in the information submitted in support of planning applications or through consultee comments during the determination of those applications.
- 11.2.162 In the first instance, where the MPA considers that additional measures are required, either to mitigate the adverse effects of a proposal or to secure enhancements to its quality, the MPA will seek to impose planning conditions on a planning permission
- 11.2.163 Circumstances can exist, however, where this may not be possible and, where this occurs, the MPA will seek to enter into a planning obligation in order to secure the necessary mitigation measures.

POLICY DM16: PLANNING OBLIGATIONS

Where it is not possible to address any unacceptable impacts of minerals development and minerals related development through the use of planning conditions, the MPA will seek to secure planning obligations to ensure that otherwise unacceptable development can be made acceptable.

Planning obligations will only be sought where they meet the following tests which require that they are:

- a) necessary to make the development acceptable in planning terms;**
- b) directly related to the development; and**
- c) fairly and reasonably related in scale and kind to the development.**

REASONED JUSTIFICATION

11.2.164 Section 106 of the Town and Country Planning Act 1990, as amended allows Mineral Planning Authorities to enter into private agreements (otherwise referred to as planning obligations) with landowners and developers in order to make acceptable development that would otherwise be unacceptable. Such obligations apply to all those parties that enter into the agreement as well as any subsequent owner of the land to which the planning permission relates. Developers can also make unilateral undertakings to commit to certain actions.

11.2.165 Government policy on the use of planning obligations is set out in the NPPF. Planning legislation²²⁷ also sets out limitations on the use of planning obligations. There are three tests that all planning obligations must meet in order to constitute a reason to grant planning permission. They must be:

- Necessary to make the proposed development acceptable in planning terms;
- Directly related to the proposed development; and
- Fairly and reasonably related in scale and kind to the proposed development.

11.2.166 In the context of minerals development and minerals related development, planning obligations may be sought in a number of circumstances. Although not intended to be definitive, such circumstances can include:

- The provision of off-site works such as highway improvements and flood alleviation measures in order to mitigate the impacts of the development;
- Contributions towards the delivery of identified infrastructure proposals or other adopted landscape-scale strategies;
- The provision of long-term site management/aftercare following restoration in order to ensure that the aftercare objectives are fully realised (where third parties are involved); and
- Securing and ensuring the delivery of biodiversity net gain or carbon offsetting particularly where it is proposed that this be achieved via ex-situ compensation or payments are made to third parties;

²²⁷ Regulation 122 Community Infrastructure Regulations 2010, as amended.

11.2.167 The precise nature and scale of planning obligations will vary with each development. Commonly they are based on:

- The nature of the impacts that the development has on existing infrastructure and whether it is capable of being accommodated by existing provision;
- Any site/development specific mitigation measures required and the means of implementing them;

11.2.168 Applicants are encouraged to discuss the need for planning obligations at the earliest possible opportunity. Pre-application discussions can prevent delays in finalising those planning applications which are granted subject to the completion of planning obligation agreements. Derbyshire County Council has produced a Developer Contributions Protocol²²⁸ which details the type and level of contributions which may be sought by the County Council when consulted on or determining planning applications, and the methodology which underpins the calculations.

²²⁸ [Developer Contributions Protocol \(derbyshire.gov.uk\)](https://www.derbyshire.gov.uk/development/development-control/developer-contributions-protocol)

CHAPTER 12: Monitoring and Implementation

INTRODUCTION AND BACKGROUND

- 12.1 The MPA is required to monitor its local plans on a regular basis to ensure that the policies are deliverable and are being implemented, in accordance with the Planning and Compulsory Purchase Act (as amended)²²⁹ and Town and Country Planning (Local Planning) (England) Regulations 2012 (as amended)²³⁰, together with the NPPF²³¹ and PPG²³². Additionally, the MPA is required to assess its local plan policies at least once every five years, from the date of adoption, to determine whether they need to be reviewed, and carry out a review if necessary. In carrying out this assessment the MPA will take into account significant changes to factors that make up the evidence base or any relevant changes to national policy. The PPG sets out, however, that local plan policies do not become out of date automatically after five years.
- 12.2 PPG²³³ requires the MPA to report annually via an Authority Monitoring Report (AMR) setting out: progress with local plan preparation in accordance with the Development Plan Scheme; activity relating to ‘duty to co-operate’, policy implementation and delivery including any information relating to indicators in the plan. It can also include developer contributions gained and used (through Section 106 planning obligations and Community Infrastructure Levy (CIL). The AMR is therefore a useful tool in informing whether there is a likely need to undertake a partial or full update of a local plan.
- 12.3 The MLP sets out the overall vision, objectives and strategic policies to address agreed priorities for the development and use of land in its area to enable the delivery of sustainable minerals development. The Vision encompasses the aspirations of people and organisations with an interest in the plan area and sets out what the area will look like at the end of the plan period in 2038, in terms of mineral development, if the objectives of the plan have been delivered

²²⁹ Section 35

²³⁰ Regulations 10A and 34

²³¹ NPPF July 2021 Paragraphs 31-33

²³² PPG Plan Making published 13 9 2018 (updated 21 7 2021) paragraph 62 Paragraph: 062 Reference ID: 61-062-20190315 Revision date: 15 03 2019

²³³ PPG Plan Making published 13 9 2018 (updated 21 7 2021) paragraph 73 Paragraph: 073 Reference ID: 61-073-20190315 Revision date: 15 03 2019

successfully. The objectives set out the key goals that need to be attained to make the vision a reality whilst the policies of the plan seek to deliver those objectives. It is important therefore to monitor the effectiveness of the local plan policies in delivering the plan objectives.

- 12.4 The Plan will ultimately be implemented through the development management process of the MPA, via the grant or refusal of planning permission for new proposals, the monitoring of the compliance of existing minerals developments with their planning conditions and obligations and action taken on unauthorised mineral development. Planning permission will be granted where proposals are in accordance with the NPPF, the policies of the adopted Minerals Local Plan and any relevant policies in the adopted Local Plans for the area in which the proposed development is located. The Borough and District Councils will have an important role to play in safeguarding mineral resources and mineral related infrastructure from non-mineral development through the application of Mineral Consultation Areas, as will the City Council in its role as a Unitary Authority.

MEASURES AND INDICATORS

- 12.5 In order to monitor the Plan's policies, it is important to establish appropriate measures and indicators. The effectiveness of some policies is more suitably measured through quantitative indicators e.g. landbanks of permitted reserves whilst the performance of other policies will be monitored through the grant or refusal of planning permissions. It is also important to monitor data that makes up the evidence base of the plan to ensure that it is kept up to date.
- 12.6 The Plan includes a number of objectives to enable delivery of the overall vision. Some of the objectives may be delivered by one specific policy, whilst others will be delivered by a combination of policies.
- 12.7 The Plan identifies a number of strategies for how the MPA will make provision for an adequate and steady supply of minerals over the Plan period. The strategy for most minerals takes the form of criterion-based policies, as there are no specific national or local targets to be met for their supply. For aggregate minerals, the plan is required to make provision for an agreed level of supply over the plan period and this requires more detailed monitoring, through the Local Aggregate Assessment (LAA) and the policies of the Plan.
- 12.8 An important requirement of plan preparation is the Duty to Co-operate and preparation of Statements of Common Ground which often include an agreement to monitor and share information on the supply of minerals.

THE MONITORING FRAMEWORK

12.9 The Monitoring framework sets out the way in which the effectiveness of the Plan’s policies will be measured. It includes reference to the Plan’s Objectives which the policies are seeking to deliver, an indicator, method or source of monitoring, target and trigger threshold for considering action including policy/plan review.

12.10 The Plan’s proposed Objectives are repeated here for information:

- **Objective 1** - Ensuring a Steady and Adequate Supply of Minerals
- **Objective 2** - Ensuring the Prudent use of Primary Mineral and other Natural Resources
- **Objective 3** - Safeguarding Mineral Resources and Mineral Related Infrastructure
- **Objective 4** – Ensuring the Sustainable Transport of Minerals
- **Objective 5** – Protecting Local Communities
- **Objective 6** – Protecting, Conserving and Enhancing the Natural, and Built and Historic Environment
- **Objective 7** – Protecting the Peak District National Park
- **Objective 8** – Minimising the impacts on Climate Change and Flood Risk
- **Objective 9** – Ensuring the Sustainable Restoration of Mineral Sites

POLICY MO1: MONITORING AND IMPLEMENTATION

The effectiveness and continued relevance of the Plan’s policies will be monitored in accordance with the Monitoring Framework. Where necessary, the MPA will carry out a review/part review of the Plan and its Policies.

MONITORING FRAMEWORK

Policy	Objectives	Indicator Number (MO)	Indicator	Monitoring Method or Source	Target	Trigger threshold for action including consideration of Policy/Plan Review
SP1: Sustainable Minerals Development	All	1	Percentage of approved applications which are consistent with policy	Monitoring of planning application decisions	100% of approvals are consistent with policy	More than 1 application approved/ won on appeal contrary to policy in any one year
SP2: Climate Change	2,4,5,6, 7,8,9	2	Percentage of approved applications which are consistent with policy	Monitoring of planning application decisions	100% of approvals are consistent with policy	More than 1 application approved/won on appeal contrary to policy in any one year
SP3: The Supply of Recycled and Secondary Aggregates	1,2	3	The proportion of secondary or recycled material used as alternatives to primary aggregates stays the same or increases	Annual Monitoring survey for AWP, LAA (it is difficult to accurately monitor production)	Production of secondary and recycled aggregate stays the same or increases	The production of secondary and recycled aggregate falls over 2 consecutive years
SP4: The Supply of Sand and Gravel	1	4	Total reserves to be sufficient to maintain supply for at least 7 years at all times	Annual Monitoring Survey for AWP, LAA	To maintain a landbank of at least seven years	Landbank less than 7 years for 2 consecutive years

Policy	Objectives	Indicator Number (MO)	Indicator	Monitoring Method or Source	Target	Trigger threshold for action including consideration of Policy/Plan Review
SP4: The Supply of Sand and Gravel	1	5	Annual production compared to annual provision rate in plan (the figure is not a production target but is a factor in assessing relationship between production and plan provision)	Annual Monitoring survey for AWP, LAA	Annual production to achieve annual provision rate	Annual production significantly below/above annual provision rate for 2 consecutive years
SP5: Allocation of Sites for Sand and Gravel Extraction	1	6	Allocated sites receive planning approval	Monitoring of planning application decisions	Permission granted for allocated sites	Allocated Sites not coming forward for approval or refused planning permission
SP6: Other Sites for Sand and Gravel Supply	1	7	Other sites receive planning permission	Monitoring of planning application decisions	Permission granted for other sites.	More than 1 application for other sites granted permission. (Indication of allocated sites not coming forward or level of need significantly greater than plan provision)

Policy	Objectives	Indicator Number (MO)	Indicator	Monitoring Method or Source	Target	Trigger threshold for action including consideration of Policy/Plan Review
SP7: The Supply of Aggregate Crushed Rock	1	8	Total reserves to be sufficient to maintain supply for at least 10 years at all times	Annual Monitoring Survey for AWP, LAA	To maintain a landbank of at least 10 years	Landbank less than 10 years for 2 consecutive years
SP7: The Supply of Aggregate Crushed Rock	1	9	Annual production compared to annual provision rate in plan (the figure is not a production target but is a factor in assessing relationship between production and plan provision)	Annual Monitoring survey for AWP, LAA	Annual production to achieve annual provision rate	Annual production significantly below/above annual provision rate for 2 consecutive years
SP8: Helping to Reduce Quarrying in the PDNP	1,7	10	Continued reduction in supply of aggregates from Peak Park	Annual Monitoring Survey for AWP, LAA	To record a continued decline in aggregate output from the Peak Park	No decrease in PDNPA crushed rock aggregate landbank
SP9: The Supply of Building Stone	1	11	Percentage of approved applications which are consistent with policy	Monitoring of planning application decisions	100% of approvals are consistent with policy	More than 1 application approved/won on appeal contrary to policy in any one year

Policy	Objectives	Indicator Number (MO)	Indicator	Monitoring Method or Source	Target	Trigger threshold for action including consideration of Policy/Plan Review
SP10: Supply of Industrial Limestone	1	12	Percentage of approved applications which are consistent with policy	Monitoring of planning application decisions	100% approval for planning applications	More than 1 application approved/won on appeal contrary to policy in any one year
SP11: Allocation of land for industrial limestone Extraction Aldwark South	1	13	Allocated site receives planning approval	Monitoring of planning application decisions	Permission granted for allocated site	Allocated Site not coming forward for approval or refused planning permission
SP12: Supply of Cement Making Materials	1	14	Level of supply required for each manufacturing facility	Annual Monitoring	Stock of permitted reserves at each operational site equivalent to 15 years of primary (limestone) and secondary (clay/shale) material to support maintenance and improvement and 25 years for a new kiln to be calculated when a planning application is submitted or when new capital investment is proposed. The overall amount required should be directly linked to the scale of capital investment required to construct and operate the facility.	Level of supply drops below 15 years for 2 consecutive years.

