

APPENDIX 1

Nottinghamshire Minerals Local Plan

Draft Plan Consultation

27th July 2018 – 28th September 2018

Foreword

We have listened carefully to the needs of the minerals industry and the concerns of local residents to help us prepare an up-to-date Minerals Local Plan which will guide the future development of mineral planning in our county up to 2036.

Our aim is to ensure that our county can provide a steady and adequate supply of minerals over the planned period, by allocating the right number of quarries in the correct locations whilst providing adequate protection to communities and the environment.

This Draft Minerals Local Plan public consultation stage marks an important stage in the development of the new plan. It sets out the draft policies including a vision, strategic objectives, strategic policies, minerals provision policies (including site specific allocations) and development management policies that will guide the future development of minerals in Nottinghamshire.

We would like to know your thoughts on the draft proposals as we have to try and strike the best balance between the wide range of local, environmental and commercial interests involved.

I hope you will respond and your comments will be considered as part of the next stage of the plan's production.

County Councillor Phil Rostance

Vice Chairman, Communities and Place Committee



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1. Introduction

- 1.1. Every year, we each use the equivalent of 10 tonnes of minerals to maintain our way of life from building homes, offices and roads, to providing electricity and heat. Specialist minerals are used in many manufacturing processes and can even be found in cosmetics and food. It is therefore important to ensure that there is a sufficient supply of material to provide the infrastructure, buildings energy and goods that we need.
- 1.2. Nottinghamshire is rich in a wide variety of minerals – in fact most of the county overlies at least one potential surface or underground resource. Sand and gravel, gypsum and clay are our largest extractive industries, all of which are nationally important. Other minerals worked include building stone, silica sand and oil. There are also mineral resources such as shale gas that could be worked in the future.
- 1.3. Whilst many of our mineral resources remain plentiful, permitted reserves are often limited and finding sufficient new reserves to meet demand will be a major challenge over the next 15-20 years. Unlike other forms of development, minerals are finite and can only be worked where they are found. This factor combined with potential environmental impacts can limit where mineral extraction is feasible. It is therefore important both to identify, at least in broad terms, where future minerals extraction will be acceptable and to safeguard resources so that suitable sites are not unnecessarily lost to other development.
- 1.4. The County Council is preparing a new Minerals Local Plan to resolve these issues and to provide the planning policy against which all proposals for new minerals development will be assessed. This Draft plan consultation exercise forms an informal stage in preparing a new plan which will cover the period up to 2036.

Have your say

- 1.5. The purpose of this draft plan consultation exercise is to set out the draft vision, strategic objectives, strategic policies, minerals provision policies (including land allocations) and development management policies that will guide the future development of minerals in the County.
- 1.6. We need to hear from all sections of Nottinghamshire's communities about what they think about the choices. There is likely to be a wide range of views about the shape of future mineral extraction in the County and we want to find solutions that have the best consensus of opinion but that can also be delivered. It is therefore important you let us know what you think so we can take your views into account before any decisions are made about what should go into the new plan.
- 1.7. This document will be available for comments between July 27th and September 28th. We would encourage you to respond online to this consultation using our online consultation system.

How to make representations

- 1.8. If you would like to make representations on the Minerals Local Plan, we would encourage you to do so online via our website at www.nottinghamshire.gov.uk/minerals, using our interactive online representation system. However, you can also email or post us your comments.

<p>Online www.nottinghamshire.gov.uk/minerals Email development.planning@nottscc.gov.uk Phone 0300 500 80 80 (customer contact centre) Post Planning Policy Team Nottinghamshire County Council County Hall West Bridgford, Nottingham NG2 7QP</p>
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What happens next?

- 1.9. At the end of this consultation exercise we will consider all comments received and we will then incorporate relevant comments in to the Submission Draft consultation document ready for another public consultation period prior to submission of the final plan to the planning inspectorate for examination.

