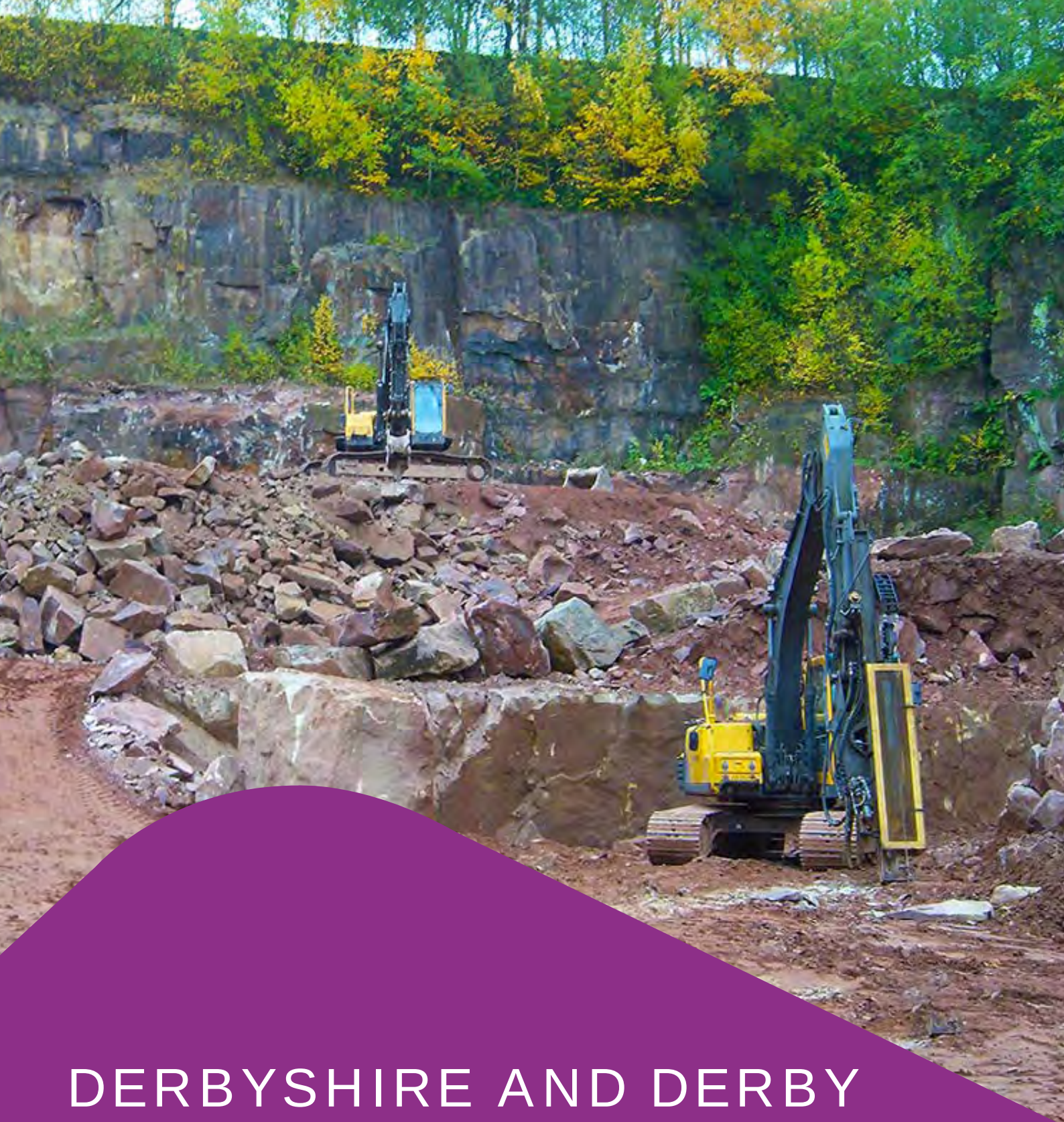

DERBYSHIRE AND DERBY MINERALS LOCAL PLAN

TOWARDS A MINERALS LOCAL PLAN: PROPOSED DRAFT PLAN - DECEMBER 2021

Derby City Council

DERBYSHIRE County Council

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HOW TO GET INVOLVED

It is very important that as many people as possible get involved and comment on the Plan. By doing so, you can shape planning policy that will be used to assess planning applications for mineral development within the Plan area. You can help by telling us your thoughts on the Proposed Draft Plan that we have set out.

CONSULTATION - HAVE YOUR SAY

To enable you to comment easily you can view the consultation documents on the County Councils Have Your Say Consultations webpage. A link to the webpage will be provided from Derby City Council's website also.

Representations made to the Minerals Local Plan cannot be made anonymously. We will publish your name or the name of your organisation and a summary of your comment only. Any details about your address, email address and telephone numbers will automatically be excluded from publication.

PRIVACY NOTICE

Derbyshire County Council is committed to protecting your personal data, and ensuring it is processed fairly and lawfully in accordance with the Data Protection Act 2018. The General Data Protection Regulations 2018 (GDPR) gives individuals the right to be informed about how organisations use their personal data. Derbyshire County Council provides this information through a number of Privacy Notices. Personal Data relating to local plans is managed in accordance with the Planning Service Privacy Notice. **Link to Planning Service Privacy Notice**

ALTERNATIVE FORMATS

We want everyone to be able to understand us and to be able to read our Plan. To obtain a copy of the Proposed Draft Plan in alternative formats, please contact Call Derbyshire on 01629 533190.
If you do not have access to the internet and would like a paper copy of the Proposed Draft Plan, please contact Call Derbyshire on 01629 533190.

YOUR COMMENTS

Comments can be submitted online to **planning.wastemin@derbyshire.gov.uk**

or posted to Minerals Local Plan Team, Place, Planning Services, Room N8, North Block, County Hall, Matlock, DE4 3AG.

CONTACT US

If you have any queries, you can email them to the above address or contact Call Derbyshire on 01629 533190 who will forward your contact details to a member of the Minerals Local Plan Team.

CONTENTS

PART ONE

INTRODUCTION AND BACKGROUND, SPATIAL OVERVIEW AND STRATEGIC PRIORITIES

CHAPTER 1: INTRODUCTION AND BACKGROUND

INTRODUCTION

1.1 Derbyshire County Council and Derby City Council[1] are currently working together to prepare a new joint minerals local plan which will cover the period to 2038. It will be called the Derbyshire and Derby Minerals Local Plan and the plan area will cover the geographical county of Derbyshire, excluding that part which falls within the Peak District National Park

1.2 The Plan period was initially to 2030 but following changes to the National Planning Policy Framework (NPPF)[2] which sets out the Government's planning policy for England, which now stipulates that local plans should cover a 15 year period from adoption of the plan, the Plan period has been extended to 2038 (15 years from the anticipated adoption of the Plan in 2023).

WHY PREPARE A JOINT PLAN?

1.3 Planning authorities are required by law to prepare local development documents[3] setting out strategic priorities for the development and use of land in their area and strategic polices to address those priorities.[4] 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.

1.4 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 jointly the current Minerals and Waste Local Plans. In addition, one of the key changes to the planning system under the 2011 Localism Act has been the introduction of the 'duty to co-operate', which seeks to enhance the way planning authorities work together and 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 will be the subject of separate consultation.

1.5 Derby City Council has also prepared the Derby City Local Plan – Part 1 Core Strategy, adopted on 25th January 2017, setting out the long-term strategy for the spatial development of the City area to 2028 for matters other than minerals and waste. The Council is currently waiting to see the outcome of the consultation on the White paper, 'Planning for the Future' before deciding its next steps.

1 Referred to as the Councils or Mineral Planning Authorities throughout the Minerals Local Plan
2 NPPF July 2021, Paragraph 22
3 Planning and Compulsory Purchase Act 2004, Section 17 (as amended by the Planning Act 2008)
4 Planning and Compulsory Purchase Act 2004, Section 19 (as amended by the Neighbourhood Planning Act 2017)

HOW IS THE PLAN PREPARED JOINTLY?

1.6 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 by the Cabinets of both Councils.

WHAT IS THE PURPOSE OF A LOCAL PLAN?

1.7 Planning law[5] 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.

1.8 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.

1.9 The NPPF[6] 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 polices; and
- The degree of consistency with the NPPF.

1.10 The Proposed Draft Plan has been prepared in conformity with the latest NPPF. However, it is a Regulation 18[7] consultation and the first iteration of the whole Plan in its entirety and therefore is not considered to be so advanced 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.

5 Planning and Compulsory Purchase Act 2004, Section 38(6)
6 NPPF July 2021, Paragraph 48
7 Town and Country Planning (Local Planning) (England) Regulations 2012 as amended

HOW WILL THE PLAN DELIVER SUSTAINABLE MINERALS DEVELOPMENT?

1.11 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.[8] 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.[9]

1.12 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.

1.13 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.

1.14 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.

8 Resolution 42/187 of the United Nations General Assembly

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

HOW IS THE LOCAL PLAN PREPARED?

1.15 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. Additionally, the Plan must be based on a robust and credible, but proportionate, evidence base, which is as up to date as practicable.

1.16 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.

1.17 There are four tests of soundness that the Plan must 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 NPPF[10] and other statements of national planning policy, where relevant.

10 NPPF July 2021, Paragraph 35

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.

- 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
- Proposed Approach 2018
- Sand and Gravel Sites Consultation 2020
- Proposed Draft Plan 2021 (this current stage)

- *Publication Plan*
- *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 Sites, 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 set out in the 2010 Equality Act.

Continues on next page

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 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.

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 outcome for the Plan. 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.

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 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 D. Information on the documents that formed part of previous Consultation stages can be found by visiting the new Minerals Local Plan Homepage on the County Council's website. 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'[11] policies of the current Derbyshire and Derby Minerals Local Plan adopted in 2000 with a first alteration adopted in 2002.

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

WHAT IS THE PROPOSED DRAFT PLAN CONSULTATION STAGE?

1.23 The consultation is the presentation of a draft version of the intended Plan in its entirety. 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;
- 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;
- Development Management Policies to avoid, control and mitigate the impacts of mineral development;
- A Monitoring Framework to monitor the effects of the Plan's polices and proposals and inform the need for Plan review;
- Site Development Briefs detailing the Principal Planning Requirements that need to be addressed by any planning application to work a proposed allocation site;
- A key diagram and policies map which presents the Plan's policies geographically.

1.24 The consultation stage provides an important opportunity for interested parties, including Town and Parish Councils, District and Borough Councils, mineral operators, landowners, community and interest groups and the people of Derbyshire and Derby, to influence the content of the Plan before a final Draft Plan is prepared and published for Examination in Public. The consultation responses received at this stage, along with the findings of the required technical assessments and any updates to the evidence base, will then help us prepare the final Draft Plan, which will itself be subject to further consultation before an independent examination takes place.

HOW IS THE PROPOSED DRAFT PLAN SET OUT?

1.25 The NPPF[12] requires the Plan to be explicit in which polices are strategic and necessary to deliver the strategic priorities of the area and any cross-boundary issues. The NPPF[13] requires that strategic policies should set out an overall strategy for the pattern, scale and quality of development 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 Polices (prefixed SP);**

PART THREE - **Development Management Polices (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 - Polices are written in bold and in box outlined blue.

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.