Policy	Objectives	Indicator Number (MO)	Indicator	Monitoring Method or Source	Target	Trigger threshold for action including consideration of Policy/Plan Review
SP12: Supply of Cement Making Materials	1	15	Percentage of approved applications which are consistent with policy	Monitoring of planning application decisions	100% of approvals are consistent with policy	More than 1 application approved/won on appeal contrary to policy in any one year
SP13: Supply of Brick Clay	1	16	Level of supply required at each quarry to supply clay manufacturing facility.	Annual Monitoring	Stock of reserves at each operational site equivalent to 25 years to support the manufacture of brick or clay products to support the level of actual and proposed investment required to maintain or improve an existing plant or to provide a new kiln, to be calculated when a planning application is submitted or when new capital investment is proposed. The overall amount required should be directly linked to the scale of capital investment required to construct and operate the facility.	Level of supply drops below 25 years for 2 consecutive years.
SP13: Supply of Brick Clay	1	17	Percentage of approved applications which are consistent with policy	Monitoring of planning application decisions	100% of approvals are consistent with policy	More than 1 application approved/won on appeal contrary to policy in any one year

Policy	Objectives	Indicator Number (MO)	Indicator	Monitoring Method or Source	Target	Trigger threshold for action including consideration of Policy/Plan Review
SP14: Supply of Vein Minerals	1	18	Percentage of approved applications meet criteria of the policy	Monitoring of planning application decisions	100% of approvals are consistent with policy	More than 1 application approved/ won on appeal contrary to policy in any one year
SP15: Coal Extraction and Colliery Spoil Disposal	1	19	Percentage of approved applications meet criteria of the policy	Monitoring of planning application decisions	100% of approvals are consistent with policy	More than 1 application approved/won on appeal contrary to policy in any one year
SP16: Supply of Conventional and Unconventional Oil and Gas	1	20	Percentage of approved applications meet criteria of the policy	Monitoring of planning application decisions	100% of approvals are consistent with policy	More than 1 application approved/won on appeal contrary to policy in any one year
SP17: Mineral Resources Safeguarding and Consultation Areas	3	21	Percentage of relevant approved applications that do not have an adverse effect on the identified Mineral Safeguarding Areas	Monitoring of planning applications within Mineral Consultation Areas	100% of relevant approvals are consistent with policy	More than 1 application approved/won on appeal contrary to policy in any one year

Policy	Objectives	Indicator Number (MO)	Indicator	Monitoring Method or Source	Target	Trigger threshold for action including consideration of Policy/Plan Review
SP18: Safeguarding Minerals Related Infrastructure	3	22	Percentage of relevant approved development proposals that do not have an adverse effect on the safeguarded mineral related infrastructure	Monitoring of planning applications within Mineral Consultation Areas identified for safeguarding minerals infrastructure	100% of relevant approvals are consistent with policy	More than 1 application approved/won on appeal contrary to policy in any one year
SP19: Restoration of sand and gravel sites in River Valleys	9	23	Percentage of approved proposals meet criteria of the policy	Monitoring of planning application decisions	100% of approvals are consistent with policy	More than 1 application approved/won on appeal contrary to policy in any one year
OM1: Borrow Pits	1	24	Percentage of approved proposals meet criteria of the policy	Monitoring of planning application decisions and supporting information.	100% of relevant approvals are consistent with policy	More than 1 application approved/won on appeal contrary to policy in any one year

Policy	Objectives	Indicator Number (MO)	Indicator	Monitoring Method or Source	Target	Trigger threshold for action including consideration of Policy/Plan Review
OM2: Re-Working of Spoil Tips	1	25	Percentage of approved proposals meet criteria of the policy	Monitoring of planning application decisions and supporting information.	100% of relevant approvals are consistent with policy	More than 1 application approved/won on appeal contrary to policy in any one year
OM3: Incidental and Prior extraction of Clay	1	26	Percentage of approved proposals meet criteria of the policy	Monitoring of planning application decisions and supporting information.	100% of relevant approvals are consistent with policy	More than 1 application approved/won on appeal contrary to policy in any one year
OM4: Mineral Related Development	1,5,6	27	Percentage of approved proposals meet criteria of the policy	Monitoring of planning application decisions and supporting information.	100% of relevant approvals are consistent with policy	More than 1 application approved/won on appeal contrary to policy in any one year
OM5: Mineral Exploration	1	28	Percentage of approved proposals meet criteria of the policy	Monitoring of planning application decisions and supporting information.	100% of relevant approvals are consistent with policy	More than 1 application approved/won on appeal contrary to policy in any one year

Policy	Objectives	Indicator Number (MO)	Indicator	Monitoring Method or Source	Target	Trigger threshold for action including consideration of Policy/Plan Review
DM1: Protecting Local Amenity, Health, Well-Being and Safety	5,6	29	Percentage of approved proposals meet criteria of the policy	Monitoring of planning application decisions and supporting information.	100% of approvals which may have an impact on local amenity are consistent with policy	More than 1 application approved/won on appeal contrary to policy in any one year
DM2: Criteria for Assessing the Benefits of Minerals Development Proposals	1,2,3, 6,8	30	Percentage of approved proposals meet criteria of the policy	Monitoring of planning application decisions and supporting information.	100% of approvals are consistent with policy	More than 1 application approved/won on appeal contrary to policy in any one year
DM3: Transport	4,5,8	31	Percentage of approved proposals meet criteria of the policy	Monitoring of planning application decisions and supporting information.	100% of approvals are consistent with policy	More than 1 application approved/won on appeal contrary to policy in any one year
DM4: Landscape	5,6,7, 8,9	32	Percentage of approved proposals meet criteria of the policy	Monitoring of planning application decisions and supporting information.	100% of approvals are consistent with policy	More than 1 application approved/won on appeal contrary to policy in any one year

Policy	Objectives	Indicator Number (MO)	Indicator	Monitoring Method or Source	Target	Trigger threshold for action including consideration of Policy/Plan Review
DM5: Biodiversity and Geodiversity	6,8,9	33	Percentage of approved proposals meet criteria of the policy	Monitoring of planning application decisions and supporting information.	100% of approvals are consistent with policy	More than 1 application approved/won on appeal contrary to policy in any one year
DM5: Biodiversity and Geodiversity	6,8,9	34	Percentage of approved proposals that provide significant biodiversity net gain and enhanced natural capital	Monitoring of planning application decisions and supporting information.	100% of approved proposals secure significant biodiversity net gain and enhancements to natural capital	More than 1 application approved/won on appeal contrary to policy in any one year
DM6: Trees, Woodland and Hedgerows	6,8,9	35	Percentage of approved proposals meet criteria of the policy	Monitoring of planning application decisions and supporting information.	100% of approvals are consistent with policy	More than 1 application approved/won on appeal contrary to policy in any one year

Policy	Objectives	Indicator Number (MO)	Indicator	Monitoring Method or Source	Target	Trigger threshold for action including consideration of Policy/Plan Review
DM6: Trees, Woodland and Hedgerows	6,8,9	36	Percentage of approved proposals provide significant new tree planting or compensatory planting	Monitoring of planning application decisions and supporting information.	100% of relevant approvals secure significant new tree planting or compensatory planting	More than 1 application approved/won on appeal contrary to policy in any one year
DM7: Historic Environment and Archaeology	6,7	37	Percentage of approved proposals meet criteria of the policy	Monitoring of planning application decisions and supporting information.	100% of approvals are consistent with policy	More than 1 application approved/won on appeal contrary to policy in any one year
DM8: Water Management and Flood Risk	5,6,8,9	38	Percentage of approved proposals meet criteria of the policy	Monitoring of planning application decisions and supporting information.	100% of approvals are consistent with policy	More than 1 application approved/won on appeal contrary to policy in any one year
DM8: Water Management and Flood Risk	5,6,8,9	39	Percentage of approved proposals that include flood risk protection and flood resilience measures.	Monitoring of planning application decisions and supporting information.	100% of relevant approvals include flood risk protection and flood alleviation measures.	More than 1 application approved/won on appeal contrary to policy in any one year

Policy	Objectives	Indicator Number (MO)	Indicator	Monitoring Method or Source	Target	Trigger threshold for action including consideration of Policy/Plan Review
DM8: Water Management and Flood Risk	5,6,8,9	40	Percentage of approved proposals that include sustainable drainage systems.	Monitoring of planning application decisions and supporting information.	100% of relevant approvals proposals include sustainable drainage systems.	More than 1 application approved/won on appeal contrary to policy in any one year
DM9: Soil Quality and Agricultural Land	5,6,8	41	Percentage of approved proposals meet criteria of the policy	Monitoring of planning application decisions and supporting information.	100% of approvals are consistent with policy	More than 1 application approved/won on appeal contrary to policy in any one year
DM10: Aviation Safety	5,9	42	Percentage of approved proposals meet criteria of the policy	Monitoring of planning application decisions and supporting information.	100% of relevant approvals are consistent with policy	More than 1 application approved/won on appeal contrary to policy in any one year
DM11: Green Belt	6	43	Percentage of approved proposals within the Green Belt meet criteria of the policy	Monitoring of planning application decisions and supporting information.	100% of relevant approvals are consistent with policy	More than 1 application approved/won on appeal contrary to policy in any one year

Policy	Objectives	Indicator Number (MO)	Indicator	Monitoring Method or Source	Target	Trigger threshold for action including consideration of Policy/Plan Review
DM12: Green and Blue Infrastructure	5,6,8,9	44	Percentage of approved proposals meet criteria of the policy	Monitoring of planning application decisions and supporting information.	100% of approvals are consistent with policy	More than 1 application approved/won on appeal contrary to policy in any one year
DM12: Green and Blue Infrastructure	5,6,8,9	45	Percentage of approved proposals that include measures to create, maintain and enhance green infrastructure	Monitoring of planning application decisions and supporting information.	100% of relevant approvals include measures to create, maintain and enhance green infrastructure.	More than 1 application approved/won on appeal contrary to policy in any one year
DM13: Public Access	5,8,9	46	Percentage of approved proposals meet criteria of the policy	Monitoring of planning application decisions and supporting information.	100% of approvals are consistent with policy	More than 1 application approved/won on appeal contrary to policy in any one year

Policy	Objectives	Indicator Number (MO)	Indicator	Monitoring Method or Source	Target	Trigger threshold for action including consideration of Policy/Plan Review
DM13: Public Access	5,8,9	47	Percentage of approved proposals that include improvements to the PROW network or increased public access.	Monitoring of planning application decisions and supporting information.	100% of relevant approvals include improvements to the PROW or increased public access.	More than 1 application approved/won on appeal contrary to policy in any one year
DM14: Cumulative Impacts	5,6,8,9	48	Percentage of approved proposals meet criteria of the policy	Monitoring of planning application decisions and supporting information.	100% of relevant approvals are consistent with policy	If more than 1 proposal approved in any one year goes against this policy
DM15: Restoration, Aftercare and After-Use	5,6,7,8,9	49	Percentage of approved proposals meet criteria of the policy	Monitoring of planning application decisions and supporting information.	100% of approvals are consistent with policy	If more than 1 proposal approved in any one year goes against this policy

Policy	Objectives	Indicator Number (MO)	Indicator	Monitoring Method or Source	Target	Trigger threshold for action including consideration of Policy/Plan Review
DM16: Planning Obligations	4,6,7,8, 9	50	Percentage of approved proposals meet criteria of the policy	Monitoring of planning application decisions and supporting information.	100% of approvals consistent with policy and granted subject to S106 where needed	If more than 1 proposal approved in any one year goes against this policy

Part 4:

Appendices and Glossary



Appendix A

SITE ALLOCATION PRINCIPAL PLANNING REQUIREMENTS

- A1 This Appendix applies to the sites proposed for allocation under the following policies of the local plan:
- Policy SP5 Allocation of Sites for Sand and Gravel Extraction – Foston, Sudbury, Elvaston, Swarkestone South and Swarkestone North.
 - Policy SP11 Allocation of Site for Industrial Limestone Extraction - Aldwark South.
- A2 It sets out the principal site-specific requirements that will need to be addressed as part of any planning application to work the allocated site. The requirements are not necessarily a comprehensive set of all the matters which will need to be addressed. Planning proposals will need to provide sufficient evidence to satisfy all policies of the development plan, where relevant.

FOSTON

Background

- A3 This is a greenfield site, representing a new operation for the extraction of sand and gravel. This generally level site is situated to the south of the A50, just to the west of Scropton village and to the south of Foston. Leathersley Lane forms its northern boundary and the railway line forms its southern boundary. It is about 71 hectares in size and is currently in agricultural use, predominantly as arable land. There are boundary hedgerows with mature, mainly, oak trees. A public footpath runs parallel to Leathersley Lane through part of the site.
- A4 It has estimated sand and gravel reserves of around 3.1 million tonnes. It would be worked at around 400,000-500,000 tonnes per annum over a six-year period from around 2030. The operator has indicated that the preferred location for the plant site and access would be towards the western part of the site, however, the precise location will be subject to more detailed consideration by the operator involving discussions with the Highways Service, but it has confirmed that all HGV traffic would be routed to the west to join the A50 at the Sudbury roundabout.

- A5 A wetland/water-based biodiversity restoration scheme is proposed with an element of improved public access. The Environment Agency had objected to this proposal at the previous consultation stage regarding the impact of working this site on the flood alleviation scheme. A revised boundary has since been proposed by the mineral operator, which will ensure the protection of the flood defence barrier and a potential flood storage scheme has been proposed to help reduce the impact of flooding on the local area. The revised scheme has been discussed with the Environment Agency which has withdrawn its objection as a result subject to the submission of an appropriate assessment at the planning application stage (which has been reviewed by a Reservoir panel engineer) which considers both the impact on the operation of the reservoir, and separately on fluvial flood risk, resulting from any proposed extraction area.