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

SP18 Mineral Resources Safeguarding and Consultation Areas

12 NPPF February 2019 with proposed amendments January 2021, Paragraph 21

13 NPPF February 2019 with proposed amendments January 2021, Paragraph 20

CHAPTER 2: SPATIAL OVERVIEW

INTRODUCTION

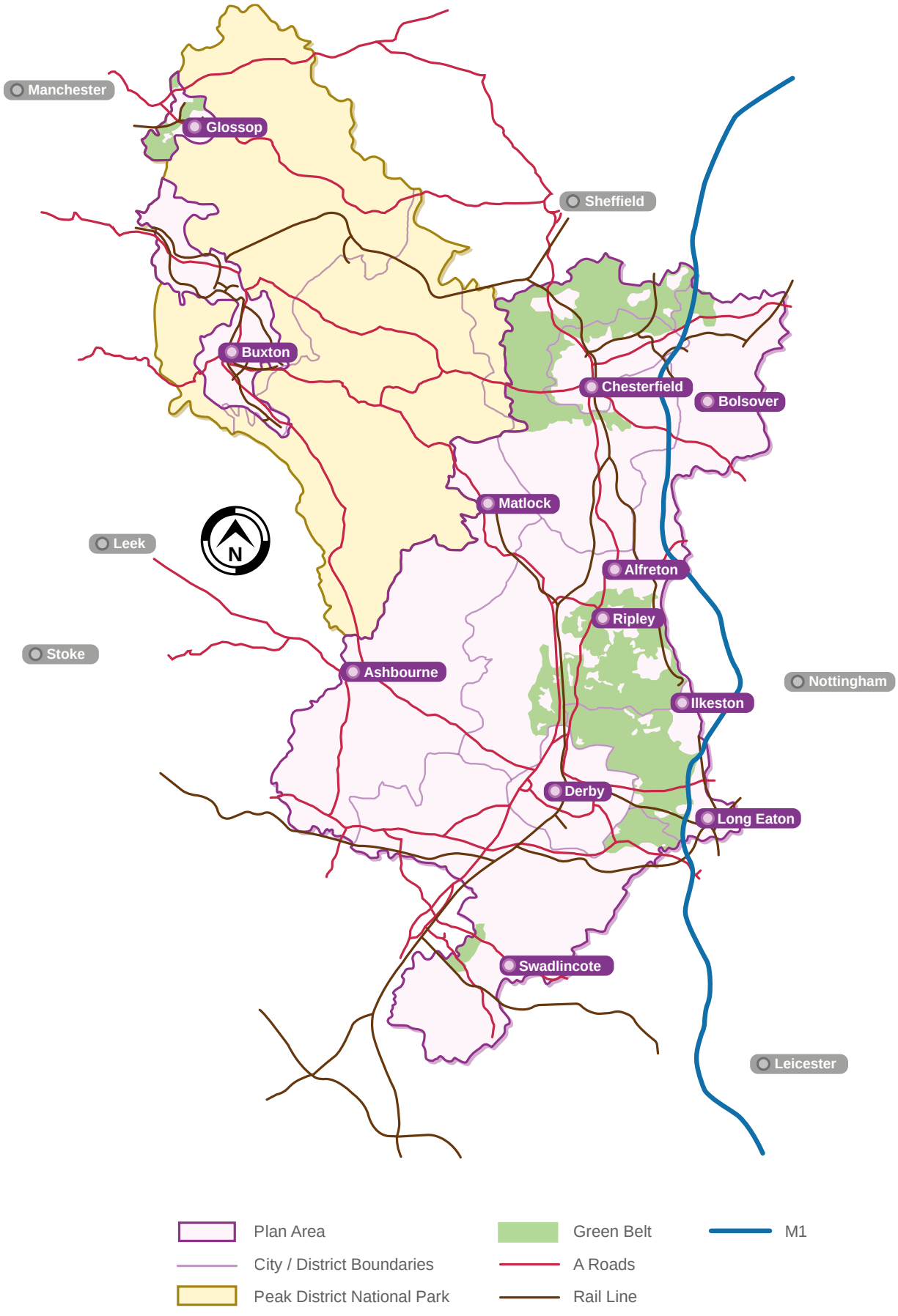
2.1 In order to plan for delivering sustainable minerals development, it is important that the Councils are aware of the spatial economic, social and environmental characteristics of the Plan area and particularly the significance and characteristics of the minerals industry. Figure 2.1 shows the Plan area of Derbyshire and Derby[14] 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's[15] estimated population in 2019 was approximately 1.05 million people with around 0.25 million living in Derby City[16] and 0.8 million living in the rest of Derbyshire[17]. 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.

14 Derbyshire and Derby refers to the geographical county of Derbyshire excluding that part which lies within the PDNP
15 Derbyshire refers to geographical county of Derbyshire including the PDNP
16 The administrative area of Derby City Council
17 The administrative area of Derbyshire County Council

FIGURE 2.1 PLAN AREA AND KEY GEOGRAPHICAL FEATURES



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 the presence of several green belt areas established, to prevent coalescence with neighbouring cities such as Manchester, Sheffield, Nottingham, 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 unworked 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 valleys of the Lower Derwent and Dove. There is a less widespread sand and gravel 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, but also from the north-west of the county around Hayfield and Glossop.

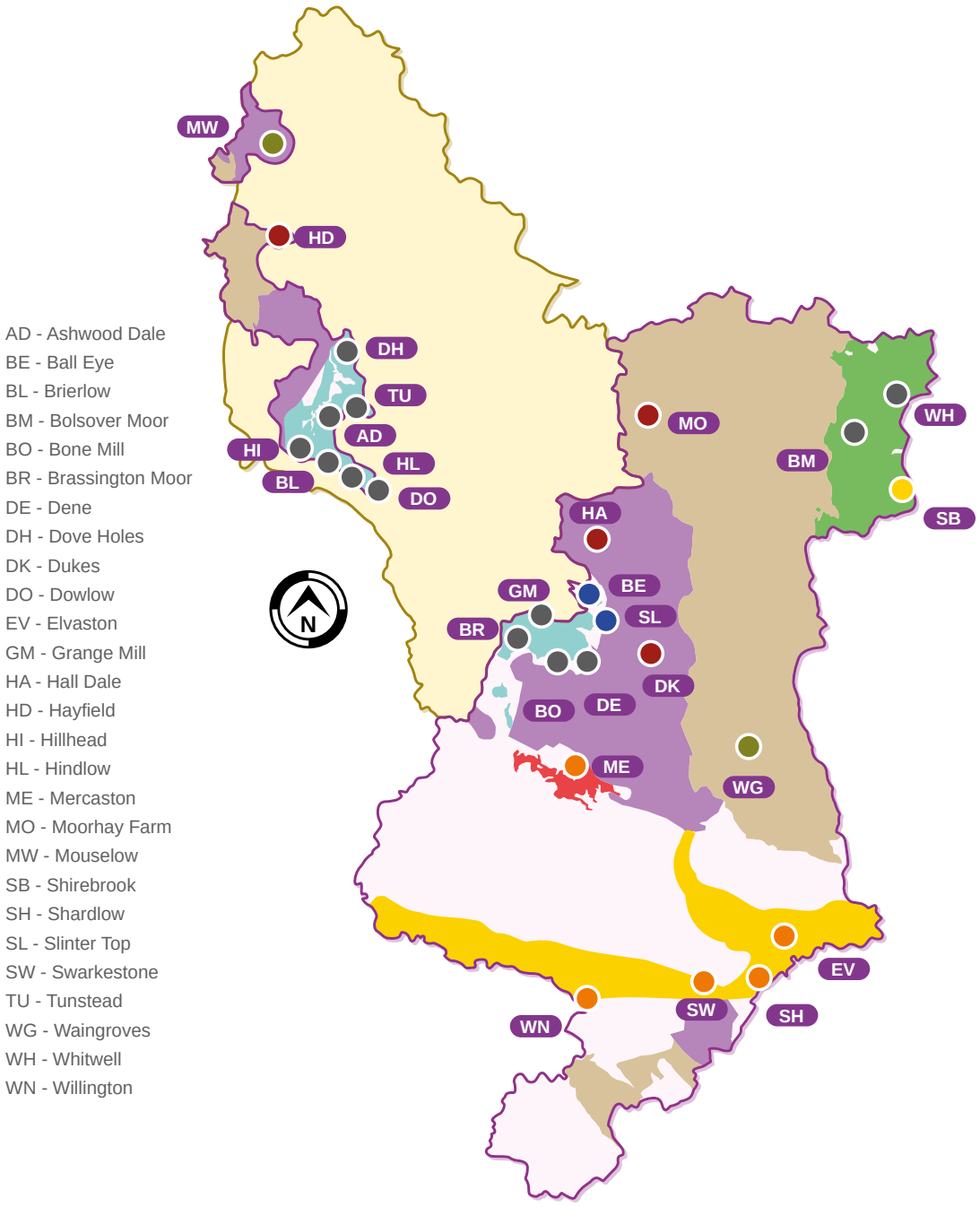
2.12 Workable deposits of vein minerals, such as Fluorspar and Barytes are found exclusively in mineralised veins and related deposits in the Carboniferous Limestone. Fluorspar occurs in only in the Northern Pennines and the Southern Pennines. Production in the northern area (Durham) ceased in 1999, leaving the Peak District 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, 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 is some potential for exploiting conventional and unconventional gas deposits in Derbyshire, mainly associated with the coal measures in the north east of the county. In the recent past coal mine methane 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. 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



AD - Ashwood Dale
BE - Ball Eye
BL - Brierlow
BM - Bolsover Moor
BO - Bone Mill
BR - Brassington Moor
DE - Dene
DH - Dove Holes
DK - Dukes
DO - Dowlow
EV - Elvaston
GM - Grange Mill
HA - Hall Dale
HD - Hayfield
HI - Hillhead
HL - Hindlow
ME - Mercaston
MO - Moorhay Farm
MW - Mouselow
SB - Shirebrook
SH - Shardlow
SL - Slinter Top
SW - Swarkestone
TU - Tunstead
WG - Waingroves
WH - Whitwell
WN - Willington

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

- Plan Area
- Sand and Gravel
- Carboniferous Limestone
- Permian Limestone
- Coal Measures (sandstones, mudstones and fireclay)
- Sherwood Sandstones
- Millstone Grit (sandstones, mudstones)
- Area of Peak District National Park within Derbyshire

- Clay Site
- Limestone / Sandstone Site
- Oil and Gas Site
- Sand and Gravel Site
- Vein Minerals Site
- Building Stone Site

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 2019, Derbyshire produced approximately 9.19 million tonnes of aggregate crushed rock[18]. Figures show that 37% 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 (19%) and 15% to the Yorkshire/ Humber Region. The West Midlands and East of England together also take a significant amount (7% and 6% respectively) and the South East, London and the Home Counties 8% between them. In 2019, there were a total of thirteen operational quarries within Derbyshire extracting limestone, of which twelve exploit the Carboniferous resource and one the Permian resource. The Plan area contains a large landbank of permitted crushed rock aggregate reserves estimated to be sufficient to last beyond the end of the Plan period at anticipated production rates.

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 2019, Whitwell, Tunstead, Brierlow, Dowlow, 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.

18 Local Aggregate Assessment 2020

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

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 2019, 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 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. Additional reserves of sand and gravel will be required to maintain supply at anticipated production rates throughout the Plan period.

2.19 Building stone is important for the repair and restoration of historic buildings or with 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 at 2019, there are three 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. 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 and natural history. In shallower quarries, the quarry floor can be restored for agriculture or 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 but more recently, sites have been restored to alternative beneficial nature conservation and recreational after-uses, for example, Attenbrough 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 Five Pits Trail etc.

Population and Households

2.27 Almost 25% of Derbyshire's[20] estimated population of 1.05 million people live within Derby City[21]. Derby City displays a younger population, with approximately 21% in the 0-15 age group compared to 17% for the rest of Derbyshire. The corresponding figure for the East Midlands and England is 19%. 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 19% and 18%. By 2041 the percentage of over 65s is anticipated to have risen to 22%[22] 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 2041 Derbyshire's population will increase by 11% whilst Derby City's population will increase by 10%. Estimates for the East Midlands and England also predict a 10% growth in population. Growth is planned particularly for South Derbyshire where the population is estimated to grow by 28% over the same period.

2.29 In 2017 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. At September 2020 the percentage of 16 to 64 year olds in employment was 80% in Derbyshire, 78% in Derby compared to 76% for the East Midlands and England.[24] Unemployment has risen sharply following the Covid-19 outbreak, in January 2021 Derbyshire's unemployment rate was 4.4% compared to Derby City's 7.5%, the average for England was 6.3%.[25]

20 Derbyshire refers to geographical county of Derbyshire including the PDNP
21 The administrative area of Derby City Council
22 Source Derby City Council
23 ONS 2018 based subnational population projections (Derbyshire County Council Observatory)
24 Source Derby City Council and Derbyshire County Council
25 Source Derbyshire County Council

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 2019 it accounted for 6.9% of employment in Derby and 8.4% in Derbyshire compared to the national average for England of 5.4% and 7.1% for the East Midlands.[26] Another notable difference in Derby City is the Professional, Scientific and Technical sector, which accounts for 16.5% of employment close to the average for England 17.5%. The figure for the rest of Derbyshire and the East Midlands is much lower at 13.5% and 13.6% 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 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 study[28] 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 Country'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]

26 Manufacturing is included in the sector 'Production' which includes mining, quarrying and utilities Source Derby City Council and Derbyshire County Council

27 Source Derby City Council and Derbyshire County Council

28 Source Derby City Council and Derbyshire County Council

29 Source Derby City Council and Derbyshire County Council – English Indices of Deprivation 2019 MHCLG

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 traffic[31]. High volume long-life limestone aggregates quarries are the only ones 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 2019 approximately 50% of limestone aggregate was transported by rail. Three aggregate limestone quarries are currently rail linked and a further two permitted quarries are anticipated to recommence production in the near future 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 (NO^2). Derby has been identified as a location of NO^2 non-compliance within the East Midlands zone and is required to implement a Clean Air Zone (CAZ) to improve air quality in the shortest possible time.

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.

30 Department of Transport Freight Statistics 2019 (table TSGB043)
31 Derbyshire Local Transport Plan 2011-2026
32 DEFRA Air Quality Management Areas

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, with a small amount of grade 2 land to the south of Ashbourne

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 county 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 county, 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 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.

33 Natural England - Agricultural Land Classification Maps

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 DCC 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 87 Sites of Special Scientific Interest (SSSIs); 1 National Nature Reserve (at Calke Abbey); and 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 are Sudbury, Calke Abbey, Welbeck Abbey, Hardwick Hall, Kedleston Hall and Elvaston Castle.

34 Derbyshire County Council Historic Environment Record

35 Magic

FIGURE 2.3 KEY ENVIRONMENTAL ASSETS

CHAPTER 3: STRATEGIC PRIORITIES - VISION AND OBJECTIVES

INTRODUCTION

3.1 The NPPF[36] 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 at the end of the Plan period in 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 PLAN'S STRATEGIC PRIORITIES

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 as we move towards the national 'zero carbon emissions' target of 2050.

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 suppled from sites within the Peak District National Park 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 mineral resources and supporting 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 etc. 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.

3.8 Mineral development will be located, designed and operated in ways which maximise the use of sustainable modes of 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.

3.9 Objective 1 - Ensuring a Steady and Adequate Supply of Minerals

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.

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

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.

3.11 Objective 3 - Safeguarding Mineral Resources and Mineral Related Infrastructure

To ensure that important mineral resources and the infrastructure that is used to process and transport extracted minerals are safeguarded from inappropriate development that would impair their availability and use for future generations.

3.12 Objective 4 - Ensuring the Sustainable Transport of Minerals

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

3.13 Objective 5 - Protecting Local Communities

To protect the existing amenity, health, safety and well-being of local communities from visual impacts, noise, dust, vibration, light pollution, land instability and contamination 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.

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

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.

3.15 Objective 7 - Protecting the Peak District National Park

To help protect, conserve and enhance the landscape, scenic beauty, wildlife and cultural heritage of the Peak District National Park (PDNP) by providing for a compensatory supply of aggregate crushed rock from the Plan area to enable a progressive reduction of those minerals suppled 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.

3.16 Objective 8 - Minimising the impacts on Climate Change and Flood Risk

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; maximise the use of sustainable modes of transport including rail, water, pipeline and conveyor; minimise the use of machinery and processing emissions, maintain or enhance water quality; optimise on-site water and energy use; maximise energy provision from renewable and low-carbon sources and reduce the risk of flooding both on site and in the wider area.

3.17 Objective 9 - Ensuring the Sustainable Restoration of Mineral Sites

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 measures to address climate change.

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.

BRIERLOW QUARRY,
MINERAL EXTRACTION

PART TWO

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 polices 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 Mineral Planning Authority (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 find solutions, which mean that proposals will be approved wherever possible and appropriate, and 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.

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.

37 NPPF July 2021, Paragraph 17

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 mineral 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 **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.**

DOVEHOLES QUARRY

4.9 **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, tranquil areas etc. 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 the road based transport of minerals, 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;**

Continues on next page

11) **protect, conserve and enhance the Plan area's natural, built and historic environment by avoiding, minimising and mitigating adverse impacts;**

12) **would deliver net gains for biodiversity and establish a coherent and resilient ecological network;**

13) **are sensitively located and designed to avoid adverse impacts on the designated landscape of 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 adopted within the Trent Valley area;**

17) **reduce impacts on the causes of climate change including reducing carbon emissions, and facilitate adaptation to increase resilience to climate change including the risk of flooding; and**

18) **maximise water and energy efficiency and the use of renewable and low-carbon energy sources.**

REASONED JUSTIFICATION

4.10 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.

4.11 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, Mineral Planning Authorities (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.

4.12 MPAs are required to make provision in their local plans to ensure the supply of aggregates over the Plan period i.e. 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.

4.13 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 duty[38] 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 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 Park. Further information on this issue is set out in Chapter 6.

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

4.14 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-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.

4.15 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 providing 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 are set out both in the individual Mineral Supply policies at Chapters 6, 7 and 8 and in the Development Management Policies at Chapter 11.

4.16 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.

4.17 To support the conservation of primary mineral resources further, the Plan will take into account the contribution that secondary and recycled aggregates will make to the 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, 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 non-aggregate purposes from tipped waste material and the Plan facilitates such development through Policy DM20 the re-working of Spoil Tips set out at Chapter 11.

4.18 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 require 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 SP18 which sets out the detailed application of this criterion.

4.19 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. Development management policy DM3 Transport of Minerals at Chapter 11 sets out detailed criteria on this matter.

4.20 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 12 and, in particular, policy DM1 Protecting Local Amenity sets out the detailed application of this criterion.

4.21 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 Trent 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.

4.22 The Plan area and adjacent Peak District National Park (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 adverse impacts of mineral working. The detailed application of this criterion is through the Development Management policies at Chapter 11 which afford the appropriate protection of environmental assets according to the hierarchy of their designation.

4.23 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 infrastructure network. The current Environment Bill seeks to establish the principle of environmental gain as a requirement of all development. Criterion 11 supports proposals that deliver biodiversity net gain; the detailed application of this policy is set out in Development Management Policy DM5 Biodiversity and Geodiversity.

4.24 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 adverse impacts on the designated landscape of the adjoining PDNP. The detailed application of this policy is set out in Development Management Policy DM4 Landscape at chapter 11.

4.25 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.

4.26 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 an appropriate 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.

4.27 One area has been identified where a strategic approach to restoration is considered important. The Trent Valley is an area in the south of the County 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 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 SP20 sets out policy requirements for mineral development proposals within the Trent Valley. These requirements have also been taken into account 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 Valley area.

4.28 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, 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 are 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.

THE SUSTAINABLE LOCATION OF MINERAL DEVELOPMENT

4.29 Minerals can only be extracted where they naturally occur 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 in the more eastern parts of the Plan area.

4.30 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.

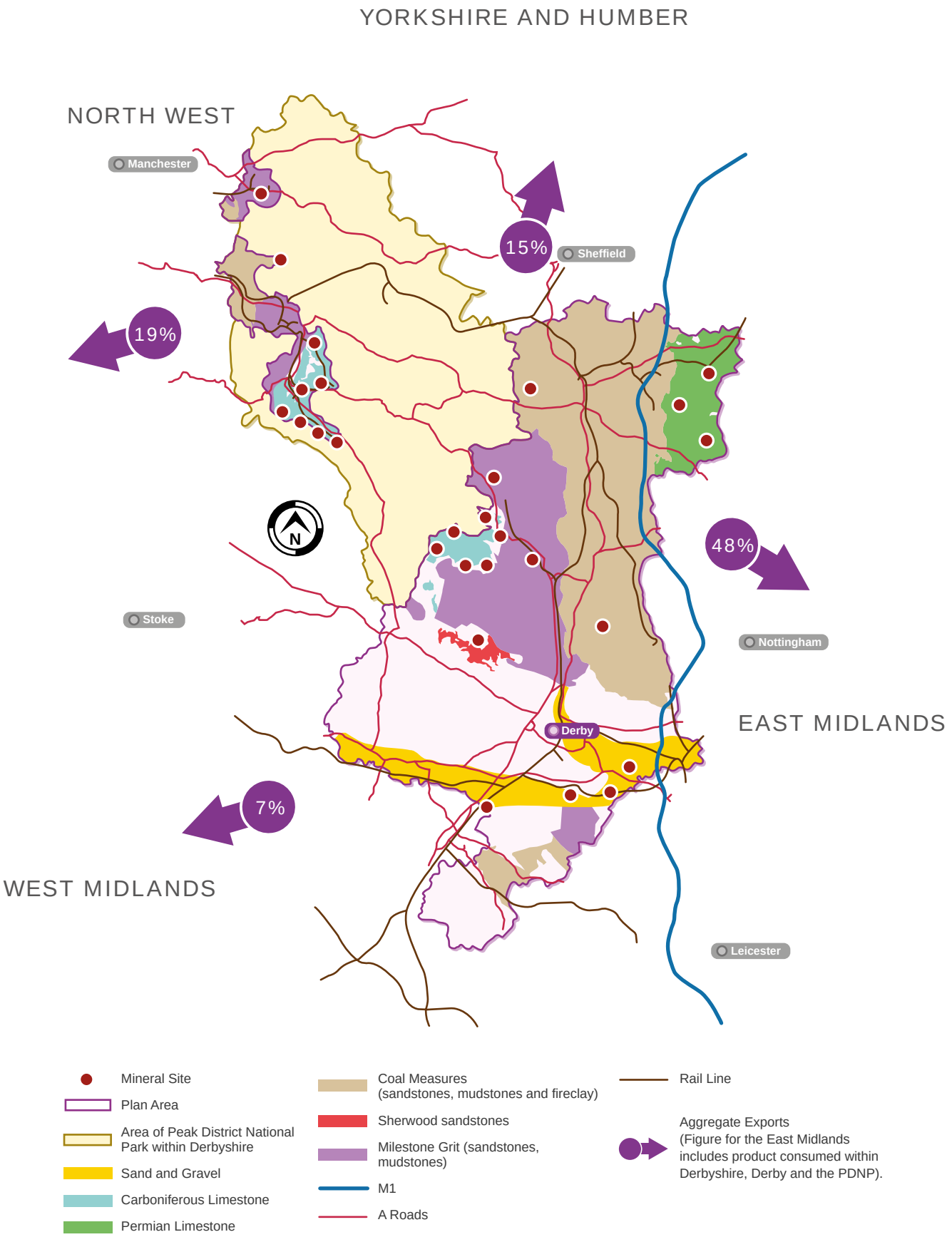
4.31 In addition to economic factors, environmental and social factors will also need to be taken into account in assessing the locational suitability of development. Such polices include maximising sustainable transport modes, protecting local communities and the natural, built and historic environment, 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

4.32 PPG[39] 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 satisfactorily addressed 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

5.1 Climate change refers to long lasting changes in global climate and particularly those that we have 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 produced by the use of fossil fuels. Global warming is the biggest threat to human society and therefore, in 2015, 195 Governments signed the Paris Agreement committing to keeping a global temperature rise this century well below 2°C above pre-industrial levels, with recent moves to pursue 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 1.5°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.

5.2 The UK is committed to achieving its carbon budget and has committed in law to achieve net-zero carbon emissions by 2050 [40] with an interim target of 78% reduction by 2035.[41] The UK carbon budget is further apportioned to local authority areas, although the budgets are not solely the local authority's responsibility. The recommended budgets reflect the actual emissions from industry and commerce, transport and domestic sectors with a suggested periodic reduction and also take account of any emissions, or emissions savings, from land use, land use change and forestry. Budgets reflect a local authority's areas particular profile and are consistent with each area's ability to make a fair contribution to the Paris Agreement. Within the Plan area CO2 emissions are notably higher in High Peak Borough primarily from large industrial installations which reflect the concentration of large-scale quarries and associated plant within the Borough, including two cement plants and several kilns/plants for processing limestone. The budget for High Peak Borough Council's fair contribution to UK targets does not include emissions from the chemical process of cement production which is regarded as a national issue and part reflects that cement produced in High Peak is used elsewhere. The carbon budgets are very challenging and will require an immediate and rapid programme of decarbonisation across all sectors if they are to be met.

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

41 The Carbon Budget Order SI 2021 No.750

5.3 Recent statistics issued by the Department of Business, Energy and Industrial Strategy (BEIS)[42] suggest that carbon dioxide accounted for 80% of greenhouse gas emissions in 2019, with the remainder made up of methane 12%, nitrous oxide 5% and fluorinated gases 3%. In 2019, UK territorial greenhouse gas emissions fell 3% from 2018 to 2019 and were 44% lower than in 1990. Transport remains the largest emitting sector at 27%, Energy Supply 21%, Industry 17%, Residential 15%, and Agriculture 10% with the remainder 9% compromising waste management, industrial processes, public and LULUCF (land use, land use change and forestry). In 2019, the 'Mining and Quarrying' industry accounted for 4% of greenhouse gas emissions.[43]

5.4 Climate change can be addressed through both mitigation (action to reduce the impact of human activity on the climate system primarily through reducing greenhouse gas emissions) and adaptation (adjustments to natural or human systems in response to the actual or anticipated impacts of climate change, to mitigate harm or exploit beneficial opportunities). The NPPF[44] identifies that the planning system can play a key role in securing reductions in greenhouse gas emissions, minimising vulnerability and improving resilience to the impacts of climate change, encouraging the re-use of existing resources and supporting renewable and low carbon energy and associated infrastructure.

5.5 Local plans are required by law[45] 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 2008.[46]

5.6 Climate change is a wide-ranging issue affecting all of the economic, environmental and social aspects of mineral development. Policy SP1, at Chapter 4, sets out the need to address climate change in order to deliver sustainable minerals development. Policy SP2, below, sets out in greater detail how proposals for mineral 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. Of particular relevance are the development management policies set out at Chapter 11, which include DM3 Transport of Minerals, DM4 Landscape, DM5 Biodiversity and Geodiversity, DM6 Trees, Woodlands and Hedgerows, DM8 Water Management and Flood Risk, DM12 Green Infrastructure and DM16 Restoration, Aftercare and After-use.

42 DBEIS 2019 UK Greenhouse gas emissions, February 2021
43 DBEIS UK Environmental Accounts 2019
44 NPPF, July 2021, paragraph 152
45 Section 19(1A) of the Planning and Compulsory Purchase Act 2004 (as amended by section 182 of the Planning Act 2008)
46 The Climate Change Act 2008 amended by the (2050 Target Amendment) Order 2019

5.7 The two areas relating to climate change that are particularly relevant to minerals planning are:

a) mitigating its effects through the reduction of carbon emissions and the carbon footprint of the minerals industry, and

b) preparing for, and adapting to, the effects of climate change by increasing on-site resilience and ensuring effective restoration.