Principal Planning Requirements

- A6 The MPAs have carried out an assessment of the promoted site as part of the preparation of the local plan and consider that mineral extraction from the proposed site is likely to be acceptable in planning terms subject to the following issues having been addressed satisfactorily, which include:
- 1) An assessment of how the site would be developed and operated in such a way that the local community and environment are protected from significant adverse impacts – The nearest communities are the villages of Scropton, Foston and Sudbury. Leathersley Farm is located approximately 185m to the northwest of the site. This will include an assessment of visual impact (including light pollution), noise and vibration, dust and air quality.
 - 2) An ecological assessment of the designated sites, habitats, fauna and flora present on or adjacent to the site and/or potentially impacted by the site's development, and an evaluation of the impact of development upon species and habitats present on or adjacent to the site, and on the wider ecological network. The site is dominated by arable farming, and historic mapping would suggest that agricultural intensification has resulted in the removal of many internal hedges previously present on site. The remnant hedgerows on site do contain some hedgerow trees which may be of some interest, although the hedgerows otherwise appear to be intensively managed. Small areas of semi-natural habitat may persist at the southern end of the site, although there are no notable habitats or designated sites recorded within or immediately adjacent to the site.

Protected and notable species records are very limited within and around the site, with only one old record for water vole seemingly relevant.

- 3) An assessment of the effects on the historic environment including designated sites and settings and archaeological remains. There are two records for cropmarks within the site, suggestive of Iron Age/Romano-British field systems and enclosures. A number of palaeo-channels are also mapped. Two records of ridge and furrow appear to be ploughed out. The Dove Valley is associated with deep alluvial deposits which can blanket archaeological and palaeo-environmental remains, so the surface-visible resource may underestimate the true extent and complexity of buried remains.
- 4) Tutbury Castle (Scheduled Monument and Grade 1 listed) is 2.3km from the site. It is situated on a natural promontory with expansive views overlooking the floodplain of the River Dove, and the site forms an integral part of the setting of this monument. It will be vital therefore that the impact of the proposal on the setting of this designated monument is considered carefully. The following requirements (5-8) should be complied with to help ensure the protection of this asset.
- 5) To help ensure the protection of the setting of Tutbury Castle, the working of this site should be staged i.e., proposals will need to include a working and restoration scheme which provides for the working and progressive restoration of the site to minimise the amount of land disturbed at any one time.
- 6) The site will be expected to be worked and restored within eight years of commencement, to help ensure that the impact on this part of the setting of Tutbury Castle is for as short a time as possible.
- 7) The processing plant should be located in the eastern part of the site which offers greater potential for screening and is less prominent in views from Tutbury Castle than the more western part of the site. This will also help to protect the setting of Leathersley Farmhouse, a Grade II listed building, situated 200m from the western boundary of the site.
- 8) The site should be restored to recreate the existing landscape type, creating a natural flood plain setting, to help conserve the setting of Tutbury Castle. Evidence should be provided that the required fill material to enable this will be available.
- 9) The site is 2km from the Grade I Listed Sudbury Hall and its Grade II Registered Park. and although are generally screened from the site, the

sensitivity of this historic area means the potential impact of the proposal on this area should be considered carefully.

- 10) Appropriate evaluation and subsequent treatment of on-site archaeological and geo-archaeological/palaeo-environmental remains will be required.
- 11) The site lies in flood zone 3 which has the highest possibility of flooding but in accordance with PPG sand and gravel working is classed as water compatible development which is appropriate development in zone 3.
- 12) The site lies within a flood storage area constructed by the Environment Agency as part of the Lower Dove Flood Risk Management scheme in 2012/13. This scheme defends Scropton, Hatton and other villages downstream from flooding. A geotechnical assessment (which has been reviewed by a Reservoir panel engineer) of the potential impact of the development on the flood defences and reservoir will be required. This includes the Reservoir Flood Defence Embankment adjacent to the eastern boundary of the site and the part of the site which is included within the Lower Dove Flood Storage Scheme. This includes the Reservoir Flood Defence Embankment adjacent to the eastern boundary of the site and the part of the site which is included within the Lower Dove Flood Storage Scheme. Appropriate extraction area stand offs which will be subject to these assessments (minimum 16m), will be proposed as a result to ensure the protection of the flood defences.
- 13) A detailed flood risk assessment (FRA) to be provided showing how, through all development phases (Construction, Operation and Restoration), that there will be no impact upon the operation of the existing Lower Dove Flood Storage Scheme. Opportunities to provide betterment in flood risk, and other environmental enhancements at the restoration stage, should be explored, however these should not have any detrimental impact upon the existing Lower Dove Flood Storage Scheme.
- 14) A detailed management plan highlighting the necessary pollution mitigation measures during the construction and operation of the quarry to ensure the protection of watercourses, surface water quality and groundwater quality.
- 15) A plan showing how the restoration of the site will provide multifunctional environmental enhancements, including, but not limited to, reducing the impacts of flood risk to others, providing significant biodiversity net gain and providing water quality improvements.

- 16) Prior to making a planning application, applicants should discuss water abstraction issues with the Environment Agency.
- 17) Applicants should contact the Environment Agency to discuss any permitting requirements, and where required, should look to parallel track these permit applications alongside the planning application.
- 18) An assessment of the landscape and visual impact of the site, including the provision of suitable landscaping measures. The proposed allocation is located within the Riverside Meadows LCT; a landscape typically farmed as permanent pasture. Evidence suggests that there has been significant boundary loss as a result of agricultural intensification and today this site is comprised of a small number of very large arable fields. Hedgerows are well managed but lack hedgerow trees. In terms of visual impact, although Leathersley Farm is located approximately 185m to the north west and Scropton is approximately 190m to the east, the site is generally well contained by existing vegetation and would not be visible from these areas to any significant extent. Two residential properties on the western edge of Scropton lie about 200m from the eastern edge of the site and are the only properties that may have direct views onto a proportion of the site (the eastern third of the site). Views of the site are predominantly from Leathersley Lane and Brooms Lane and the railway, which runs along the southern boundary of the site. A public footpath also runs parallel to Leathersley Lane through part of the site from where views of the site would be evident. Views from Foston and the A50 to the north are obscured by dense woodland. Tutbury Castle and grounds, which is a scheduled monument and lies on higher ground to the south, could, potentially, have distant views of the site. Overall, there are some/few visual receptors and potentially large parts of the site would be visible given the lack of internal hedgerows.
- 19) A Transport Assessment would need to accompany any application to assess the impact of traffic generated by the site on the surrounding highway network, particularly A515/A50 junction and include details of proposed measures to ensure that HGV traffic generated by the development do not turn right out of the site towards Scropton and do not use the main road through Sudbury village. Leathersley Lane is within an area wide Weight Restriction and forming an access within the limit will give any HGV the legitimate right to 'access' the site via any of the routes throughout the restricted area. The means of access would therefore need to be located outside of the restriction, to direct HGVs via the suitable routes of A50 and A515. With the restriction starting immediately

on entering Leathersley Lane, this is likely to require a modification to the existing order, which would be subject to public consultation. Early engagement with the Local Highways Authority and National Highways will be required should planning applications be submitted for the sites at Sudbury and Foston.

- 20) If proposals come forward that would result in both Sudbury and Foston sites operating concurrently, then the Transport Assessment for the second site proposal that comes forward will need to assess the cumulative impacts on the Major Road Network and Strategic Road Network from both sites and demonstrate that these will be acceptable.
- 21) It will be necessary for a joint condition survey to be undertaken to agree the condition of the road before it accepts the additional HGV movements so that all parties understand the condition at the time of its first operation.
- 22) An account of the mitigation and compensation measures required to address environmental impacts, and of the biodiversity enhancement opportunities arising from the development, including its restoration and aftercare.
- 23) The restoration of the site should take into account the Restoration Strategy for the Trent Valley, as set out in Policy SP19, to help ensure that proposals for mineral working in the Trent, Derwent and Lower Dove Valleys show how the mitigation, restoration and aftercare of sand and gravel sites will fit in with this long-term restoration strategy for sand and gravel sites in the river valleys.

SUDBURY

Background

- A7 This 79.3 hectare site is situated between Leathersley Lane, which forms the northern boundary of the site, and the River Dove to the south. The railway forms the far southern boundary of the site with the River Dove just beyond. The A515 forms the western boundary, beyond which lies Sudbury village, including Sudbury Hall Park and Garden. It is relatively flat and open in character, being within the floodplain of the River Dove, and is in agricultural use, being divided into 12 small fields, with the majority of fields being for arable production and others used for livestock grazing. Many of the field boundaries are of hedgerows and standard trees. There are lines of willow trees and a wildlife site in the south western part of the site, close to the River Dove.

- A8 The yield of the site would be around 2 million tonnes of sand & gravel, extracted over a period of 7-8 years from an extraction area of around 60 hectares. This equates to an annual output of between 250,000 and 300,000 tonnes.
- A9 The access is likely to be close to the junction of Leathersley Lane with the A515 in the north west corner of the site. The processing plant is also likely to be in the north west part of the site to minimise product haulage distance and flood risk.
- A10 Restoration is likely to be mainly to water-based uses with a high nature conservation/biodiversity component.

Principal Planning Requirements

- A11 The MPAs have carried out an assessment of the promoted site as part of the preparation of the local plan and consider that mineral extraction from the proposed site is likely to be acceptable in planning terms subject to the following issues having been addressed satisfactorily, which include:
- 1) An assessment of how the site would be developed and operated in such a way that the local community and environment are protected from significant adverse impacts – the nearest community is the village of Sudbury 300m to the north west of the site. This will include an assessment of visual impact (including light pollution), noise and vibration, dust and air quality. Leathersley Farm is located adjacent to the north east boundary of the site. Given the flat topography, large tracts of the site would be visible from these and other individual properties in the surrounding area, although visibility would be less from receptors to the west as a result of the lines of willow trees in the south west section of the site. There could also be higher level views from Tutbury Castle, which is a scheduled monument. No public rights of way cross the site.
 - 2) An ecological assessment of any designated sites, habitats, fauna and flora present on or adjacent to the site and/or potentially impacted by the site's development, and an evaluation of the impact of development upon species and habitats present on or adjacent to the site, and on the wider ecological network. The site assessment showed that the site has limited priority ecological value with the exception of the Wildlife Site (a feature which could be enhanced). There are some established hedgerows, though not generally species rich and some mature oak and ash – possible veterans.

- 3) An assessment of the effects on the historic environment including designated sites and settings and archaeological remains. Leathersley Farmhouse is (Grade II Listed) immediately adjacent to the site and a buffer zone would be required to help protect this asset from the impacts of quarrying. Sudbury Hall (Grade I Listed) is within 1km, with its Grade II Registered Park at around 740m. The proposal could have an impact on Sudbury conservation area and the setting of the Grade I Sudbury Hall and its Grade II Registered Historic Park and Garden and consideration should be given to this.
- 4) In terms of archaeology, there are HER records for earthwork ridge and furrow within the site although there is evidence this appears to have been ploughed out. The Dove is a very active floodplain with substantial alluviation, and there is consequently potential for geo-archaeology (palaeochannels etc) with well-preserved remains and early archaeology beneath the alluvium. Appropriate evaluation and subsequent treatment of on-site archaeological and geo-archaeological/palaeo-environmental remains will be required.
- 5) An assessment of the effects of the development on the water environment. The site lies in flood zone 3 which has the highest possibility of flooding but in accordance with PPG sand and gravel working is classed as water compatible development which is considered to be appropriate development in flood zone 3.
- 6) The site straddles a flood defence embankment which controls flows into a flood storage area, constructed by the Environment Agency as part of the Lower Dove Flood Risk Management scheme in 2012/13. This scheme defends Scropton, Hatton and other villages downstream from flooding. A detailed assessment of the potential impact of the development on these flood defences will have to be undertaken as part of any submission for the development of this site. Development will only be acceptable where these detailed assessments show no impact upon the existing flood defences and the wider operation of the Lower Dove Flood Defence Scheme. Should planning permission be granted, appropriate extraction area stand offs, which will be subject to these assessments (minimum 16m), will be proposed to ensure the protection of the flood defences.
- 7) A detailed flood risk assessment (FRA) showing how, through all development phases (construction, operation and restoration), that there will be no impact upon the operation of the existing Lower Dove Flood Storage Scheme. Opportunities to provide betterment in flood risk, and

other environmental enhancements at the restoration stage, should be explored, however these should not have any detrimental impact upon the existing Lower Dove Flood Storage Scheme.