MITIGATION - REDUCING CARBON EMISSIONS

5.8 The extraction of minerals, processing and transport to market all generate carbon emissions although the scale of them will depend on the method of extraction, the way in which they are processed and transport requirements. There are several ways in which emissions can be reduced.

5.9 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 need for 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. Other measures include adapting processes and procedures, and refurbishing/ retro-fitting plant and buildings to be more energy efficient and 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. Simple measures can also be effective such as maintaining equipment or turning it off when it is not in use, each of which it is estimated can reduce energy demand by up to 10%. Specific measures to increase water efficiency include re-using waste water, harvesting rain water and using winter storage

5.10 The use of renewable and low carbon energy can help reduce emissions. In 2019 the mineral products industry (including mining and quarrying), excluding transport, accounted for 12% of industrial fuel consumption in the UK, of this 47% was from natural gas, 20% electricity, 15% coal and 10% bioenergy and waste. Since the turn of the century fuel consumption by the minerals product sector has decreased by some 16%; in 2001 coal accounted for 26% of consumption, fuel from bioenergy and waste has only been consumed since 2015.[47] The potential for on-site generation will depend on several factors, including the size, location and anticipated life of workings, the renewable resources available, and the environmental and economic impacts of installing renewable technologies. Measures which may generate electricity to meet some or all energy needs include the provision of low carbon energy such as solar panels, wind turbines and ground source heat pumps and the provision of battery storage for on-site generated energy. reservoirs to supplement supply throughout the summer months.

47 DBEIS Digest of UK Energy Statistics (DUKES) 2019

5.11 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 clinker[48] produces significant carbon dioxide emissions, and in 2018, it was estimated that the concrete and cement production accounted for 1.5% of UK CO2 emissions. Of the 7.3 million tonnes of carbon dioxide produced in 2018; 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. Significant progress has been made in reducing emissions 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. Clinker is the principal ingredient in cement, and clinker production the main source of carbon dioxide emissions. In 2018, the sector took 43% of its kiln fuel thermal input from waste derived sources, avoiding the use of just under 500,000 tonnes of coal. In addition, cement manufacturers replaced 7% of their raw materials with waste derived alternatives e.g. pulverised fuel ash. Further reductions may be achieved if product and design standards allow for lower carbon cement formulations and these are adopted by the market. However, to realistically meet 'net zero' emissions from cement production by 2050 carbon capture, transport and storage will need to be technologically and economically feasible.

5.12 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 sector.[49] 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. Currently it is only the limestone quarries that are long-life (2042) and have large scale production (between 3 to 6 mtpa) which transport mineral by rail. Three limestone quarries are currently rail linked and a further two quarries that are resuming production intend to transport mineral by rail. On average approximately 50% of material is transported by rail.

5.13 The increased use of secondary and recycled aggregates helps to reduce carbon emissions. 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. Policy SP3 of the Plan supports proposals for increasing the supply of secondary and recycled aggregates.

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

49 Carbon Brief - Clear on Climate, 9 December 2020

ADAPTING TO CLIMATE CHANGE

5.14 The effects of climate change are experienced through more extreme and unpredictable weather conditions, which may include more intense rainfall events, hotter summers and warmer but wetter winters. The impacts of these changes on the Plan area 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 of from climate change are inevitable and therefore 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.

5.15 Mineral development and mineral related development should include adaptive measures to ensure on site resilience from unexpected climatic events such as heat and drought, storm events and high winds. Climate change may particularly lead to increased and new risks of flooding within the lifetime of planned mineral developments. Mineral development and mineral related 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.

5.16 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.

5.17 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.

5.18 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 trees; all of which provide local and wider benefits for the climate including carbon reduction.

SP2 CLIMATE CHANGE

5.19 **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 incorporate measures to minimise and offset greenhouse gas emissions (mitigation) and effectively assist in the reduction of vulnerability from and increase resilience to, the future impacts of climate change (adaptation), through:**

1) **Ensuring energy efficient plant and buildings (including retro-fitting or refurbishing existing buildings) and using 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 and locally or on-site sourced building materials;**
3) **Using sustainable transport modes and low carbon emission 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 carbon reduction and climate change adaptation, including the creation of green infrastructure including tree planting, biodiversity and habitat creation, carbon sinks and flood resilience.**

REASONED JUSTIFICATION

5.20 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 working towards a reduction in greenhouse gas emissions, 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.

5.21 Proposals for mineral development and mineral related development should demonstrate to the MPA how they can contribute towards reducing greenhouse gas emissions and provide for resilience and adaptability in responding to the impacts of climate change, including flooding. Proposals should take account of climate change for the lifetime of the development, from its location, design and construction through to operation, decommissioning and final restoration and aftercare.

5.22 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 provide more information and be expected to show greater mitigation and adaptation measures than small-scale mineral proposals. The MPA will expect that all 'Transport Assessments' and 'Site Transport Plans' submitted in support of planning applications should provide information on the consideration given to the sustainable transport of minerals and to the measures proposed to achieve reduced emissions. The MPA will expect that any measures to reduce and adapt to climate change such as tree planting and increased biodiversity will be incorporated in on site restoration proposals rather than offset elsewhere.

BRASSINGTON MOOR QUARRY PHASED RESTORATION

CHAPTER 6: THE SUPPLY OF AGGREGATE MINERALS

6.1 RECYCLED AND SECONDARY AGGREGATES

INTRODUCTION

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 we can reduce the amount of primary mineral that has to be extracted 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 cementious addition with ready mixed concrete and as an aggregate in block manufacture (historically pfa was traditionally 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 The production of recycled and secondary aggregates has grown considerably from around 20 million tonnes in 1980 to consistently around 70 million tonnes in recent years. Recent figures[50] suggest that 90% of all Construction, Demolition and Excavation waste is recycled as aggregates. In 2018, recycled and secondary aggregate production totalled some 71 million tonnes[51] in Great Britain which contributed 28% of total aggregate production. A further breakdown of recycled and secondary aggregate figures is available for 2017[52] 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

50 Minerals Products Association - From Waste to Resource 2019
51 Mineral Products Association - Profile of the UK Minerals Products Industry 2020
52 Minerals Products Association - Contribution of Recycled and Secondary Aggregates 2019

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. Firstly there are stand-alone facilities which receive materials from other industrial processes. This includes ash and slag from foundries, power stations and incinerators. Secondary aggregate can also be produced at temporary sites which utilise minerals extracted from old tips associated with quarries, collieries and other industrial concerns. Secondary aggregate can also be produced 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 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.

NATIONAL POLICY

6.1.8 NPPF[53] states that mineral planning authorities should have planning policies that so far as 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).

53 National Planning Policy Framework, July 2021, Paragraph 210

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 Derby and Derbyshire is often inconsistent and unreliable. Most recycled aggregate is derived from construction, demolition and excavation waste arisings. The most recent estimate[54] 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 recycled and secondary aggregates only 10% is from secondary aggregates and therefore annual production is not likely to be substantial. The LAA[55], 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.

54 DCC & DC Towards a Statistical Basis for the Waste Local Plan 2013
55 DCC, DC and PDNPA LAA 2020

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 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 polices 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 Paper[56] 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 polices 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.

56 Towards a Minerals Local Plan Winter 2021/2022 Consultation, Proposed Draft Plan, Background Paper December 2021

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 in a local plan;
- On previously developed land;
- On demolition and redevelopment sites;
- At waste/spoil tips;
- As part of reclamation schemes.

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.

6.1.19 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. Polices for safeguarding mineral related infrastructure and mineral resources are set out at Chapter 9 of the Plan.

6.1.20 There are a range of environmental, local amenity and health impacts that are likely to be relevant when assessing planning proposals for recycling and 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. 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.

6.1.21 Where proposals include the re-working of spoil tips for non-aggregate purposes they will be assessed under Policy DM18 Re-working of Spoil Tips set out at Chapter 11 of the Plan.

POLICY SP3: THE SUPPLY OF RECYCLED AND SECONDARY AGGREGATES

6.1.22 **Proposals for facilities/operations for the production of recycled and secondary aggregates will be supported where they are sited at/on the following locations;**

1) **Operational quarries (on a temporary basis linked to the permitted timescale of the mineral extraction);**
2) **Operational landfill sites (on a temporary basis linked to the permitted timescale of the landfill operation);**
3) **Within permanent waste management sites;**
4) **Existing, permitted or land allocated for 'general industrial/storage or distribution' uses in a local plan (subject to the detailed policy requirements of the local plan previously etc);**
5) **Previously developed land;**
6) **Demolition and redevelopment sites (on a temporary basis linked to the permitted timescale of the redevelopment works);**
7) **Waste/spoil tips (on a temporary basis linked to the permitted timescale necessary for the removal works and provided they would not adversely affect any previous restoration that has been carried out on the site, or, if they would, they should result in significant improvements to the previous restoration scheme);**
8) **Reclamation schemes (on a temporary basis linked to the permitted timescale of the reclamation scheme).**

REASONED JUSTIFICATION

6.1.23 The NPPF encourages the use of recycled and secondary aggregates in construction both to reduce the need for material from primary mineral sources and to reduce the amount of waste material that is required to be landfilled. There are substantial amounts of material within the Plan area that could contribute further to aggregate supply and the Plan proposes to maximise the use of those materials in the production of recycled and secondary aggregates. Policy SP3 allows for the production of both recycled and secondary aggregates from a wide range of locations. Some locations are mineral focused, such as, existing quarries processing mineral waste using existing processing plant. Some locations are waste focused such as existing landfill sites or permanent waste management sites. Other locations include industrial estates, previously developed land and redevelopment sites which offer opportunities for demolition waste to be reused on site. Opportunities to produce secondary aggregates arise from former tips/spoil associated with mineral workings and heavy industrial businesses or from the tips removed as part of wider reclamation schemes.

6.1.24 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 polices which might restrict the use of such locations for recycled and secondary aggregate production. The 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

6.2.1 Sand and gravel is a nationally and locally important aggregate mineral. The Plan area produces around 1 million tonnes 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 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, with reserves being of particularly high quality, both in geological and commercial terms, in the area of the Trent Valley between Long Eaton and Willington and on into Staffordshire. There are only limited reserves of sand and gravel in Derby City and no current workings.

6.2.4 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.

FIGURE 6.2.1 SAND AND GRAVEL QUARRIES AND RESOURCES

NATIONAL POLICY

National Planning Policy Framework (NPPF)

6.2.5 The NPPF sets out the need to plan for a steady and adequate supply of aggregate by preparing a Local Aggregate Assessment 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 Local Aggregate Assessment (LAA) and through this, making provision for aggregates by the identification of specific sites, preferred areas and/or areas of search.

6.2.6 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.

Planning Practice Guidance

6.2.7 PPG sets out that the Managed Aggregate Supply System (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 mineral planning authorities 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.

6.2.8 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 as to whether it might be appropriate to increase supply.

NEED

6.2.9 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. This has considered all relevant information as required by national policy and has concluded that, based on an annual provision rate of 0.99mt, Derbyshire and Derby should provide 18.81 million tonnes of sand and gravel from 1 January 2020 to 31 December 2038 (i.e. 19 x 0.99) 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 seven year landbank is maintained and that any significant changes identified in the need and demand for the sand and gravel from the area are addressed.

SUPPLY

6.2.10 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 2010 and 2019 has averaged 0.99 million tonnes.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.

FIGURE 6.2.2: ANNUAL PRODUCTION OF SAND AND GRAVEL 2010-2019 (FIGURES IN MILLION TONNES)

2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
1.1	0.81	0.82	0.95	1.13	1.29	0.94	1.05	0.78	0.57

6.2.11 These sites together have reserves of 11.43 million tonnes of sand and gravel. This stock of reserves is known as the landbank. National policy[57] requires landbanks to be maintained for all aggregate minerals, with the recommended 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 11.5 years (total permitted reserves of 11.43 million tonnes divided by the current annual provision rate of 0.99mt). 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.

6.2.12 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 10.55mt at the Plan base date of 31st December 2019. The reserve figure shown in the table below also includes the additional reserves at Willington, which were permitted in August 2021. The table indicates that there would be a shortfall of 7.38 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	0.99
B Total Production Requirement 2020-2038 (Ax19)	18.81
RESERVES	**MILLION TONNES**
C Permitted Reserves (Landbank) at 31/12/2019 + Willington 2021	11.43
SHORTFALL	**MILLION TONNES**
E Shortfall 2020 – 2038 (B-C)	7.38

57 NPPF July 2021 Paragraph 213

6.2.13 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.

POLICY SP4: SUPPLY OF SAND AND GRAVEL

6.2.14 **To meet identified levels of demand for sand and gravel over the period from 1 January 2020 to 31 December 2038, provision will be made for 18.81 million tonnes, at an annual rate of 0.99 million tonnes.**

REASONED JUSTIFICATION

6.2.15 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. To ensure that adequate and steady supplies can be maintained, the NPPF sets out that LAAs should be undertaken to determine future provision for aggregate minerals including sand and gravel. Taking into account cross border demands, there is a requirement to maintain a landbank of permitted reserves of sand and gravel of at least seven years.

PROPOSED SAND AND GRAVEL SITES

6.2.16 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 to help 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. 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.

6.2.17 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.

6.2.18 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.

6.2.19 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.

6.2.20 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 7-8 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, as shown in the deliverability schedule below at Figure 6.2.4. There is a need, therefore, to provide additional sites to cater for this, which will ensure continuity of production over the Plan period. As shown in the deliverability schedule, total production over the Plan period to 2038 is estimated at 20.2 million tonnes, which is not significantly greater than the overall requirement of 18.81 million tonnes. This situation will continue to be monitored on an annual basis over the Plan period and any significant changes which come to light may result in a review of this part of the Plan.

SAND AND GRAVEL EXTRACTION, SHARDLOW QUARRY

POLICY SP5: ALLOCATION OF SITES FOR SAND & GRAVEL EXTRACTION

6.2.21 **Sites are allocated to meet expected demand for 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 has been 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.

REASONED JUSTIFICATION

6.2.22 Based on the average production figures set out in Policy SP4, the Plan needs to provide an estimated 18.81 million tonnes of sand and gravel over the Plan period). Permitted sand and gravel sites reserves located in the county are 11.43 million tonnes, a shortfall of 7.38 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.

ADDITIONAL SITES

POLICY SP6: OTHER SITES FOR SAND & GRAVEL SUPPLY

6.2.23 **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

6.2.24 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.

6.2.25 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 SAND AND GRAVEL DELIVERABILITY SCHEDULE

SITE	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Shardlow (Permission)	200	350	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)	0	320	320	320	320	320	320	320	200										
Swarkestone (SW extension)										320	320	320	320	320	320	320	320		
Swarkestone North																		320	320
Willington (Permission)	320	350																	
Willington (Extension)			350	350	200														
Elvaston (Permission)									300	300	300	300	300	300					
Elvaston (Extension)															300	300	300	300	300
Mercaston	50	70	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	570	1090	1090	1090	940	990	990	990	1170	1290	1340	1340	1340	1090	1090	1090	1090	990	690