- 8) A detailed management plan highlighting the necessary pollution mitigation measures during the construction and operation of the quarry to ensure the protection of watercourses, surface water quality and groundwater quality.
- 9) A plan showing how the restoration of the site will provide multifunctional environmental enhancements, including, but not limited to, reducing the impacts of flood risk to others, providing significant biodiversity net gain and providing water quality improvements.
- 10) Prior to making a planning application, applicants should discuss water abstraction issues with the Environment Agency.
- 11) Applicants should contact the Environment Agency to discuss any permitting requirements, and where required, should look to parallel track these permit applications alongside the planning application
- 12) An assessment of the landscape and visual impact of the site, including the provision of suitable landscaping measures. The site is dominated by small scale arable fields enclosed by hedgerows with scattered hedgerow trees. The site retains a strong landscape character with an intact network of small fields, albeit land use has changed from meadow to arable with the loss of associated ridge and furrow. In terms of visual impact, given the flat topography, large tracts of the site would be visible from the properties and roads close to the site, although visibility would be less from receptors to the west as a result of the lines of willow trees in the south west section of the site. There could also be higher level views from Tutbury Castle, which is a scheduled monument.
- 13) A Transport Assessment would need to accompany any application to assess the impact of traffic generated by the site on the surrounding highway network, particularly the A515/A50 junction and include details of proposed access measures to ensure that HGV traffic generated by the development would not turn right out of the site along Leathersley Lane towards Scropton and would not use Main Road through Sudbury village and Conservation Area, including (as far as possible) at times when traffic is diverted through the village due to a temporary closure on the A50. Further safety improvements at Sudbury roundabout should be considered. Leathersley Lane is within an area wide Weight Restriction and forming an access within the limit will give any HGV the legitimate

right to ‘access’ the site via any of the routes throughout the restricted area. The means of access would therefore need to be located outside the restriction, to direct HGVs via the suitable routes of A50 and A515. With the restriction starting immediately on entering Leathersley Lane, this is likely to require a modification to the existing order, which would be subject to public consultation. Early engagement with the Local Highways Authority and National Highways will be required should planning applications be submitted for the sites at Sudbury and Foston.

- 14) If proposals come forward that would result in both Sudbury and Foston sites operating concurrently, then the Transport Assessment for the second site proposal that comes forward will need to assess the cumulative impacts on the Major Road Network and Strategic Road Network from both sites and demonstrate that these will be acceptable.
- 15) Additional HGVs can result in increased maintenance requirements, and it will be necessary for a joint condition survey to be undertaken to agree the condition of the road before it accepts the additional HGV movements so that all parties understand the condition at the time of the site’s first operation.
- 16) An account of the mitigation and compensation measures required to address environmental impacts, and of the biodiversity enhancement opportunities arising from the development, including its restoration and aftercare.
- 17) The restoration of the site should take into account the Restoration Strategy for the Trent Valley, as set out in Policy SP19, to help ensure that proposals for mineral working in the Trent, Derwent and Lower Dove Valleys show how the mitigation, restoration and aftercare of sand and gravel sites will fit in with this long-term restoration strategy for sand and gravel sites in the river valleys.

SWARKESTONE NORTH

Background

- A12 This is a proposed extension to the operational Swarkestone Quarry. The site is 100 hectares in size and is situated between the existing quarry to the east and Twyford village to the west. The River Trent forms the southern boundary of the site and the A5132 the northern boundary. It is generally level, open terrain, being within the floodplain of the River Trent. It is currently in agricultural use with a mix of arable and grazing uses.

- A13 It is estimated that this site would yield 4.5 million tonnes of sand and gravel from deposits with an average depth of 4 metres. Deposits have been classified as being of medium to high quality. The operator estimates that the annual output would be 300,000 tonnes, and the material would be extracted over a 15-year period.
- A14 It is proposed to continue to use the existing processing plant and access road. The excavated material would be transported to the plant by truck or conveyor. The access joins the A5132 and lorries would generally then travel east onto the A514 before joining the A50.
- A15 The site would be restored to mainly water-based end uses, with a focus on nature conservation and wildlife biodiversity.

Principal Planning Requirements

A16 The MPAs have carried out an assessment of the promoted site as part of the preparation of the local plan and consider that mineral extraction from the proposed site is likely to be acceptable in planning terms subject to the following issues having been addressed satisfactorily, which include:

- 1) An assessment of how the site would be developed and operated in such a way that the local community and environment are protected from significant adverse impacts. There are several properties which have the potential to be affected by the working of this site. There are properties in Twyford to the north-west and several individual residential properties to the north of the site, including a number of dwellings at the converted Poplars Farm and Fields Farm, which stand close to the northern site boundary of the site. Part of the site is also visible from properties in Ingleby to the south.
- 2) An ecological assessment of any designated sites, habitats, fauna and flora present on or adjacent to the site and/or potentially impacted by the site's development, and an evaluation of the impact of development upon species and habitats present on or adjacent to the site, and on the wider ecological network. The majority of site is arable land with localised improved pasture adjacent to Twyford and possibly semi-improved in field by the river with palaeochannels. There are limited mature/veteran trees in centre of the site. There are no records for priority habitats on this site.
- 3) An assessment of the effects on the historic environment, including designated sites and settings and archaeological remains. In terms of designations, the 'Round Hill' henge and barrow, designated as a Scheduled Monument is located in the northern part of the site.

Consideration will need to be given to the setting of this monument with a view to providing additional stand-offs to protect its setting. Consideration should be given to the protection of heritage assets at Twyford.

- 4) In terms of archaeology, cropmarks are recorded north and south of the scheduled monument. Localised palaeochannels are present and evident along the southern fringe of the site, visible as an existing stream line. Appropriate evaluation and subsequent treatment of on-site archaeological and geo-archaeological/palaeo-environmental remains will be required to be undertaken.
- 5) An assessment of the effects of the development on the water environment. The site lies in flood zone 3 which has the highest possibility of flooding but in accordance with PPG sand and gravel working is classed as water compatible development which is appropriate development in flood zone 3. There should be no excavations within 45 metres of the River Trent, or flood defences, particularly around meanders which are a zone of active erosion.
- 6) A detailed flood risk assessment (FRA) showing how, through all development phases (Construction, Operation and Restoration), that there will be no increase in flood risk to the site and to others. Opportunities to provide betterment in flood risk, and other environmental enhancements at the restoration stage, should be explored.
- 7) A detailed management plan highlighting the necessary pollution mitigation measures during the construction and operation of the quarry to ensure the protection of watercourses, surface water quality and groundwater quality.
- 8) A plan showing how the restoration of the site will provide multifunctional environmental enhancements, including, but not limited to, reducing the impacts of flood risk to others, providing significant biodiversity net gain and providing water quality improvements. It will also be required to show specific sensitively designed restoration to enhance the currently degraded setting of the Round Hill Scheduled Monument.
- 9) Prior to making a planning application, applicants should discuss water abstraction issues with the Environment Agency.
- 10) An assessment of the landscape and visual impact of the site, including the provision of suitable landscaping measures. In terms of the landscape, the site crosses two Landscape Character Types but is poorly representative of each. The majority of the land is usually down to arable with some localised pasture associated with smaller fields adjacent to

Twyford and immediately adjacent to the River Trent. Hedgerows are generally poor, in some places missing and generally species poor. There is a general lack of tree cover associated with field boundaries and the river. Trees are mostly associated with the semi-improved areas near the river. The overall condition of the site is considered to be average to poor. There is an isolated burial mound and some localised ridge and furrow (poor condition) within the site. In terms of visual impact, there are several properties from which the site is visible. There are properties in Twyford to the north-west and several individual residential properties to the north of the site, including properties at Poplars Farm and Fields farm on Twyford Road, close to the northern site boundary of the site. Part of the site is also visible from properties in Ingleby to the south.

- 11) A Transport Assessment would need to accompany any application to assess the access to this site and the impact of traffic generated by the site on the surrounding highway network. It is expected that this site would be worked through the existing plant and access arrangements so the impact on the surrounding area in this respect is likely to be unchanged.
- 12) An account of the mitigation and compensation measures required to address environmental impacts, and of the biodiversity enhancement opportunities arising from the development, including its restoration and aftercare.
- 13) To help ensure the continued safe operation of overhead electricity transmission lines, the applicant will be required to discuss its proposals with National Grid.
- 14) The restoration of the site should take into account the Restoration Strategy for the Trent Valley, as set out in Policy SP19, to help ensure that proposals for mineral working in the Trent, Derwent and Lower Dove Valleys show how the mitigation, restoration and aftercare of sand and gravel sites will fit in with this long-term restoration strategy for sand and gravel sites in the river valleys.

SWARKESTONE SOUTH

Background

- A17 This is an extension to the existing active Swarkestone Quarry. The 79 hectare site is situated to the west of the current operational Swarkestone Quarry, to the south of the River Trent. The western boundary is formed by a private access road and the southern boundary by a brook. Repton village is situated to the south-west and Ingleby and Foremark villages to the south-east. Being

within the floodplain of the River Trent, the terrain is generally flat and open. It is in agricultural use, predominantly as pastureland, with a number of hedgerows and mature/semi-mature hedgerow trees.

- A18 Taking account of proposed stand offs, the proposed extraction area would be around 70 hectares. It has been estimated that the site would yield saleable reserves of over 2.5 million tonnes of sand and gravel from deposits that average 3.5 metres in depth.
- A19 Annual output is estimated at 300,000 tonnes. The lifespan of the site is estimated as being around 8-9 years.
- A20 The company proposes that the existing processing plant would be used and that the existing access road onto the A5132 would also be used. The mineral would be transported across the River Trent using the temporary bridge. It is estimated that there would be about 110 lorry movements per day from/to the site.
- A21 The site would be restored to mainly water-based end uses, with a focus on nature conservation and wildlife biodiversity.

Principal Planning Requirements

- A22 The MPAs have carried out an assessment of the promoted site as part of the preparation of the local plan and consider that mineral extraction from the proposed site is likely to be acceptable in planning terms subject to the following issues having been addressed satisfactorily, which include:
 - 1) An assessment of how the site would be developed and operated in such a way that the local community and environment are protected from significant adverse impacts, taking account of the following. Properties at Twyford have partial views across the river of part of the site. A residential nursing home adjoins the site to the west and has open views of the western part of the site. There are seven properties at the converted Old Waterworks and three at the converted New Waterworks which have open views of the site. There are also views from Anchor Church (historic caves) to the south-east of the site boundary and from a few properties in Ingleby and Foremark, including Foremark Preparatory School and also from Ingleby Road. A Public Right of Way (PROW) runs along the eastern boundary of the site and this forks to the north-west through the site. Meadow Lane is also a PROW, which is used on a frequent basis. The majority of the site is visible from these PROW.

- 2) An ecological assessment of any designated sites, habitats, fauna and flora present on or adjacent to the site and/or potentially impacted by the site's development, and an evaluation of the impact of development upon species and habitats present on or adjacent to the site, and on the wider ecological network. Hedgerows are intact and close cut, but are species poor, lacking notable hedgerow trees. Prominent trees and mixed species hedge (oak and some poor ash) associated with the green lane on the eastern boundary of the site. A stream runs west to east, lined with mature alder/willow. Some palaeochannels exist in improved pasture. Although limited in extent there remain some valuable characteristic habitats of a Natural Area.
- 3) An assessment of the effects on the historic environment, including designated sites and settings and archaeological remains. In terms of designated sites, Grade II Listed 'Anchor Church' is close to the site, with designed views over the extraction site associated with the cave's re-interpretation within the 18th century park at Foremark Hall. Additional stand-off areas, using existing field boundaries will be required to create a landscape buffer to help protect the group of heritage assets at Twyford. This would require detailed discussions with the Council's Planning and Archaeology Officers.
- 4) In terms of archaeology, there is possibly some remnant ridge and furrow and indications of the parish boundary. There are also visible palaeochannels within the site. Appropriate evaluation and subsequent treatment of on-site archaeological and geo-archaeological/palaeo-environmental remains will be required.
- 5) An assessment of the effects of the development on the water environment. The site lies in flood zone 3 which has the highest possibility of flooding but in accordance with PPG, sand and gravel working is classed as water compatible development, which is classified appropriate development in flood zone 3. There should be no excavations within 45 metres of the River Trent, or flood defences, particularly around meanders which are a zone of active erosion.
- 6) A detailed flood risk assessment (FRA) showing how, through all development phases (Construction, Operation and Restoration), that there will be no increase in flood risk to the site and to others. Opportunities to provide betterment in flood risk, and other environmental enhancements at the restoration stage, should be explored.

- 7) A detailed management plan highlighting the necessary pollution mitigation measures during the construction and operation of the quarry to ensure the protection of watercourses, surface water quality and groundwater quality.
- 8) A plan showing how the restoration of the site will provide multifunctional environmental enhancements, including, but not limited to, reducing the impacts of flood risk to others, providing significant biodiversity net gain and providing water quality improvements.
- 9) Prior to making a planning application, applicants should discuss water abstraction issues with the Environment Agency.
- 10) An assessment of the landscape and visual impact of the site, including the provision of suitable landscaping measures. In terms of the landscape, the site is poorly representative of the established character of the Riverside Meadows Landscape Character Type, with large parts of the site now down to arable or improved pasture. Hedgerows are mostly intact and close cut, generally species poor and lacking in notable hedgerow trees. The most prominent trees (oak and some poor quality ash) are associated with the green lane on the eastern boundary of the site and connects to the river. There is some localised ridge and furrow and palaeochannels within areas of improved pasture and a small section of mixed species hedgerow associated with the green lane. Overall, the landscape character is considered to be weak, although there are some attractive features, some of which are in good condition. In terms of visual impact, there are a number of residential properties in close proximity to the site which will need to be considered. The undulating topography to the south screens the majority of site from Repton and Milton. A Public Right of Way (PROW) runs along the eastern boundary of the site and this forks through the north-west section of the site. Meadow Lane, which forms the western boundary of the site is also a PROW. The majority of the site is visible from both of these public rights of way.
- 11) A Transport Assessment would need to accompany any application to assess the access to this site and the impact of traffic generated by the site on the surrounding highway network. It is expected that this site would be worked through the existing plant and access arrangements so the impact on the surrounding area in this respect is likely to be unchanged.
- 12) An account of the mitigation and compensation measures required to address environmental impacts, and of the biodiversity enhancement

opportunities arising from the development, including its restoration and aftercare.