Total Estimated Production - 20,270,000 tonnes

FIGURE 6.2.5 FOSTON

Scale 1:15000

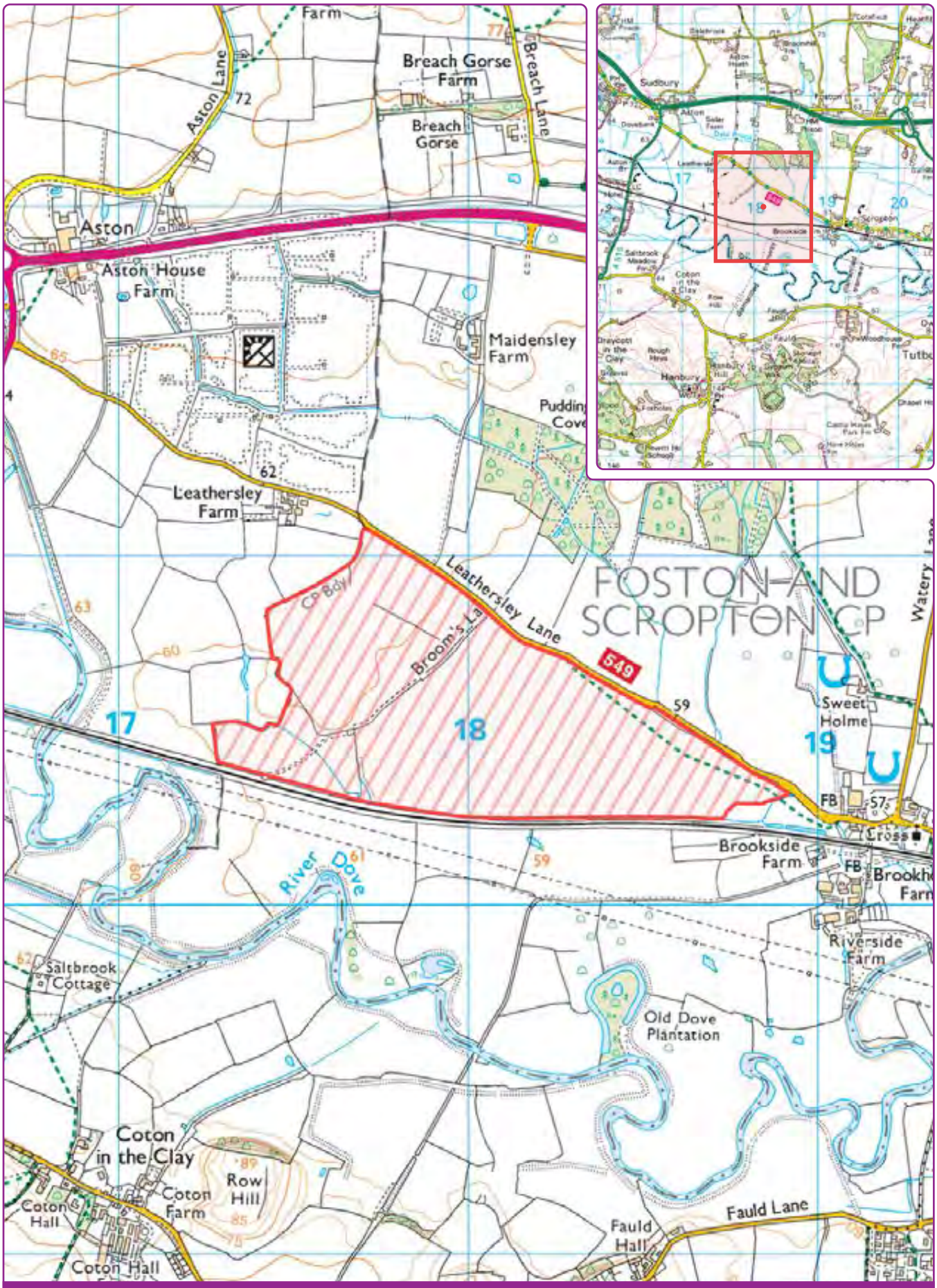


FIGURE 6.2.6 SUDBURY

Scale 1:15000

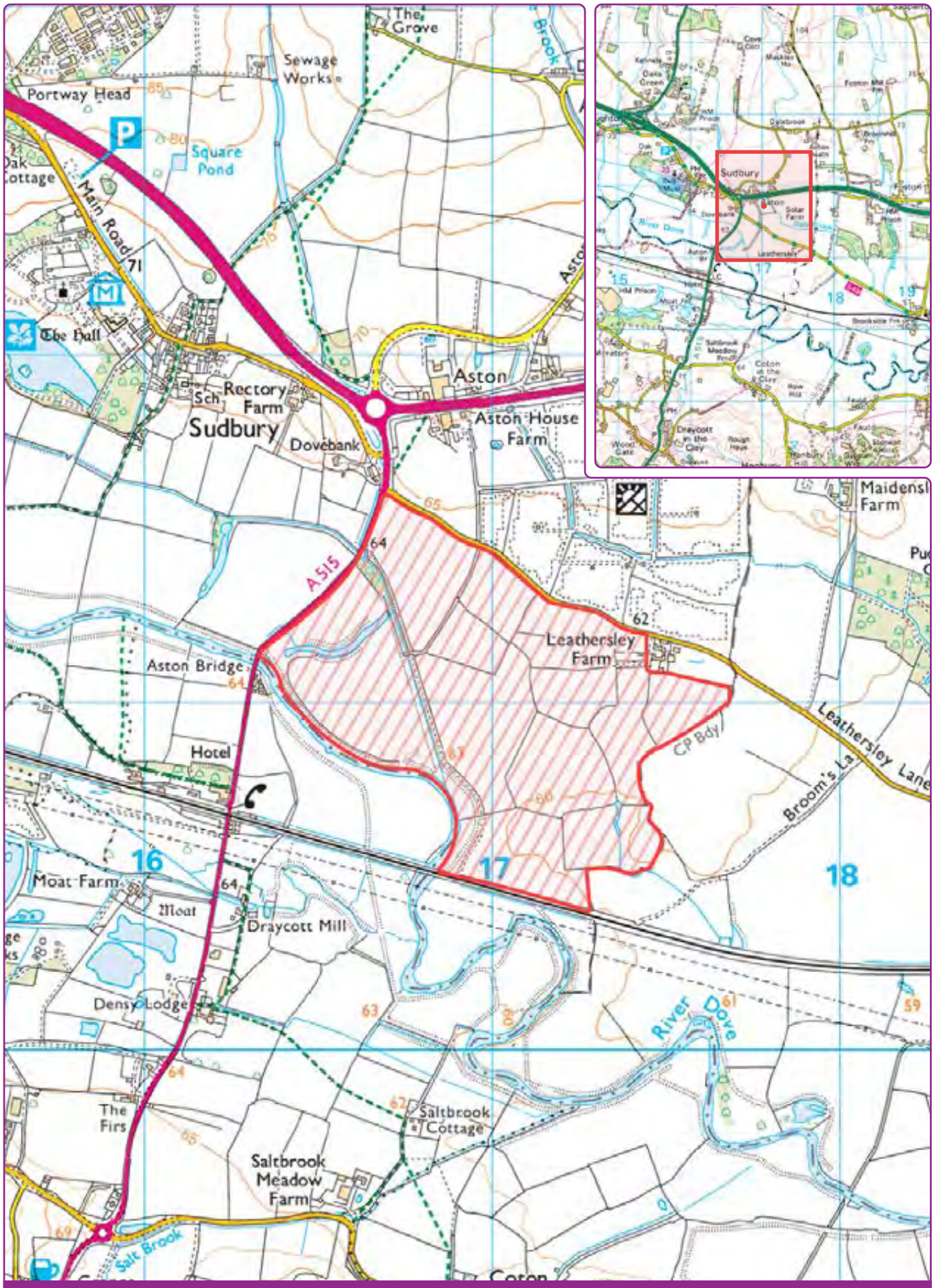


FIGURE 6.2.7 ELVASTON

Scale 1:15000

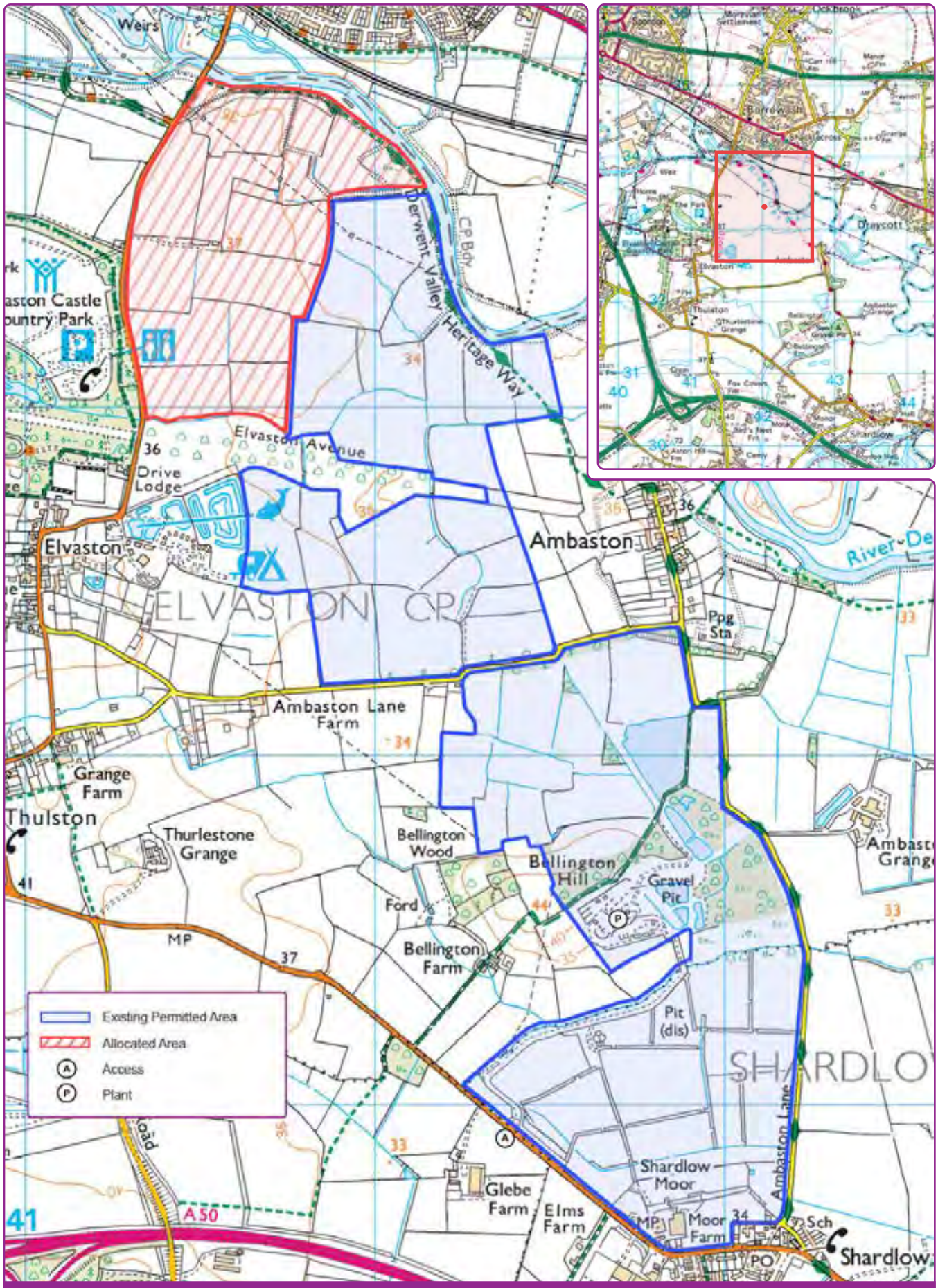


FIGURE 6.2.8 SWARKESTONE SOUTH

Scale 1:15000

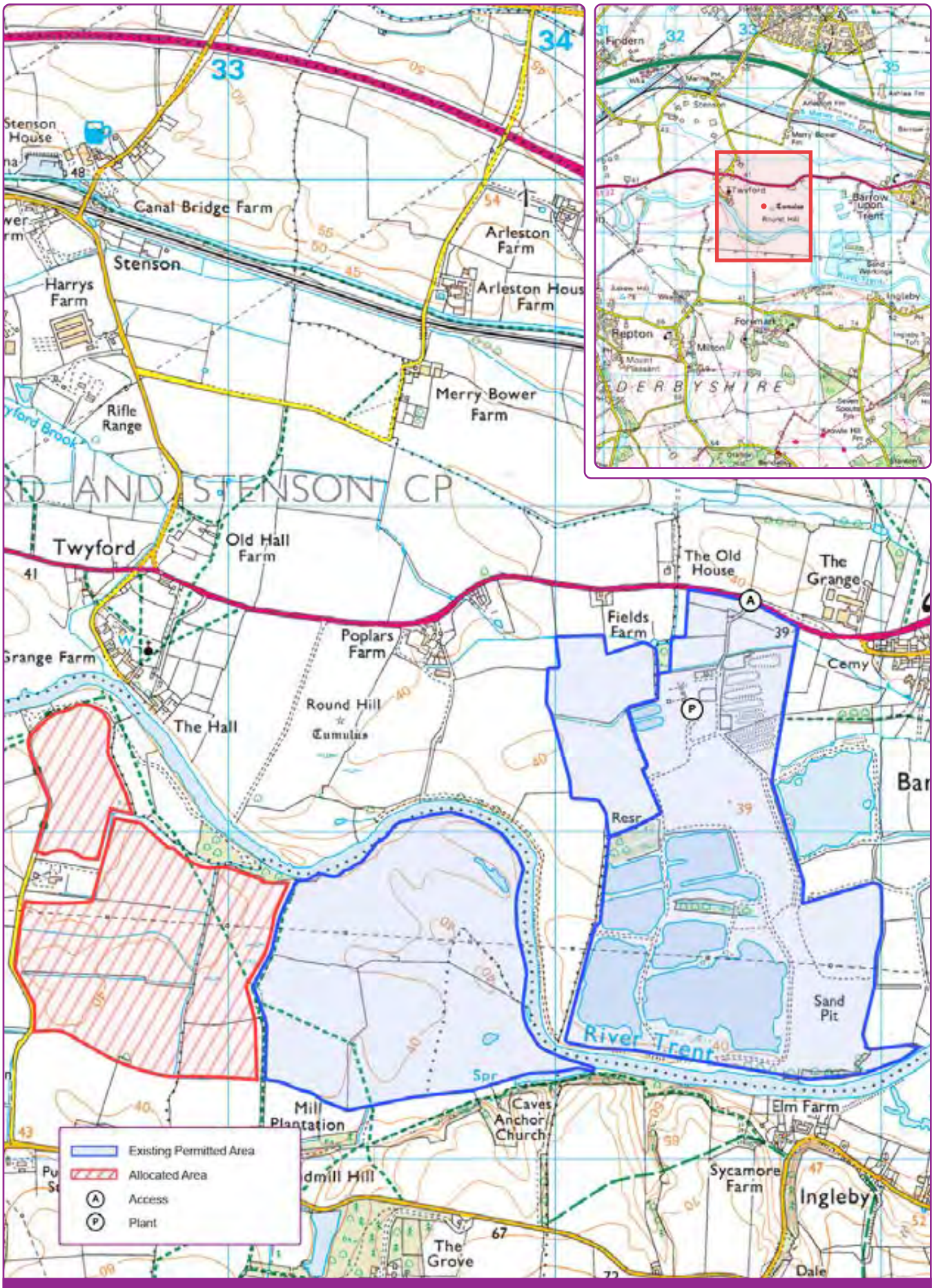
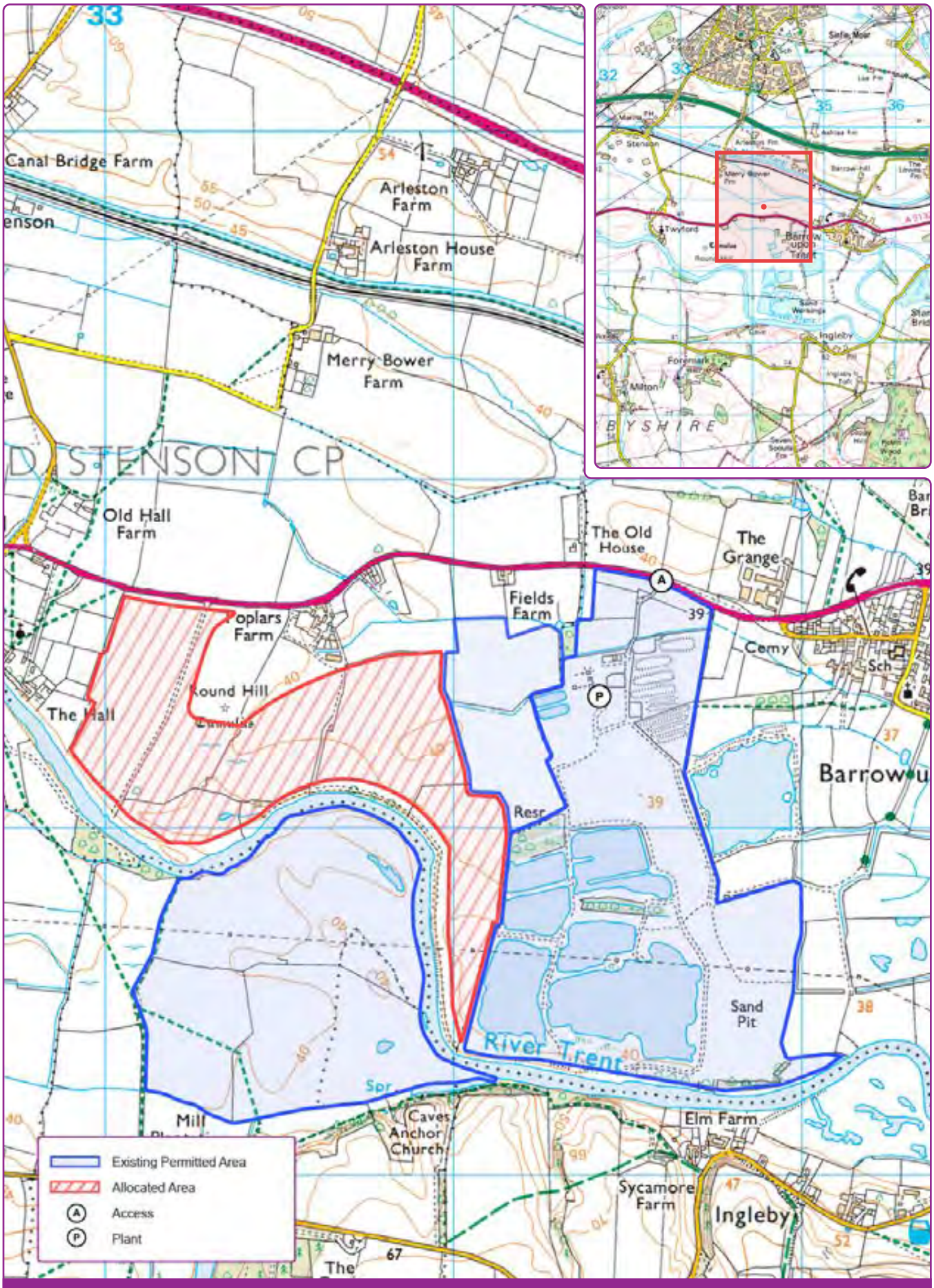


FIGURE 6.2.9 SWARKESTONE NORTH

Scale 1:15000



6.3 AGGREGATE CRUSHED ROCK

INTRODUCTION

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 north east 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 north west 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

NATIONAL POLICY

National Planning Policy Framework (NPPF)

6.3.6 The NPPF specifies that MPAs should plan for a steady and adequate supply of aggregate minerals by preparing a Local Aggregate Assessment (LAA) and through this, making provision for aggregates by allocating 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.[58]

6.3.7 PPG[59] explains that the Managed Aggregate Supply System (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.

6.3.8 It also sets out that aggregate landbanks should be used as a trigger for a mineral planning authority 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 mineral planning authorities 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, has agreed to continue to meet the requirements of many other areas within the United Kingdom which do not benefit from their own resources. The LAA 2020[60] 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 twenty quarries in Derbyshire which have permission for the extraction of crushed rock for aggregate. Thirteen of these are producing aggregate and the other seven are currently non-operational

58 National Planning Policy Framework Paragraph 213, July 2021
59 Planning Practice Guidance, October 2014
60 Derbyshire, Derby and Peak District National Park Authority Local Aggregate Assessment, 2020

6.3.11 Survey data from 2019 showed that there is an estimated reserve of around 653 million tonnes of rock for aggregate use at these quarries. The LAA sets the annual provision rate at 9.44 million tonnes. As a result, there is a landbank of reserves of around 70 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 figure by 10% to compensate for a reduction in the PDNP figure of the same amount. The LAA sets out that Derbyshire will seek to provide around 9.44 million tonnes of aggregate crushed rock each year. 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 70 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 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.

POLICY SP7: THE SUPPLY OF AGGREGATE CRUSHED ROCK

6.3.17 **To meet identified levels of demand for aggregate crushed rock over the period from 1 January 2020 to 31 December 2038, provision will be made for 179.4 million tonnes, at an equivalent annual rate of 9.44 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 a minimum 10-year land bank of permitted reserves, and/or

2) they will result in significant net planning 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

6.3.18 Aggregate crushed rock is a mineral of national and local importance, of which Derbyshire is one of the main suppliers. In accordance with the NPPF, the Plan is required to provide for its extraction. To ensure that adequate and steady supplies can be maintained, the NPPF sets out that LAAs should be undertaken annually to determine future provision for aggregate minerals including crushed rock.

6.3.19 There is also a requirement to maintain a landbank of permitted reserves of aggregate crushed rock of at least ten years. The LAA shows that there are already sufficient permitted reserves of aggregate crushed rock to maintain both local and national supplies for the Plan period and beyond. As a result, there is no requirement to identify land for additional supplies in this Plan.

6.3.20 There may be circumstances, however, where proposals come forward for new aggregate crushed rock quarries or extensions to existing quarries, and these may be considered favourably if they offer significant economic and/or social 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.

6.4 HELPING TO REDUCE QUARRYING IN THE PEAK DISTRICT NATIONAL PARK

INTRODUCTION

6.4.1 National minerals policy seeks to maintain landbanks of non-energy minerals from outside designated areas, such as National Parks. In order to help to deliver this approach on a local scale, the Peak District National Park Authority (PDNPA) has a policy in its adopted Core Strategy (2011) to not allow further new quarries or extensions to existing quarries in the National Park in order to help protect the special qualities of the landscape. The Plan will help the PDNPA achieve this aim by compensating for the reduction in quarrying in the National Park by increasing its provision figure for aggregate crushed rock (limestone and gritstone). 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 Managed Aggregate Supply System (MASS). Such a system does not exist for mineral which are used for industrial purposes or for minerals which are used for building and roofing stone.

NATIONAL POLICY

National Planning Policy Framework (NPPF)

6.4.2 The NPPF sets out that mineral planning authorities to provide, as far as is practicable, for the maintenance of landbanks of non-energy minerals from outside National Parks.[61]

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

6.4.3 **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 Local Aggregate Assessment.**

REASONED JUSTIFICATION

6.4.4 In accordance with the NPPF, 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 proposal which would extend existing operations other than in exceptional circumstances (other than fluorspar and small scale proposals for building stone).

61 National Planning Policy Framework Paragraph 211, July 2021

6.4.5 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 Managed Aggregate Supply System is that Mineral Planning Authorities which have adequate resources of aggregates 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. The Local Aggregate Assessment (LAA) is a key part of this system.

6.4.6 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, the East Midlands Aggregates Working Party approved the principle whereby Derbyshire, Derby and the Peak District National Park will adjust their provision figures for aggregate crushed rock in the Joint LAA to recognise and cater for the progressive closure of quarries in the Peak District National Park as they become exhausted over the coming years. The similarity of the mineral resources in this area, 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. The Joint LAA reduces the provision figure for the Peak Park by 10% and this is added to the provision figure for Derbyshire and Derby.

CHAPTER 7: SUPPLY OF NON-AGGREGATE MINERALS

7.1 BUILDING STONE

7.1.1 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. 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.

7.1.2 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. It is, therefore, of great importance for the conservation of Derbyshire's historic and built environment.

7.1.3 As shown on Figure 7.1.1, there are only five quarries in the Plan area which now produce building stone and this is on a 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 Quarry near Chesterfield.

FIGURE 7.1.1 BUILDING STONE RESOURCES AND QUARRIES

NATIONAL POLICY

National Planning Policy Framework (NPPF)

7.1.4 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.[62]

7.1.5 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.[63]

NEED

7.1.6 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.

SUPPLY

7.1.7 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 criteria set out below.

62 National Planning Policy Framework Paragraph 211, July 2021
63 National Planning Policy Framework Part 16, July 2021

POLICY SP9: THE SUPPLY OF BUILDING STONE

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

1) **The extraction would be primarily for building stone rather than for aggregate;**
2) **There is a justification for stone of a specific character to be worked in that particular location; and**
3) **The scale of the proposal is such that any adverse social and environmental impacts could be mitigated.**

REASONED JUSTIFICATION

7.1.9 Building stone operations are generally low-key operations and are characterised generally by short term intermittent working to meet an identified need for stone for specific projects.

7.1.10 The main reason for the quarry should be for the production of building stone, but it is acknowledged that there will be a certain amount of stone which is not suitable for this purpose and which 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 respects the location where it is proposed and that any adverse impact on the surrounding area can be mitigated.

7.1.11 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.

7.1.12 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.

7.2 INDUSTRIAL LIMESTONE

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 2019.[64]

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; recently[65] 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 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.

64 East Midlands Aggregates Working Party: Annual Minerals Survey (2009-2019)
65 East Midlands Aggregates Working Party: Annual Minerals Survey (2009-2019)

7.2.6 In 2019, a total of nine 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 two 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 and non-operational sites for industrial uses totalled some 174 million tonnes in 2019.[66]

66 Derbyshire, Derby and PDNP Local Aggregate Assessment (LAA) 2019

FIGURE 7.2.1: LIMESTONE RESOURCES WITH OPERATIONAL AND NON-OPERATIONAL INDUSTRIAL LIMESTONE QUARRIES 2019

NATIONAL POLICY

National Planning Policy Framework (NPPF)

7.2.7 The NPPF[67] 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 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.

7.2.8 Planning Policy Guidance (PPG)[68] 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 PPG[69] 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.

7.2.10 PPG[70] 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.

67 National Planning Policy Framework, July 2021
68 Planning Practice Guidance Minerals 2014 Paragraph 214: 086 Reference ID: 27-086-20140306
69 Planning Practice Guidance Minerals 2014 Paragraph 214: 086 Reference ID: 27-086-20140306
70 Planning Practice Guidance Minerals 2014 Paragraph 214: 008 Reference ID: 27-008-20140306

NEED

7.2.11 There are no national assessments of need for Industrial limestone. In order to make provision for its likely use in industrial or manufacturing processes the plan has to meet both anticipated and unforeseen demand. Such demand may take the form of additional reserves required at an existing quarry 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 Britain.[71]

EXISTING PRODUCTION

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 10 years.[72] If demand follows the national trend[73] production is not expected to increase. At the end of 2019, permitted reserves in the Plan area were 'theoretically' equivalent to around 60 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 industrial limestone quarries.

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.

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

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

72 East Midlands Aggregates Annual Minerals Survey (2009-2018)

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

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 nine 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 criteria which include; the need for the particular specification of mineral, the contribution to the stock of permitted reserves to support the high capital and operating costs of industrial processing plant and the need to maximise the recovery of the mineral for industrial purposes. The policy 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.

7.2.16 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 SP10: SUPPLY OF INDUSTRIAL LIMESTONE

7.2.17 **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 Section 106 agreements to control the use of industrial limestone for industrial purposes.

REASONED JUSTIFICATION

7.2.18 Industrial Limestone 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. The policy allows for the working of additional reserves subject to proposals satisfying criteria covering the need for a particular technical specification of mineral and the need to increase stocks of permitted reserves to maintain supply or support investment in new or existing plant. Proposals should seek to maximise the recovery of industrial minerals. Where industrial minerals are worked in conjunction with other minerals, which is usually the case, their extraction should not result in an unreasonable delay to the overall proposed restoration of the site.

POLICY SP11: ALDWARK SOUTH ALLOCATION OF LAND FOR INDUSTRIAL LIMESTONE WORKING AT ALDWARK / BRASSINGTON MOOR QUARRY

7.2.19 **Land is allocated for mineral extraction at Aldwark/Brassington Moor Quarry, shown on the Proposals 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.

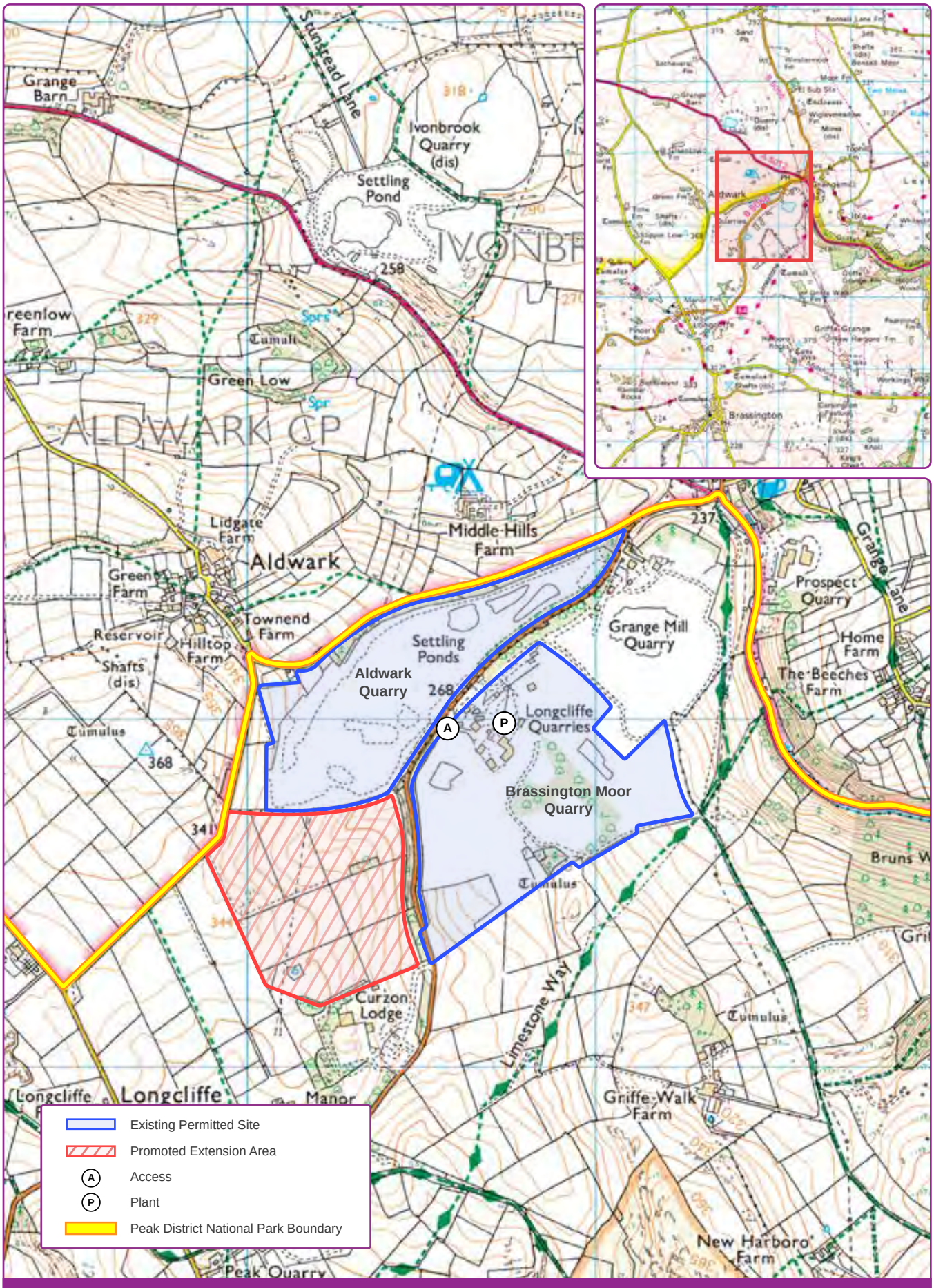
REASONED JUSTIFICATION

7.2.20 The Plan proposes to allocate land, see Figure 7.2.2, for working at Aldwark/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.

7.2.21 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

Scale 1:15000



CEMENT

INTRODUCTION AND BACKGROUND

7.2.22 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. 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.

NATIONAL POLICY

7.2.23 In view of the above, the NPPF and PPG establish the need to ensure that sufficient stocks of permitted reserves of primary (chalk/limestone) and secondary (clay/shale) materials are available to support the level of actual and proposed investment required to maintain or improve existing plant or to provide a new kiln for cement manufacture. For the maintenance and improvement of existing plant the stock of reserves should be at least 15 years for primary and secondary cement materials. To support a new kiln the stock of reserves should be at least 25 years. These requirements apply to individual sites or feeder sites rather than the whole Plan area.

NEED

7.2.24 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.

SUPPLY

7.2.25 There are five main producers of cement in the UK and the supply of cement is produced at eleven plants; the UK is however a net importer of cement.

TUNSTEAD

7.2.26 Within the Plan area there is one cement plant located at Tunstead Quarry; it is an important source of cement for both the Greater Manchester and West Midlands conurbations. The plant is operated by Tarmac and supplied by the two adjoining quarries Tunstead and Old Moor (part of this quarry lies within the Peak District National Park (PDNP) outside of 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 substantial[74] and according to the operator, even with production at the maximum level suggested including K2, are sufficient to last well beyond the plan period which ends in 2038, also taking into account the minimum 25 year stock of permitted reserves required by the NPPF to support the development of a new kiln.

7.2.27 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 proportionately with the commissioning of K2. In planning for minerals, mineral planning authorities are expected to identify and co-operate on strategic cross border matters. The MPA is co-operating with Staffordshire County Council to monitor and maintain this supply.

HOPE

7.2.28 A further cross-boundary issue relates to Hope cement works operated by Breedon Cement, which 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.

74 Permitted Reserve information supplied in confidence for Annual Mineral Surveys, Minerals Aggregate Working Party,2018

7.2.29 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 NPPF[75] 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 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.

7.2.30 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. Secondly, the Plan proposes to supply any unforeseen needs through a policy which allows for the working of additional reserves subject to meeting criteria which include; the contribution to the stock of permitted reserves to support the high capital and operating costs of cement making plant and the need for the particular specification of mineral. 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.

75 National Planning Policy Framework, July 2021, Paragraph 177

POLICY SP12 SUPPLY OF CEMENT MAKING MATERIALS

7.2.32 **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 a 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.

7.2.31 **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

7.2.33 Cement making raw materials are minerals of national and local importance and in accordance with the NPPF, the Plan is 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 plant. Where new quarries are proposed they should be located, in principle, as near as possible to where the material will be used.

7.3 BRICK CLAY AND FIRECLAY

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. 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 SP16 Supply of Coal and Colliery Spoil Disposal.