- 13) To help ensure the continued safe operation of overhead electricity transmission lines, the applicant will be required to discuss its proposals with National Grid.
- 14) The restoration of the site should take into account the Restoration Strategy for the Trent Valley, as set out in Policy SP19, to help ensure that proposals for mineral working in the Trent, Derwent and Lower Dove Valleys show how the mitigation, restoration and aftercare of sand and gravel sites will fit in with this long-term restoration strategy for sand and gravel sites in the river valleys.

ELVASTON

Background

- A23 The 50-hectare site is proposed as an extension to the existing quarry. It is located within the Green Belt to the north-west of the yet to be worked site, which received planning permission for sand and gravel extraction in 2013 and would continue the westerly movement of Elvaston Quarry along the Derwent Valley.
- A24 The site boundaries are well defined, its eastern boundary following the western boundary of the recently permitted area, its northern boundary follows the River Derwent, its western boundary follows the B5010 and its southern boundary follows an existing hedgerow. The northern part of the site, south of the River Derwent and directly north-east of Elvaston Castle, comprises unimproved pasture and remnant hedgerows. The central area is predominantly arable fields with improved pasture to the south. There are occasional scattered trees of varying age and condition, a group of willows and evidence of lost hedgerows. Hedgerow condition is very variable.
- A25 It is proposed to work some 1,500,000 tonnes of sand and gravel from a net excavation area measuring 40ha i.e. an estimated yield of tonnes per hectare 37,500 tph. The average depth of the deposit is 2.5 metres.
- A26 The estimated yield figure would be 1,500,000 tonnes. With a proposed annual output of around 300,000, this would give a lifespan for the site of approximately 5 years. The proposed timings of the workings are currently unknown.

- A27 The site would be worked as the current site but with an extended conveyor system to serve this area. The site would be worked through the existing plant, which would need to be refurbished, and utilising existing access arrangements. Access to the plant site would be gained via a new conveyor tunnel to be constructed under Ambaston Lane and via an over ground conveyor through ‘Elvaston Avenue’ and across a culvert to be constructed over Ambaston Brook. All lorries would leave the plant site via the existing access road and would turn right, onto London Road, joining the main road network at Thulston Roundabout. No delivery vehicles would pass through Shardlow, or travel on Ambaston Lane or the B5010 to Borrowash.
- A28 Restoration is likely to be mainly to water-based uses with a high nature conservation/biodiversity component.

Principal Planning Requirements

- A29 The MPAs have carried out an assessment of the promoted site as part of the preparation of the local plan and consider that mineral extraction from the proposed site is likely to be acceptable in planning terms subject to the following issues having been addressed satisfactorily, which include:
- 1) An assessment of how the site would be developed and operated in such a way that the local community and environment are protected from significant adverse impacts, taking into account the location of the site within the Green Belt and therefore the need to maintain the openness of area. Some properties on the southern edge of Borrowash, may have views across the northern part of the site. Beechwood camping/caravan site which lies to the south of the site would be screened by trees/hedgerows on its northern boundary. There are open views from several residential properties and from the main entrance to Elvaston Castle and Country Park which lie immediately across the road which forms the western boundary.
 - 2) An ecological assessment of any designated sites, habitats, fauna and flora present on or adjacent to the site and/or potentially impacted by the site’s development, and an evaluation of the impact of development upon species and habitats present on or adjacent to the site, and on the wider ecological network. There is unimproved pasture and remnant hedgerows on the northern part of the site adjacent to the River Derwent. Arable fields are in the centre of the site and improved pasture to south. There are occasional scattered trees of varying age and condition and a group of willows and evidence of lost hedgerows. The condition of

hedgerows is generally variable. There are no records of designated wildlife sites.

- 3) An assessment of the effects on the historic environment, including designated sites and settings and archaeological remains. In terms of designated sites and settings, Elvaston Castle Country Park is situated across the road from the site's western boundary and forms a well-used and valuable local recreational amenity. The Castle and Gardens are Grade II* Listed Buildings. The Eastern Avenue, which adjoins the southern boundary is an integral component of the gardens. A significant stand-off would be required to create a landscape buffer to help protect the setting of this historic asset. This would require detailed discussions with the Council's Planning and Archaeology Officers.
- 4) In terms of archaeology, there are some remnants of ridge and furrow adjacent to the river. There are vestigial remains elsewhere of once very extensive open fields. There are palaeochannels adjacent to the river which may have considerable potential. Appropriate evaluation and subsequent treatment of on-site archaeological and geo-archaeological/palaeo-environmental remains would be required.
- 5) An assessment of the effects of the development on the water environment. The site lies in flood zone 3 which has the highest possibility of flooding but in accordance with PPG, sand and gravel working is classed as water compatible development, which is classified appropriate development in flood zone 3. There should be no excavations within 45 metres of the River Trent, or flood defences, particularly around meanders which are a zone of active erosion.
- 6) A detailed flood risk assessment (FRA) showing how, through all development phases (Construction, Operation and Restoration), that there will be no increase in flood risk to the site and to others. Opportunities to provide betterment in flood risk, and other environmental enhancements at the restoration stage, should be explored.
- 7) A detailed management plan highlighting the necessary pollution mitigation measures during the construction and operation of the quarry to ensure the protection of watercourses, surface water quality and groundwater quality.
- 8) A plan showing how the restoration of the site will provide multifunctional environmental enhancements, including, but not limited to, reducing the impacts of flood risk to others, providing significant biodiversity net gain and providing water quality improvements.

- 9) Prior to making a planning application, applicants should discuss water abstraction issues with the Environment Agency.
- 10) An assessment of the landscape and visual impact of the site, including the provision of suitable landscaping measures. The northern part of the site directly south of the River Derwent and north-east of Elvaston Castle comprises of unimproved pasture with remnant hedgerows. The central area is predominantly arable fields with improved pasture to the south. There are occasional scattered trees of varying age and condition, a group of willows and evidence of lost hedgerows. Hedgerow condition is very variable. The proposed site has a few characteristics that accord with the established character of the *Riverside Meadows* and the condition is considered to be generally poor.
- 11) A Transport Assessment would need to accompany any application to assess the access to this site and the impact of traffic generated by the site on the surrounding highway network. It is expected that this site would be worked through the existing plant and access arrangements so the impact on the surrounding area in this respect is likely to be unchanged.
- 12) An account of the mitigation and compensation measures required to address environmental impacts, and of the biodiversity enhancement opportunities arising from the development, including its restoration and aftercare.
- 13) The restoration of the site should take into account the Restoration Strategy for the Trent Valley, as set out in Policy SP19, to help ensure that proposals for mineral working in the Trent, Derwent and Lower Dove Valleys show how the mitigation, restoration and aftercare of sand and gravel sites will fit in with this long-term restoration strategy for sand and gravel sites in the river valleys.

ALDWARE SOUTH

Background

A30 The long established Brassington Moor Quarry, operated by Longcliffe Quarries Ltd, lies within the Carboniferous Limestone Resource centred on the Matlock/Wirksworth area. The quarry complex straddles the B5056 Grangemill to Longcliffe road, it comprises to the south of the road the processing plant together with three of the four quarry units known as Main, Barnfield and Pyro quarries. To the north of the road and linked to the rest of the quarry and processing plant by an under-road tunnel, is the fourth unit known as Aldware

quarry. The proposed allocation site is an extension to this quarry and is known as Aldwark South. To the immediate east of the main quarry complex and sharing a common boundary is Grangemill Quarry.

- A31 Longcliffe Quarries Ltd primarily produces high purity limestone for specialist markets; the limestone is processed via on site processing plant and despatched off site in dedicated road tankers/transport. Some of the products produced require exacting specifications which impacts on the suitability of reserves at the quarry and dictates that extraction operations take place at various locations within the quarry complex dependent on customers' requirements.
- A32 Every tonne of stone lifted from the quarry face contains the full range of stone types to some degree. To deal with these complexities there is a continual quality monitoring and matching control system that streams from the deposit to each plant and its end use. Historically, the business has been developed using the benefit of three or four different quarries in each of which may be two extraction benches are working. Typically, this allows 6 or 8 choices of source stone; it is not practicable to open more than two benches per quarry.
- A33 The Company essentially produces dried, milled and classified calcium carbonate powders and granules. These are crucial raw materials for the production of animal feed, glass, sealants and adhesives, mastics, plastics and rubber. It also produces bright (white) dusts for precast concrete products and significant volumes of agricultural lime. By-products from these mainstream products are also sold for construction uses. Production rates have increased in recent years averaging above 1mt with approximately 70% used for industrial purposes and 30% used for aggregates.
- A34 The need for additional reserves during the plan period is to provide mineral that is low in cadmium, iron and lead which occur at different locations and depths throughout the quarry but which are vital for the production of animal feed products and for use in glass manufacture. The Company estimates that these reserves will be exhausted between 2025 and 2031. It is promoting an extension to the quarry, Aldwark South which measures 25 Ha and would yield approximately 24 mt of reserve. Exploration has concluded that the geology of the proposed extension is very similar to the area currently being worked; overall the reserve has a very high calcium carbonate content and would yield 18% low cadmium reserves, 19% low iron reserves and 63% low lead reserves. The reserves would be worked and processed via the existing permitted plant and access arrangements.

Principal Planning Requirements

A35 The MPAs have carried out an assessment of the promoted site as part of the preparation of the local plan and consider that mineral extraction from the proposed site is likely to be acceptable in planning terms subject to the following issues having been addressed satisfactorily which include:

- 1) An assessment of how the site would be developed and operated in such a way that the local community and environment are protected from significant adverse impacts – The nearest communities are the villages of Aldwark and Longcliffe which lie approximately 500 metres away to the north and south west of the site respectively. The hamlet of Ible lies on the hillside above the Via Gellia some 1.5km away to the east of the site. Residential and industrial uses are present at Manor Farm which lies some 350m to the south of the site.

There are two important long distance recreational routes, the High Peak Trail which forms part of the Midshires Way and the Limestone Way which lie to the south and east of the site at approximately 500 and 400 metres respectively. Harboro Rocks viewpoint lies some 1km to the south east of the site. The Peak District National Park boundary abuts the north western corner of the promoted site which forms part of the wider setting of the National Park.

- 2) An ecological assessment of the designated sites, habitats, fauna and flora present on or adjacent to the site and/or potentially impacted by the site's development, and an evaluation of the impact of development upon species and habitats present on or adjacent to the site, and on the wider ecological network - The promoted site does not include any land designated for its ecological interest. The key ecological receptors in this area are the ancient woodlands of the Via Gellia SSSI/SAC complex which lies approximately 1km to the east of the site. A small area of woodland protected by a Tree Preservation Order (TPO) is located on the site and other TPOs are located close by. Habitats within the site appear to consist of managed farmland unlikely to be of significant ecological interest in its own right, although great crested newts have been recorded from within and adjacent to the site. Impacts on this European Protected Species would need consideration and mitigation as part of any planning application, if a need is proven.
- 3) An assessment of the effects on the historic environment including designated sites and settings and archaeological remains. An initial Heritage Impact Assessment (HIA) has been carried out which identifies

that whilst some scheduled monument sites e.g., Moot Low barrow and Harboro Rocks cave, lie within the wider surroundings of the site, impacts would not be significant and could be satisfactorily managed through reinstating the site to a naturalistic landform which, for example, would reinstate the historic viewsheds from Moot Low to the north. The site has four entries on the County Council's Historic Environment Record (HER) relating to prehistoric and mining archaeology, on-site impacts should be managed through the requirement for a robust programme of archaeological assessment, evaluation and recording before and during extraction.

- 4) An assessment of the effects of the development on the water environment – the site lies in flood zone 1 which has the lowest possibility of flooding and in accordance with PPG mineral working is classed as 'less vulnerable' development which is appropriate development in zone 1. However mineral working should not increase flood risk elsewhere and needs to be designed, worked and restored accordingly. The site lies on Carboniferous Limestone which is classed as a major aquifer and within a Groundwater Source Protection Zone 1 for a public water supply. Protection zones are designated for important groundwater abstraction sources such as wells, boreholes and springs used for drinking water supply. It is important, within these zones, not to interrupt the flow or to pollute the groundwater. Planning proposals will need to be able to demonstrate that the proposal does not pose an unacceptable risk to the water regime and that any adverse impacts can be adequately mitigated. Suitable investigations and assessments will be required to ensure the protection of controlled waters.

Additionally the current planning permission²³³ which the quarry operates under, is subject to a section 106 agreement which requires the off-site monitoring of surface water in relation to any impacts of working on the wider Via Gellia/Peak District Dales SSSI/SAC ecological complex; this matter will need to be addressed in any planning application. The HRA undertaken to support the Plan indicates that as a safeguard an updated hydrological study should be undertaken to reaffirm that no adverse effect on the Via Gellia stream (and thus no likely significant effect on wider Via Gellia/Peak District Dales SSSI/SAC ecological complex) will arise. It also advises that the off-site monitoring of surface water required under

²³³ CM3/1205/156 Extension to Brassington Moor Quarry and continued extraction and processing of limestone in existing quarry and restoration of the whole site, granted 24 12 2008.

a section 106 agreement should continue. Prior to making a planning application, applicants should discuss water abstraction issues with the Environment Agency.

- 5) An assessment of the landscape and visual impact of the site including the provision of suitable landscaping measures – the initial assessment concluded that there would be potentially significant adverse effects on sensitive visual receptors including recreational users of the High Peak Trail, Limestone Way and Harboro Rocks including locations that get little or no view of the current quarry development. There may also be some visual impacts on isolated properties close to Aldwark including Middle Hills Farm camping and caravan site and the village of Ible; additionally there are footpaths and roads in these areas from which the promoted site may be visible. Any impacts will also be in the context of the existing quarry and the adjoining Grangemill quarry which already exert significant adverse visual effects on surrounding sensitive visual receptors. The promoted site abuts the PDNP boundary forming part of its immediate setting and large parts of the site will be clearly visible from it.

Following on from this assessment, further work has been undertaken by the Operator in liaison with the County Council to provide more detail on the potential impact of working the site on the surrounding visual receptors/landscape including impacts on the PDNP. The photographic material and Zone of Theoretical Visual (ZTV) analysis confirms that visual impacts are likely to be confined to the local landscape with receptors to the south and south-east most likely to be affected by the proposed allocation especially those recreational users of the High Peak Trail, Limestone Way and Harboro Rocks. There are vantage points to the north, within the Peak District National Park, where the allocation area is also visible but this visibility would be confined to the north-western extent of this area and would be viewed at distance and within the context of the established quarry complex. A 'Mitigation Strategy' has been submitted by the Operator containing a range of techniques that could be applied to the progressive working and restoration of the site to assist in mitigating those impacts. Key techniques that any planning application to work the site would need to include are:

- A phased sequence of working and restoration which prioritises early rollover restoration of the western perimeter face;
- Temporary screen bunds which take advantage of the local topography to temporarily reduce the visibility of the extraction areas;

- A strategy for tree and woodland planting along the B5056 corridor which reflects the Derbyshire County Council and PDNPA strategies for the local landscape character including:
 - Further improvement to planting around the Curzon Lodge site to mitigate cumulative impacts;
 - Retention of the woodland/coppice block close to the southern boundary of the extension area for as long as possible as part of the phased development of the area;
 - Woodland planting on the western and southern boundaries of the proposed allocation site;
 - Planting in key areas of the landscape to the east of the B5056;
- A comprehensive management plan for all new tree planting and existing tree planting associated with the quarry site to take into account the impact of Chalara ash die back;
- Introduction of a diverse habitat mix through the implementation of a pre-designed 'green infrastructure' strategy which includes areas of calcareous grassland where appropriate and particularly on steeper slopes in accordance with the PDNPA White Peak Landscape Character Area Strategy.

The mitigation of landscape and visual impacts on sensitive receptors and the PDNP is a key issue that any planning application would need to address.

- 6) A transport assessment including an assessment of the existing access arrangements and the potential impact upon the Strategic Road Network – the last planning permission for a major extension to the existing quarry was granted in 2007 when a comprehensive assessment of transport matters took place. Since then, the Company has indicated that the level of vehicle movements has doubled from 100 to 200 loads a day (400 in/out movements). The increase in movements is attributable to both an increase in production, since 2007, from averaging below 1 mt to consistently averaging above 1 mt in recent years and the diversification of markets served by the Company. The County Council as Highways Authority has raised concerns about the continuation of the significant increase in lorry movements. It has raised two particular issues; emerging vehicle visibility at the junction of B5056 and the A5012 and potential congestion and negative impacts on Cromford Conservation Area, from HGVs travelling west along the Via Gellia to join the A6. Both issues will need to be satisfactorily addressed in detail in a Transport Assessment

to accompany any planning application. The current quarry operates under planning permission granted in 2007 and is subject to a Section 106 agreement which requires the operator to pay an annual sum of money towards maintaining a portion of the highway directly outside the quarry entrance. The continuation of this agreement would need to be addressed as part of any planning proposals to work the proposed allocated site.

- 7) An account of the mitigation and compensation measures required to address environmental impacts, and of the biodiversity enhancement opportunities arising from the development, including its restoration and aftercare - the key ecological resources in this area are ancient woodlands and species rich calcareous grasslands set within a managed pastoral landscape. If soil resources are managed, site restoration should offer the opportunity to deliver restoration to grasslands which should be calcareous and species rich with opportunities for woodland creation if deemed desirable. Restoration of or natural generation on benches could offer additional complementary habitat gains. There is potential for site restoration to deliver net gain for biodiversity through habitat creation which would add to resources within the wider area, without necessarily directly enhancing existing habitat corridors. Opportunities for the provision of multifunctional environmental enhancements should be explored. Restoration of the site to a naturalistic landform would deliver benefits in terms of the wider setting of the scheduled monuments at Moot Low and Harboro Cave.

Appendix B

SAND AND GRAVEL DELIVERABILITY SCHEDULE

Site	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Shardlow (permission)	350	350	350	350	350	350	350	350									
Sudbury				250	250	250	250	250	250	250	250						
Foston									400	400	400	400	400	400	400	300	
Swarkestone (Permission)	320	320	320	320	320	320	200										
Swarkestone (SW extension)								320	320	320	320	320	320	320	320		
Swarkestone North																320	320
Willington (permission)																	
Willington (extension)	350	350	200														
Elvaston (Permission)							300	300	300	300	300	300					
Elvaston (extension)													300	300	300	300	300
Mercaston	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70
Reserves likely to be worked in Plan period	1090	1090	940	990	990	990	1170	1290	1340	1340	1340	1090	1090	1090	1090	990	690

Total estimated production 2022-2038 = 18,610,000 tonnes

Appendix C

MINERAL SITES IN THE PLAN AREA

- C1 This Appendix provides brief details of permitted mineral sites within the Plan area. Sites are listed within the District/Borough Council area in which they are located. Minerals produced include limestone, sandstone, sand and gravel, vein minerals and brick clay.

HIGH PEAK

Dove Holes Quarry

- C2 Operated by Cemex, Dove Holes Quarry lies on the Carboniferous Limestone to the east of Dove Holes village which itself lies to the north east of Buxton. It is a large quarry covering some 213 Hectares, including a small area (22 Ha) within the PDNP. The quarry area is a combination of three long established quarries known individually as Bee Low, Peak Quarry and Holderness, all of which were developed in the first half of the twentieth century. Production at the quarry is focused on the aggregate market; annual production is estimated at 5 mt with approximately 50% transported by rail. Permitted reserves are sufficient to last well beyond the end of the Plan period in 2038. The quarry complex provides the location for several companies making mineral products using the raw materials from the quarry.

Tunstead Quarry

- C3 Operated by Tarmac, Tunstead Quarry lies on the Carboniferous Limestone resource to the east of Buxton. The site consists of two quarries Tunstead and Old Moor (part of which lies within the PDNP). It is an important producer of both aggregate and industrial limestone and contains one of the Country's eleven only cement plants with a production capacity of 1 million tonnes (mt) of cement. It has permission for a second cement plant which if developed would increase capacity to 2.15 mt. Annual mineral production is estimated at around 6 mt ; with approximately 50% transported by rail. The site has sufficient reserves to last beyond the end of the Plan period.

Dowlow Quarry

- C4 Operated by Breedon Southern Ltd, Dowlow Quarry lies south-east of Buxton at Sterndale Moor, and is the southernmost of four quarries lying between the A515 Buxton to Ashbourne road and the PDNP boundary to the west. Its

carboniferous limestone is quarried for both industrial and aggregate purposes with annual production estimated at 3.5 mt. Approximately 50% of material is transported by rail. The site has sufficient permitted reserves to maintain production throughout the Plan period.

Hindlow Quarry

- C5 Operated by Tarmac, Hindlow Quarry is located to the north west of Dowlow. The quarry has not been producing limestone since 1988 although the lime manufacturing plant has continued to be operational since that time, initially utilising onsite stockpiles of stone and later, limestone imported from Tunstead Quarry. More recently extraction has restarted to supply the lime manufacturing plant and the aggregates market. The established rail network is being used to distribute approximately 50% of aggregates whilst the industrial lime products continue to be distributed by road. Future working is estimated at 2mt per annum with permitted reserves sufficient to last well beyond the Plan period.

Brierlow Quarry

- C6 Operated by Lhoist UK Ltd, Brierlow Quarry can be found north west of Hindlow is the third adjoining quarry in this area. The operation is primarily focused on the production of industrial lime. The site is bisected by a railway line (mostly tunnel) however there is no rail link to the site. Annual production is estimated at 0.5 mt with sufficient permitted reserves to last beyond the Plan period.

Hillhead Quarry

- C7 Operated by Tarmac, Hillhead Quarry is the fourth in the line of quarries to the south of Buxton. The site, which is located on the northern slopes of a prominent ridge line, has a surface area of 129 hectares (ha). The quarry's northern boundary is a mineral railway which serves the quarries on the A515 but is not actively used by Hillhead at present. A small area of the site, in its south-eastern corner, is in the Peak District National Park. Full time quarrying operations were mothballed in 2000 and the site has only been intermittently worked since. Indications from the operator are that quarrying is likely to recommence during the Plan period. The operator is also pursuing obtaining access to the mineral railway. Production is anticipated at 0.5 mtpa mainly for aggregate purposes, permitted reserves are estimated to last well beyond the Plan period.

Ashwood Dale Quarry

- C8 Operated by Breedon Southern Ltd, Ashwood Dale Quarry is located to the south of Buxton on the Carboniferous Limestone. Annual production is estimated at 100,000 tonnes used for the aggregate market. Permitted reserves are sufficient to last throughout the Plan period. All production is transported by road.

Mouselow Quarry

- C9 Operated by Weinerberger Ltd, Mouselow Quarry is located to the north of Glossop. The quarry is an important provider of brick clay supplying approximately 50% of the raw material required at the operator's brickworks located at Denton, East Manchester. Annual production from the quarry is estimated to have risen to 57,000 tonnes and permitted reserves are estimated to be exhausted by around 2030. The quarry also supplies sandstone for use as building stone and a small amount of aggregate. Annual production of sandstone is estimated at 10,000 tonnes.

Hayfield

- C10 There is one sandstone quarry at Hayfield where sandstone is worked intermittently for aggregate/building stone purposes.

DERBYSHIRE DALES

Grange Mill Quarry

- C11 Grange Mill Quarry, Wirksworth is operated by Ben Bennet Jnr Ltd extracts Carboniferous Limestone mainly for industrial purposes but also for aggregate use. Production has been estimated at 300,000 tonnes per year with permitted reserves sufficient to last throughout the plan period. All production is transported by road.

Brassington Moor Quarry

- C12 Brassington Moor Quarry operated by Longcliffe Quarries Ltd, adjoins Grange Mill Quarry to the south west on the Carboniferous Limestone resource. Mineral is principally quarried for the industrial market but also for aggregate purposes as well. Annual production is estimated at 1mt with approximately 70% used for industrial purposes and 30% used for aggregates. The quarry has permission until 2035, however the operator estimates that reserves that are low in cadmium, iron and lead which are vital for animal feed products and glass manufacture will be exhausted between 2025 and 2031. It is promoting

an extension to the quarry, Aldwark South which measures 25 ha and would yield approximately 24 mt of reserve. This site is proposed for allocation in this Plan.

Bonemill Quarry

- C13 Bonemill Quarry, operated by Longcliffe Quarries Ltd, lies to the east of Wirksworth. Dolomitic limestone is worked at the quarry for both industrial and aggregate purposes. Annual production is estimated at around 800,000 tonnes; the site had sufficient permitted reserves to last throughout the Plan period.

Dene Quarry

- C14 Dene Quarry, operated by Tarmac, lies to the west of Cromford. It produces approximately 0.5 mt of Carboniferous Limestone for use in the aggregates market. All mineral is transported by road. Access to the site is shared with Slinter Top Quarry. The current permission expires in 2026

Slinter Top Quarry

- C15 Slinter Top Quarry, operated by Slinter Mining Company, lies to the west of Cromford on the Carboniferous Limestone where vein minerals are quarried alongside limestone aggregates with the resulting void infilled with inert, non-hazardous excavation materials. Annual production is estimated at 100,000 tpa; all produced mineral is transported by road with the vein mineral transported to Cavendish Mill in the PDNP for processing. Mineral extraction is permitted at Slinter Top until 31st December 2021 and infilling until 31st December 2032. A planning application has been submitted, in 2017, for a lateral southwest extension to the existing quarry for limestone and vein mineral extraction. The proposal is to extract 1.3 million tonnes of mineral over the period to 2033 with a further 3 years to complete infilling and restoration.

Ball Eye Quarry

- C16 Ball Eye Quarry, is located close to Bonsall. The quarry has recently, in 2022, been sold. The quarry is currently non-operational but the site has permission to extract limestone for aggregate purposes with vein mineral quarried as ancillary mineral.

Halldale

- C17 There is a non-operational sandstone quarry at Halldale, Darley Dale where sandstone has been quarried intermittently for building stone purposes.

BOLSOVER

Whitwell Quarry

- C18 Whitwell Quarry, operated by Tarmac, lies on the Permian Limestone resource located in the north east of the County. The quarry produces around 1mt of mineral per annum. Approximately half of the mineral produced is high quality dolomitic limestone used at the adjacent Whitwell Works, operated by Lhoist which produces products for use in the steel industry. The remaining 50% is used for aggregates purposes. The current planning permission expires in 2025, the Company is exploring sites in both Derbyshire and Nottinghamshire to continue to supply the works.