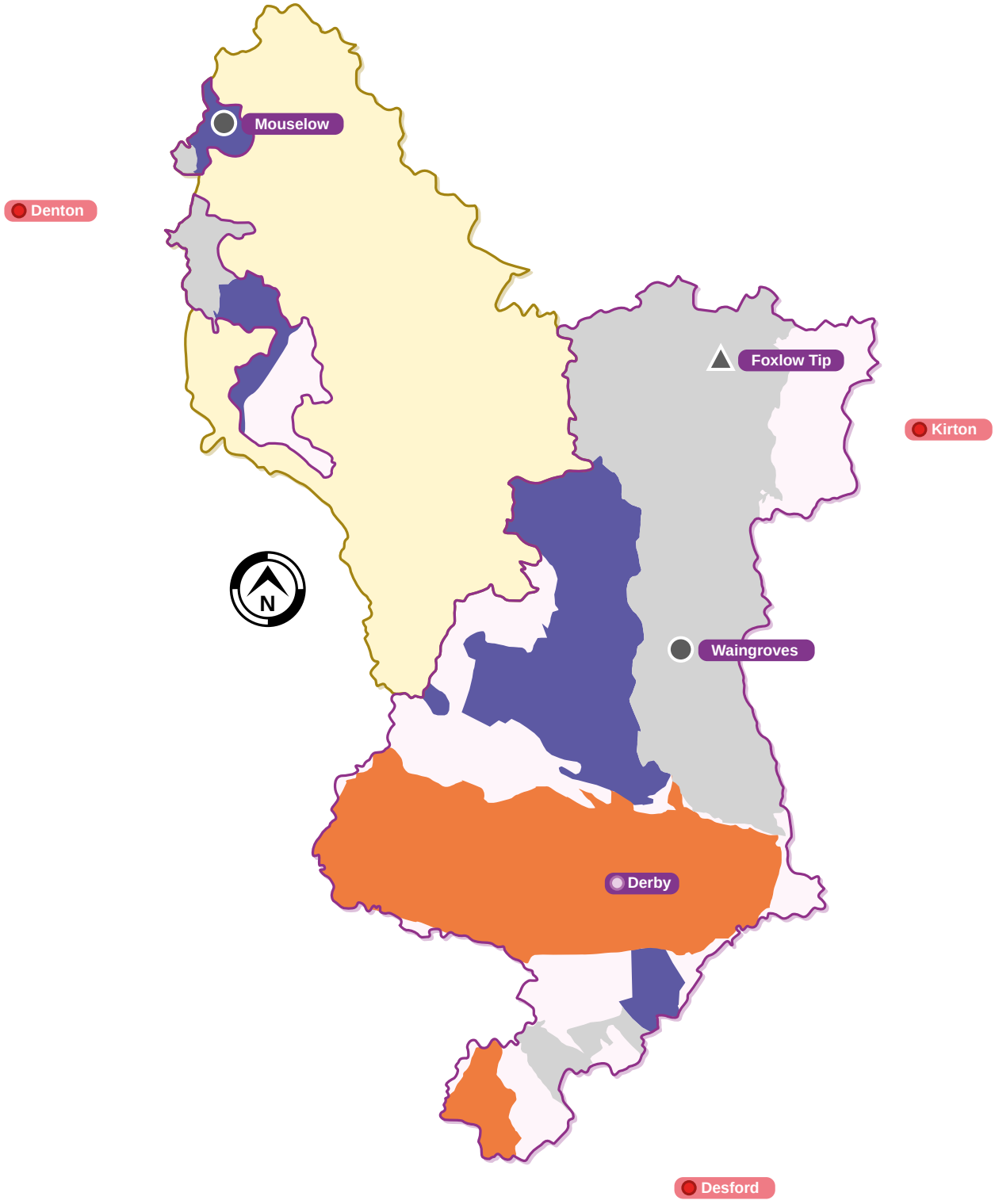
7.3.2 The use of brick clay is particularly susceptible to economic fluctuations which can lead to the 'mothballing' or closure of extraction sites and processing facilities. There are currently no brickworks within the Plan area; all brick clay excavated from the Plan area's two active sites is exported 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



NATIONAL POLICY

National Planning Policy Guidance

7.3.4 The NPPF[76] 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 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.

Planning Practice Guidance

7.3.6 PPG[77] 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 PPG[78] 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 PPG[79] 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.

76 National Planning Policy Framework, July 2021
77 Planning Practice Guidance Minerals 2014 Paragraph: 086 Reference ID: 27-086-20140306
78 Planning Practice Guidance Minerals 2014 Paragraph: 086 Reference ID: 27-086-20140306
79 Planning Practice Guidance Minerals 2014 Paragraph: 086 Reference ID: 27-086-20140306

NEED

7.3.9 There are no national assessments of need for brick clay production. In order to make provision for its likely use in industrial or manufacturing processes, the plan has 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 985,000 tonnes.[80] Based on an estimated production rate of 45,000 tonnes per annum (tpa) these are forecast to sustain production until 2040, beyond the end of the Plan period in 2038.

Waingroves Quarry

7.3.11 Permitted reserves at Waingroves are approximately 3,650,000 tonnes. Based on an estimated production rate of 60,000 tonnes per annum (tpa) increasing to 115,000 tpa from 2023, to supply the new brickworks at Desford, these are forecast to sustain production for over 33 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. It will be removed off site when a suitable market is found.

80 At 1/1/2019

81 United Kingdom Minerals Year Book 2020

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, and are sufficient to last until the end of the Plan period. 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 unforeseen need through a plan-wide policy which allows for new working subject to meeting criteria which cover contribution to the stock of permitted reserves, blending, chemical/physical composition, stockpiling and proximity to the brickworks or clay products factory. The supply of brick clay will be further maintained through safeguarding as set out in Chappter 9.

MOUSELOW QUARRY, GLOSSOP, BRICK CLAY AND SANDSTONE

POLICY SP13: SUPPLY OF BRICK CLAY

7.3.14 **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.**

7.3.15 **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.**

REASONED JUSTIFICATION

7.3.16 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. The NPPF requires a minimum 25 year stock of permitted reserves to be provided at brick works/clay products sites to support investment. The need for clays with particular technical specifications and the need to blend different sources of clays are also important matters to be taken into account in assessing planning proposals. Where new sites are proposed they should be located, in principle, as near as possible to where the clay will be used.

STOCKPILING BRICK CLAY

7.3.17 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 which could lead to a delay in the restoration of the site.

POLICY SP14: STOCKPILING BRICK CLAY

7.3.18 **Where practicable, planning 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

7.3.19 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

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 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 2019[81] 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 1970's early 1980's where production topped 235,000 tonnes in 1975, need has declined progressively, due largely to the decline of indigenous chemical and steel industries. Nevertheless, the recent growth in new markets for fluoro-polymers has resulted in the inclusion of barytes and fluorspar on the 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 risk[82].

7.4.4 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 PDNP[83]. 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.

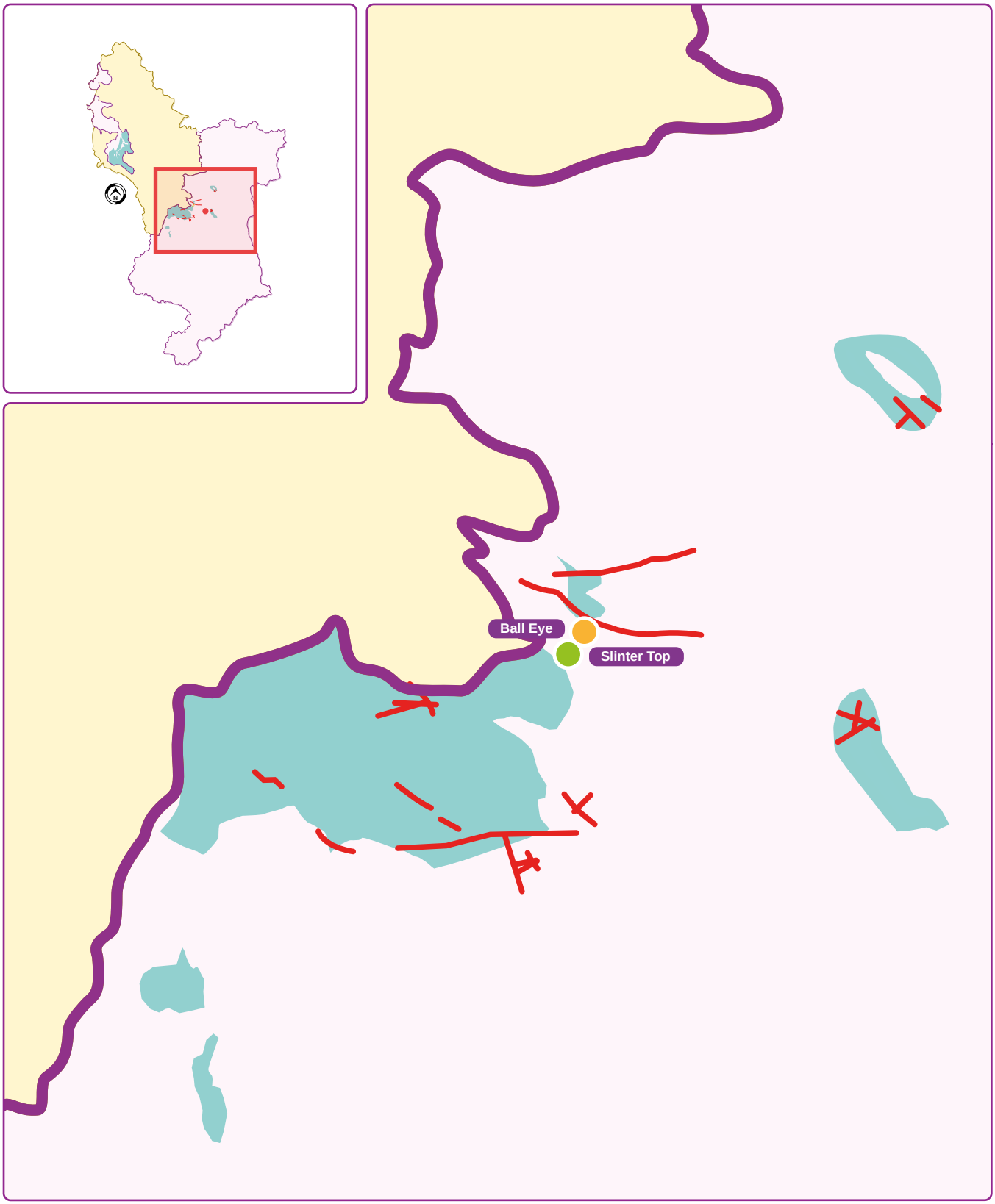
82 EU Fourth List of Critical Raw Materials 2020

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

84 National Planning Policy Framework 21 July 2021

7.4.5 Within the Plan area there is one operational site at Slinter Top (Slinter Mining Company), near Cromford where vein minerals are quarried alongside limestone aggregates with the resulting void infilled with inert, non-hazardous excavation materials. Mineral extraction is permitted at Slinter Top until 31st December 2021 and infilling until 31st December 2032. The method of working is that rock is loosened by a combination of blasting and digging. The vein mineral is then transported to Cavendish Mill to be processed. The site is estimated to contain a permitted resource of approximately 1,800,000 tonnes of limestone and associated vein minerals. A planning application has been submitted in 2021 to extend working to 2031. A non-operational site at Balleye Quarry (Deepwood Mining), Bonsall is also present within the Plan area. The planning permission is however primarily for limestone extraction with vein mineral quarried as ancillary mineral. Figure 7.4.1 shows these sites along with vein mineral resources.

FIGURE 7.4.1 VEIN MINERAL RESOURCES AND SITES



7.4.6 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.

7.4.7 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 problem is the impact of HGV traffic on the National Park, as the plant receives material to be processed, and then distributes it afterwards.

NATIONAL POLICY

National Planning Policy Guidance

7.4.8 NPPF[84], 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. The plan addresses the safeguarding of mineral resources in Chapter 9.1.

85 As defined by the Environment Act 1995

Planning Practice Guidance

7.4.9 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 MPA's 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.

NEED

7.4.10 There are no national assessments of need for Industrial minerals. In order to make provision for its 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, is slightly increasing which could lead to an increase in demand in the Plan area.

SUPPLY

7.4.11 Given the limited availability of vein minerals throughout the country, it is anticipated that the Plan area will contribute 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.

7.4.12 In order to meet the need for vein minerals therefore, the Plan will maintain supply in two ways. Firstly, through existing permitted reserves, which are present at one operational quarry, Slinter and one non-operational quarry Ball Eye, within the Plan area. There are also 'dormant'[85] extraction sites at Ashover, Brassington, Matlock, but these reserves are considered not to be important in the overall picture of supply over the Plan period.

86 Paragraph 215 (c), revised NPPF, July 2021

7.4.13 Secondly, the Plan proposes to supply any unforeseen needs through a criteria-based policy which allows for the working of additional reserves. The policy will apply plan-wide with the deposits that have the most potential for 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 any proposals for vein mineral extraction is restricted to working the vein mineral resource rather than the crushed rock resource. Vein mineral processing has the potential to generate waste material particularly slurry from processing plants which will need to be disposed of appropriately.

7.4.14 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 to protect resources from sterilisation by non-mineral development. Safeguarding policies are set out at Chapter 9 of the Plan.

POLICY SP15: SUPPLY OF VEIN MINERALS

7.4.15 **Proposals for the extraction of vein minerals will be supported, where additional reserves are required for use in industrial and manufacturing processes and where:**

1) The duration and scale of the development is limited to the minimum necessary to extract the vein mineral, and

2) Provision is made, where necessary, for appropriate and acceptable means of disposing of any waste arisings, tailing lagoons or slurries generated by the proposal.

REASONED JUSTIFICATION

7.4.16 Vein Minerals are of national and local importance and, in accordance with the NPPF, the Plan is required to include policies for their extraction to support their likely use in industry and manufacturing. Policy SP12 Supply of Vein Minerals allows for the working of additional reserves of vein minerals subject to proposals satisfying criteria relating to the scale of and duration of the extraction mineral and where necessary the need to dispose of any processing waste arisings, tailing lagoons or slurries satisfactorily. All proposals will need to satisfy the relevant polices of the Plan including the detailed development management polices set out at Chapter 11.