Bolsover Moor Quarry

- C19 Bolsover Moor Quarry, owned by Tarmac, is a non-operational quarry located on the Permian Limestone to the east of Bolsover. When in production the site mainly supplied the aggregates market with production around 200,000 tpa. The contribution that this quarry will make to supply over the Plan period is uncertain.

NORTH EAST DERBYSHIRE

Moorhay Farm

- C20 There is a sandstone quarry at Moorhay Farm where sandstone is worked intermittently for building stone purposes. The site produces small quantities of stone roofing slate, with paving stone and walling stone produced as a by-product.

AMBER VALLEY

Waingroves Quarry

- C21 Waingroves Quarry, operated by Forterra Building Products Ltd, lies to the south of Ripley. Approximately 60,000 tonnes of brick clay are excavated annually for use as blending material in the Companies brick works located at Kirton in Nottinghamshire and Desford in Leicestershire. Permitted reserves are estimated to be sufficient to last throughout the Plan period.

Dukes Quarry

- C22 There is a sandstone quarry, Dukes Quarry, Whatstandwell where sandstone is worked intermittently for building stone purposes.

SOUTH DERBYSHIRE

Elvaston Quarry

- C23 Elvaston Quarry, operated by Tarmac, lies on the sand and gravel resource in the Lower Derwent Valley. Elvaston Quarry was first established in the late 1960s when permission was granted near to Draycott; workings have moved westwards along the valley. The current permitted extraction area, granted in 2013, lies north of Ambaston Lane; this permission retains the processing plant site at Bellington Hill and access arrangements onto the A6. This area has not been worked and the site is currently non-operational, but it is anticipated to recommence working towards the end of this decade. Permitted reserves are anticipated to be worked over a 5-year period at an average annual output of 300,000 tonnes; an extension to this area is proposed for allocation in the Plan to provide sufficient mineral to maintain production throughout the Plan period.

Shardlow Quarry

- C24 Shardlow Quarry, operated by Hanson, is located on the sand and gravel resource, in the Trent Valley, to the south of Shardlow village. The quarry became operational in 1989; it has a direct private access from the A50 which bisects the northern part of the site. The current working area was granted permission in 2015; annual production is anticipated at 350,000 tpa with permitted reserves anticipated to be worked out by the end of this decade. Hanson is promoting a replacement site at **Foston** which lies in the Dove Valley. This site is proposed for allocation in the Plan; working is anticipated to commence in 2030 with annual production estimated at 400,000 tpa.

Swarkestone Quarry

- C25 Swarkestone Quarry, operated by Tarmac, lies in the Trent Valley on the sand and gravel resource. The extraction of sand and gravel has taken place in the Swarkestone area since the late 1940s with working extending from the original site in a westerly direction along the valley. The current plant site lies to the south of Barrow on Trent village and was established in the mid-1990s; annual production is estimated around 300,000 tpa with permitted reserves anticipated to be worked out by the end of this decade. An extension to the west of the current permitted area, known as **Swarkestone South** is proposed

for allocation in the Plan which would extend the life of the site towards the end of the Plan period in 2036. To ensure continuity of production a further extension is proposed to the north west of this allocation known as **Swarkestone North** which would enable production to be maintained beyond the Plan period..

Willington Quarry

- C26 Willington Quarry, operated by Cemex, lies on the sand and gravel resource in the Trent Valley to the south west of Willington. The working of sand and gravel in the Willington area has taken place by a number of operators since the 1960s. The current plant area was established in the late 1980s. A recent permission has been granted, in August 2021, for an extension to the site which is anticipated to maintain working until 2024 based on an estimated annual production of 350,000 tonnes .Cemex are promoting a replacement site at **Sudbury** which lies in the Dove Valley. This site is proposed for allocation in the Plan; working is anticipated to commence in 2025 with annual production estimated at 250,000.

Mercaston Quarry

- C27 Mercaston Quarry, operated by Hanson, lies on the Sherwood Sandstone and comprises five separate areas. A processing plant and ancillary facilities are located off Mercaston Lane. The site has not been fully operational for a number of years with only small quantities of mineral produced annually. Based on this small quantity of output permitted reserves are sufficient to last well beyond the Plan period.

Appendix D

SAVED POLICES OF THE ADOPTED MINERALS LOCAL PLAN TO BE REPLACED

D1 The new Derbyshire and Derby Minerals Local Plan when adopted will replace the ‘saved’²³⁴ policies of the current Derby and Derbyshire Minerals Local Plan adopted in 2000 with a first alteration adopted in 2002. A list of the saved policies is set out below:

Policy Number	Policy Name
MP1	The Environmental Impact of Mineral Development
MP2	The Need for Mineral Development
MP3	Measures to reduce Environmental Impact
MP4	Interests of Acknowledged Environmental Importance
MP5	Transport
MP6	Nature Conservation - Mitigation Measures
MP7	Archaeology - Mitigation Measures
MP10	Reclamation and After-Use
MP11	Borrow Pits
MP12	Mineral Related Development
MP13	Mineral Exploration
MP15	Reworking of Tips
MP16	Maintenance of Landbanks
MP17	Safeguarding Resources
MP18	Extensions to Sites
MP19	Additional Sites
MP21	Sand and Gravel Sites
MP22	Sherwood Sandstones
MP23	Crushed Rock for Aggregates
MP24	Secondary and Recycled Materials
MP25	Industrial Limestone
MP27	Coal Extraction and Colliery Spoil Disposal
MP28	Opencast Constraint Areas
MP29	Coal Stocking

²³⁴ Paragraph 1(3) of Schedule 8 to the Planning and Compulsory Purchase Act 2004

MP32	Clay
MP33	Vein Minerals
MP34	Building Stone
MP35	Oil and Gas

Appendix E

DOCUMENTS THAT FORM PART OF THE PRESUBMISSION DRAFT PLAN CONSULTATION STAGE

- E1 The preparation of the Minerals Local Plan requires the preparation of a number of supporting technical documents and assessments as well as the main Plan document. A list of the documents which form part of this Pre-Submission Draft Consultation is set out below:

Main Document

- E2 Derbyshire and Derby Minerals Local Plan – Pre-submission Draft Plan, January 2023.

Policies Map

Background Papers

- E3 (The preceding number is the Pre-submission Draft Plan Chapter to which the Paper relates)
- 2.0 Spatial Overview
 - 5.0 Climate Change
 - 6.1 Secondary and Recycled Aggregates
 - 6.2 Sand and gravel
 - 6.3 Crushed Rock
 - 6.4 Reducing Quarrying in the PDNP
 - 7.1 Building Stone
 - 7.2 Industrial Limestone
 - 7.2 Industrial Limestone Cement
 - 7.3 Brick Clay and Fireclay
 - 7.4 Vein Minerals
 - 8.1 Coal and Colliery Spoil
 - 8.2 Oil and Gas Conventional
 - 8.2 Oil and Gas Unconventional
 - 8.2 Gas from Coal
 - 9.1 Safeguarding Mineral Resources
 - 9.2 Safeguarding Minerals Infrastructure

11 Cumulative Impact

Development Papers

- E4 (The preceding number is the Proposed Draft Plan Chapter to which the Paper relates)
- 3 Strategic Priorities - Vision and Objectives
 - 4 Sustainable Minerals Development
 - 5 Climate Change
 - 6.1 Secondary and Recycled Aggregates
 - 6.2 Sand and gravel
 - 6.3 Crushed Rock
 - 6.4 Reducing the supply of aggregates from the PDNP
 - 7.1 Building Stone
 - 7.2 Industrial Limestone
 - 7.3 Brick Clay and Fireclay
 - 7.4 Vein Minerals
 - 8.1 Coal and Colliery Spoil
 - 8.2 Hydrocarbons
 - 9.1 Safeguarding Mineral Resources
 - 9.2 Safeguarding Minerals Infrastructure
 - 10 Restoration of sand and gravel sites in the River Valleys
 - 11 Development Management

Duty to Cooperate (DtOC)

- E5 DtOC Introduction and Overview
DtOC Statement of Common Ground

Representations

- E6 Report of Representations 2022

Assessments

- E7 Sustainability Appraisal Report
Strategic Transport Assessment Stages 1 and 2
Habitats Regulations Assessment
Strategic Flood Risk Assessment

Health Impact Assessment

Equalities Impact Assessment

Sand and Gravel Sites Assessments

Sand and Gravel Assessment Methodology (published for information only)

Mapping Environmentally Sensitive Areas Methodology (published for information only)

Glossary

Aftercare: Processes necessary to maintain the quality of restored land to provide suitable conditions for determined after-uses such as conservation or agriculture.

After-use: The final use of land after the completion of mineral working and restoration such as nature conservation areas, country parks, agriculture, forestry, industrial uses, and other development i.e., housing developments.

Aggregates: Granular materials formed of loose fragments sand and gravel, crushed rock and other bulk materials used by the construction industry for purposes such as the making of concrete, mortar, asphalt or for roadstone, drainage or bulk filling.

Air Quality Management Areas (AQMA): An area unlikely to achieve national air quality objectives by relevant deadlines identified by the Local Authority. The Local Authority is subsequently required to put together a plan to improve air quality in that area – a Local Air Quality Action Plan.

Amenity: A positive element or elements that contribute to the overall character or enjoyment of an area. For example, open land, trees, historic buildings and the inter-relationship between them, or less tangible factors such as tranquillity.

Ancient or veteran tree: A tree which, because of its age, size and condition, is of exceptional biodiversity, cultural or heritage value. All ancient trees are veteran trees. Not all veteran trees are old enough to be ancient, but are old relative to other trees of the same species. Very few trees of any species reach the ancient life-stage.

Ancient woodland: An area that has been wooded continuously since at least 1600 AD. It includes ancient semi-natural woodland and plantations on ancient woodland sites (PAWS).

Area of Search: Areas where knowledge of mineral resources may be less certain but within which planning permission may be granted, particularly if there is a potential shortfall in supply.

Article 4 direction: A direction made under Article 4 of the Town and Country Planning (General Permitted Development) (England) Order 2015 which withdraws permitted development rights granted by that Order.

Bedrock Geology: Is the term used by British Geological Survey to describe the main mass of rocks, present everywhere that form the Earth. Bedrock can be either exposed or concealed.

Best and Most Versatile Agricultural Land: Land in grades 1, 2, and 3a of the Agricultural Land Classification. Land, which is the most flexible, productive and efficient, which can best deliver future crops.

Biodiversity: Refers to the biological diversity of all life on earth. It identifies the range of ecosystem variations, genetic differences and species, including both plants and animals.

Borrow Pit: A temporary site where minerals are extracted to supply materials for a specific project.

Buffer Zones: Land designated for protection where mineral development is prohibited. Usually found around settlements to protect residents from the adverse effects of site workings.

Building Stone: Hard rock types that can be used directly from mining for a variety of applications in construction, such as walling, flagstones, roofing and masonry. Rock type includes limestone and sandstone.

Bund: A retaining wall or embankment that can be used to screen mineral development.

Climate Change: The long-term change to Earth's climate. A change in global or regional weather patterns, such as precipitation or temperature. It is thought that recent changes in Earth's climate have been influenced by human activities rather than being a natural occurrence.

Climate change adaptation: Adjustments made to natural or human systems in response to the actual or anticipated impacts of climate change, to mitigate harm or exploit beneficial opportunities.

Climate change mitigation: Action to reduce the impact of human activity on the climate system, primarily through reducing greenhouse gas emissions.

Coal: A fossil fuel used in energy production, mainly formed from carbonised organic matter.

Competent person: A person with a recognised relevant qualification, sufficient experience in dealing with the topic in question and membership of a relevant professional organisation.

Conservation (for heritage policy): The process of maintaining and managing change to a heritage asset in a way that sustains and, where appropriate, enhances its significance.

Conservation Area: Those areas which represent ‘special architectural or historic interest, the character and appearance of which it is desirable to preserve or enhance under the Planning (Listed Buildings and Conservation Areas) Act 1990’

Cumulative Impact: A number of developments in a locality or a continuous activity over time that together may have an increased impact on the environment, local community or economy.

Decentralised energy: Local renewable and local low carbon energy sources.

Designated heritage asset: A World Heritage Site, Scheduled Monument, Listed Building, Protected Wreck Site, Registered Park and Garden, Registered Battlefield or Conservation Area designated under the relevant legislation.

Development: “the carrying out of building, engineering, mining or other operation in, on, over or under land, or the making of any material change in the use of any building or other land” as defined in the 1990 Town and County Planning act. Most mineral development requires planning permission.

Development Plan: Defined in section 38 of the Planning and Compulsory Purchase Act 2004, and includes adopted local plans, neighbourhood plans that have been made and published spatial development strategies, together with any regional strategy policies that remain in force. Neighbourhood plans that have been approved at referendum are also part of the development plan unless the local planning authority decides that the neighbourhood plan should not be made. These are fundamental documents that identify key goals for development.

Dormant Mineral Site: A mineral site officially classed as dormant under the Environment Act 1995 or the Planning and Compensation Act 1991. The permitted reserve cannot be exploited until new planning conditions have been agreed hence they are not included in landbank calculations of permitted reserves.

Duty to Cooperate: An important element of local plan preparation is the requirement to fulfil the Duty to Co-operate provisions established by the Localism Act 2011 and as set out in Section 33A of the Planning and Compulsory Purchase Act 2004. It places a duty on local planning authorities (including County Councils) and prescribed public bodies to engage, on an ongoing basis, to maximise the effectiveness of a local plan in the context of strategic matters that cross administrative boundaries. Evidence of the discussions and the outcomes from them, will need to be made available at the local plan examination as part of the test of soundness.

Energy Minerals: Minerals used for energy production, usually by burning. They have high levels of carbon and include coal, oil and gas.

Environment Agency (EA): The principle environmental regulatory body in England and Wales. It strives to protect and enhance the environment; it supports sustainable development and aims to create better places for both people and wildlife.

Environmental Impact Assessment (EIA): A procedure to be followed for certain types of project to ensure that decisions are made in full knowledge of any likely significant effects on the environment.

Equalities Impact Assessment (EqIA): Used to assess the impact of the plans policies on groups of individuals with protected characteristics. Demonstrates the plan does not discriminate and ensures equality.

Evidence Base: Information and data collected by local authorities, used to support plan preparation.

Floodplain: an area of land identified as at risk of flooding when a river bursts its banks.

Flood Zones: Area identified by the Environment Agency as being at risk of flooding. Categorised into 3 zones, zone 3 being the highest risk.

Geodiversity: The range of rocks, minerals, fossils, soils and landforms.

Green Belt: Specially designated area protected from most forms of development in order to stop urban sprawl and the coalescence of settlements, preserve the character of existing settlements and encourage development to locate within existing built-up areas.

Green infrastructure: A network of multi-functional green and blue spaces and other natural features, urban and rural, which is capable of delivering a wide range of environmental, economic, health and wellbeing benefits for nature, climate, local and wider communities and prosperity.

Groundwater: An important part of natural water cycle, groundwater is found underground, stored in soil and rocks.

Habitats Regulation Assessment (HRA): Investigation to identify any aspects of planned land-use that could have significant impact on designated European sites. These sites include Special areas of Conservation (SACs), candidate SACs, Special Protection Areas (SPAs) and potential SPAs (pSPAs) and Ramsar Sites. These sites are collectively termed Natura 2000 sites.

Habitats site: Any site which would be included within the definition at regulation 8 of the Conservation of Habitats and Species Regulations 2017 for the purpose of those

regulations, including candidate Special Areas of Conservation, Sites of Community Importance, Special Areas of Conservation, Special Protection Areas and any relevant Marine Sites.

Health Impact Assessment (HIA): A practical approach used to assess the impact of plans and policies on health and wellbeing. This process helps to make informed decisions with the aim to minimise any possible negative implications.

Heritage Asset: A building, monument, site, place, area or landscape that is identified as having a degree of significance meriting consideration when making planning decisions. This includes designated assets and those identified by the local planning authorities.

Historic Environment: All aspects of the environment that have resulted from the interaction between people and places throughout time. This includes surviving physical remains of past human activity.

Hydraulic Fracturing: Also known as fracking, a process used to extract oil and gas found in rock deep underground. This involves the fracture of rocks to release the oil and gas, a mix of sand, water and chemicals is pumped under high pressure into bore holes to create this fracturing.

Industrial Minerals: Minerals that are essential in supporting industrial and manufacturing processes such as industrial limestone, brick clay and vein minerals.

Infrastructure: collective term for services that are necessary for communities to function such as roads, water and electricity. In terms of mineral working sites infrastructure relates to the plant necessary to work the mineral before it leaves the site.

International, national and locally designated sites of importance for biodiversity: All international sites (Special Areas of Conservation, Special Protection Areas, and Ramsar sites), national sites (Sites of Special Scientific Interest) and locally designated sites including Local Wildlife Sites.

Landbank: A stock of land with planning permission to work minerals. Can be used as a monitoring tool to assess the amount of unexploited aggregate mineral reserves and assess the amount of time supply will last based on the forecasted level of demand.

Local Aggregates Assessment (LAA): Produced annually and used to plan for a steady and adequate supply of aggregates. It assesses all supply options and forecasts future demand of aggregates. The LLA is prepared jointly between

Derbyshire County Council, Derby City Council and the Peak District National Park Authority.

Local plan: A plan for the future development of a local area, drawn up by the local planning authority in consultation with the community. In law this is described as the development plan documents adopted under the Planning and Compulsory Purchase Act 2004. A local plan can consist of either strategic or non-strategic policies, or a combination of the two.

Material Consideration: A matter that should be taken into account in deciding a planning application or on an appeal against a planning decision.

Mineral Consultation Area (MCA): Geographical area based on a Mineral Safeguarding Area, where the district or borough council should consult the Mineral Planning Authority for any proposals for non-mineral development.

Mineral Development: The term ‘mineral development’ includes the exploration and extraction of minerals both above and below ground, the processing and transportation of minerals and the restoration of mineral sites. It includes the location, design and operational practices of development associated with new and existing mineral sites.

Mineral Related Development: Refers to the infrastructure, plant and vehicles used to extract, process and transport minerals and restore mineral sites.

Minerals resources of local and national importance: Minerals which are necessary to meet society’s needs, including aggregates, brickclay (especially Etruria Marl and fireclay), silica sand (including high grade silica sands), coal derived fly ash in single use deposits, cement raw materials, gypsum, salt, fluorspar, shallow and deep-mined coal, oil and gas (including conventional and unconventional hydrocarbons), tungsten, kaolin, ball clay, potash, polyhalite and local minerals of importance to heritage assets and local distinctiveness.

Mineral Safeguarding Area (MSA): Areas defined by mineral planning authorities to protect potentially workable resources of minerals from sterilisation by other forms of development which may prevent future extraction of the mineral.

Mitigation: Actions taken to reduce the impact of future adverse effects.

Monitoring Report: Produced annually to check progress of policy implementation and review their outcomes to assess effectiveness and impact of the Plan.

National Park: The statutory purposes of national parks are to conserve and enhance their natural beauty, wildlife and cultural heritage and to promote opportunities for public understanding and enjoyment of their special qualities. National parks are

designated by Natural England, subject to confirmation by the Secretary of State under the National Parks and Access to the Countryside Act 1949.

National Planning Policy Framework (NPPF): Sets out the Government’s planning policies for England and how these should be applied and provides a framework within which locally prepared plans can be produced.

National trails: Long distance routes for walking, cycling and horse riding.

Nature Recovery Network: An expanding, increasingly connected, network of wildlife-rich habitats supporting species recovery, alongside wider benefits such as carbon capture, water quality improvements, natural flood risk management and recreation. It includes the existing network of protected sites and other wildlife rich habitats as well as and landscape or catchment scale recovery areas where there is coordinated action for species and habitats.

Natural Flood Management: Managing flood and coastal erosion risk by protecting, restoring and emulating the natural ‘regulating’ function of catchments, rivers, floodplains and coasts.

Non-operational Mineral Site: A mineral site wherein the winning and working or depositing of minerals is not currently taking place.

Operational Mineral Site: A mineral site wherein the winning and working or depositing of minerals is currently/intermittently taking place.

Outstanding universal value: Cultural and/or natural significance which is so exceptional as to transcend national boundaries and to be of common importance for present and future generations. An individual Statement of Outstanding Universal Value is agreed and adopted by the UNESCO World Heritage Committee for each World Heritage Site.

Overburden: soil and other materials that lie above the mineral reserve, can be stored for later use in restoration of worked land.

Permitted Mineral Reserves: Mineral deposits that have planning permission for extraction.

Planning condition: A condition imposed on a grant of planning permission (in accordance with the Town and Country Planning Act 1990) or a condition included in a Local Development Order or Neighbourhood Development Order.

Planning obligation: A legal agreement entered into under section 106 of the Town and Country Planning Act 1990 to mitigate the impacts of a development proposal.

Preferred Area: areas of known mineral resources where planning permission might reasonably be anticipated. Such areas may also include essential operations associated with mineral extraction.

Priority habitats and species: Species and Habitats of Principal Importance included in the England Biodiversity List published by the Secretary of State under section 41 of the Natural Environment and Rural Communities Act 2006.

Ramsar Site: Wetland sites considered to be of international importance. Sites are declared under the 1971 Ramsar Convention, which was established by UNESCO.

Reclamation: The act of restoring land used for the winning and working of minerals to an acceptable environmental condition for either resumption of former land use or for a new use, examples include agriculture, forestry or conservation.

Recycled Aggregates: Aggregates produced from recycled construction waste such as crushed concrete or asphalt pavement.

Regional Aggregates Working Party: A working group consisting of local authority officers, representatives of the aggregates industry and central government established to consider the supply and demand for aggregate minerals.

Renewable and low carbon energy: Includes energy for heating and cooling as well as generating electricity. Renewable energy covers those energy flows that occur naturally and repeatedly in the environment – from the wind, the fall of water, the movement of the oceans, from the sun and also from biomass and deep geothermal heat. Low carbon technologies are those that can help reduce emissions (compared to conventional use of fossil fuels).

Safeguarding: Protection of a particular mineral site or resource from intruding non-mineral development.

Scope 1 Emissions: These are the emissions that a company makes directly — for example while running its boilers and vehicles.

Scope 2 Emissions: These are the emissions it makes indirectly – like when the electricity or energy it buys for heating and cooling buildings, is being produced on its behalf.

Scope 3 Emissions: These are the emissions associated, not with the company itself, but that the organisation is indirectly responsible for, up and down its value chain. For example, from buying products from its suppliers, and from its products when customers use them.

Secondary Aggregates: Aggregates that are by products from industrial processes, including the production of primary aggregates. They have not been previously used for construction such as, incinerator bottom ash, railway ballast and fine ceramic waste.

Setting of a heritage asset: The surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral.

Significance (for heritage policy): The value of a heritage asset to this and future generations because of its heritage interest. The interest may be archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset's physical presence, but also from its setting. For World Heritage Sites, the cultural value described within each site's Statement of Outstanding Universal Value forms part of its significance.

Site of Special Scientific Interest (SSSI): Sites designated by Natural England under the Wildlife and Countryside Act 1981.

Special Area of Conservation (SAC): Areas defined by regulation 3 of the Conservation of Habitats and Species regulations 2017 which have been given special protection as important conservation sites. They are designated to give protection to one or more specific habitats and/or species and is part of a global effort to conserve the world's biodiversity.

Special Protection Area (SPA): Areas classified under section 15 of the Conservation of Habitats and Species Regulations 2017, identified as being of international importance for the breeding, feeding, wintering or the migration of rare and vulnerable species of birds. These areas are classified under the Birds Directive and are found within European Union countries.

Specific Site: Where viable mineral resources are known to exist, landowners are supportive of minerals development and the proposal is likely to be acceptable in planning terms. Such sites may also include essential operations associated with mineral extraction.

Statement of Common Ground (SOCG): The National Planning Policy Framework (NPPF), requires strategic policy-making authorities to prepare and maintain statements of common ground (SOCG), documenting the cross-boundary matters being addressed and the progress in co-operating to address these.

Statement of Community Involvement (SCI): Required to be prepared under the provisions of the Planning and Compulsory Purchase Act 2004, a document which sets out planned involvement of the local community and other interested stakeholders in the planning process and development management decisions.

Sterilisation: A change of use to land or non- mineral related development such as housing and roads that restrict the access to mineral deposits causing sterilisation as extraction of these minerals becomes impossible for the foreseeable future.

Strategic Flood Risk Assessment (SFRA): Risk assessment carried out by local authorities to evaluate potential flood risk. Investigation considers current and future risk as well as land use change, levels of development and climate change.

Strategic Transport Assessment (STA): Provides evidence to support policies and proposals by assessing the impact of the planned policies on the transport network.

Sub-national: Refers to the regional area i.e., the East Midlands in Derbyshire and Derby's case. The East Midlands Regional Aggregates Working Party considers the supply and demand for aggregate minerals in the East Midlands region.

Supplementary planning documents: Documents which add further detail to the policies in the development plan. They can be used to provide further guidance for development on specific sites, or on particular issues, such as design. Supplementary planning documents are capable of being a material consideration in planning decisions but are not part of the development plan.

Sustainability Appraisal (SA): A way of promoting sustainable development through plan and policy implementations this appraisal should be undertaken throughout the development of a policy document and involves testing the impact of the plan against a series of sustainability objectives. This appraisal determines the degree in which plans, and policies contribute to the achievement of sustainable development.

Sustainable Development: Broadly refers to development that meets the needs of the current generation without comprising the ability of future generations to meet their own needs.

Transport assessment: A comprehensive and systematic process that sets out transport issues relating to a proposed development. It identifies measures required to improve accessibility and safety for all modes of travel, particularly for alternatives to the car such as walking, cycling and public transport, and measures that will be needed deal with the anticipated transport impacts of the development.

Tranquil Areas: Areas sufficiently remote from the visual or audible intrusion of development or traffic to be considered unspoilt by urban influences.

Travel plan: A long-term management strategy for an organisation or site that seeks to deliver sustainable transport objectives and is regularly reviewed.

Tree Preservation Order (TPO): A mechanism for securing the preservation of single or groups of trees of acknowledged amenity value. A tree subject to a tree preservation order may not normally be topped, lopped or felled without the consent of the local planning authority.

Wildlife corridor: Areas of habitat connecting wildlife populations.

Winning: The preparation of land to make a mineral deposit accessible for extraction.

Working: The removal of mineral from deposit below ground.

World Heritage Site: A cultural or natural site of outstanding universal value designated by the International Council on Monuments and Sites (ICOMOS).