Scope of the new Minerals Local Plan

1.10. Once adopted, the new Nottinghamshire Minerals Local Plan forms the land use planning strategy for mineral development within the County up to 2036. It will provide the basis for the determination of mineral planning applications within the County. Its over-arching theme is the promotion of sustainable development and achieving the highest quality restoration possible. This means balancing the economic benefits and need for minerals against the social and environmental disruption and harm that their extraction can cause. Long term environmental gains can be achieved, for example, by creating wildlife habitats out of worked out quarries. Sustainability also means safeguarding mineral resources from unnecessary sterilisation so they can remain available for extraction for future generations.

The Plan contains the following:

- An overview of the County in terms of population, transport, communications, the economy and resources, Green Belt, landscape, countryside, natural and built heritage, water, soil, air, health and climate, which will help us plan effectively for the future;
- A long term Vision for mineral development in Nottinghamshire to 2036;
- Strategic Objectives demonstrating how the Vision will be achieved
- Strategic Policies covering the key issues of Sustainable Development, Minerals Provision, Biodiversity-Led Restoration, Climate Change, Sustainable Transport, The Built, Historic and Natural Environment and the Nottinghamshire Green Belt;
- Mineral Provision Policies setting out the mineral requirements during the plan period to 2036, including land allocations to meet this demand;
- Development Management Policies, the purpose of which is to deliver the strategic policies and objectives by providing the criteria against which future minerals development will be assessed. They relate specifically to individual, site level criteria such as environmental impacts and standards and provide guidance about how planning applications for minerals development in the County will be assessed;
- A framework by which the implementation of and subsequent effect of the plan and its policies can be monitored and reviewed; and
- A Policies Map which identifies site allocations/policies and site specific Development Briefs.

Replacing our existing minerals policies

The new Minerals Local Plan will replace the existing saved policies contained in the Nottinghamshire Minerals Local Plan which was adopted in 2005.

This document can be made available in alternative formats or languages on request.

The Government has published a revised NPPF that is currently out for consultation. This draft plan does not take account of the proposed changes as they have yet to be formally adopted. However once the final NPPF revisions have been confirmed any relevant changes will be incorporated into the developing plan.

Supporting documents

The Minerals Local Plan is supported by a series of other documents that will help inform the development of the minerals local plan.

Local Aggregates Assessment (LAA)

The LAA summarises past aggregate production, the number of active quarries and the distribution of the extracted mineral. It includes 10 and 3 year average production figures as required by the National Planning Policy Framework (NPPF) and identifies key issues that could affect the future demand for aggregates over the next plan period. The LAA is produced on an annual basis taking account of the most recent production data.

Monitoring Report

These reports are produced at least annually and show how the County Council is progressing with preparing its new Local Plans and how well its current adopted policies are being implemented.

Statement of Community Involvement (SCI)

This sets out how Nottinghamshire County Council will consult and engage with local people, statutory bodies and other groups during the preparation of the Local Plan and on mineral planning applications.

Sustainability Appraisal (SA)

The purpose of the SA is to promote sustainable development through better integration of sustainability considerations in the preparation and adoption of plans. SA helps local planning authorities to ensure that sustainable development is considered in the preparation of their plans. The NPPF introduced a 'presumption in favour of sustainable development' as a 'golden thread' which should run through plan and decision-making. SA has been an integral part of all stages of the preparation of the new Minerals Local Plan, with reports produced at each stage. This submission draft is accompanied by a final SA report.

Strategic Transport Assessment (STA)

Consultation with the Highways Authority during the preparation of the Minerals Local Plan has indicated that each proposed site would not have significant impacts on the highway network if a relevant package of mitigation measures were implemented. However, a

detailed strategic transport assessment has been completed to ensure that there are no unacceptable overall impacts on the highway network. This concludes that the highway impacts of new or extended mineral sites would be minimal and highlights appropriate mitigation measures, where relevant. In addition to these strategic findings, all sites will require a detailed transport assessment at the planning application stage.

Strategic Flood Risk Assessment (SFRA)

A Level 1 Strategic Flood Risk Assessment for the Nottinghamshire Minerals Local Plan has been undertaken by AECOM on behalf of the County Council. The purpose of this report was 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 sites will require a site-specific Flood Risk Assessment at the planning application stage.

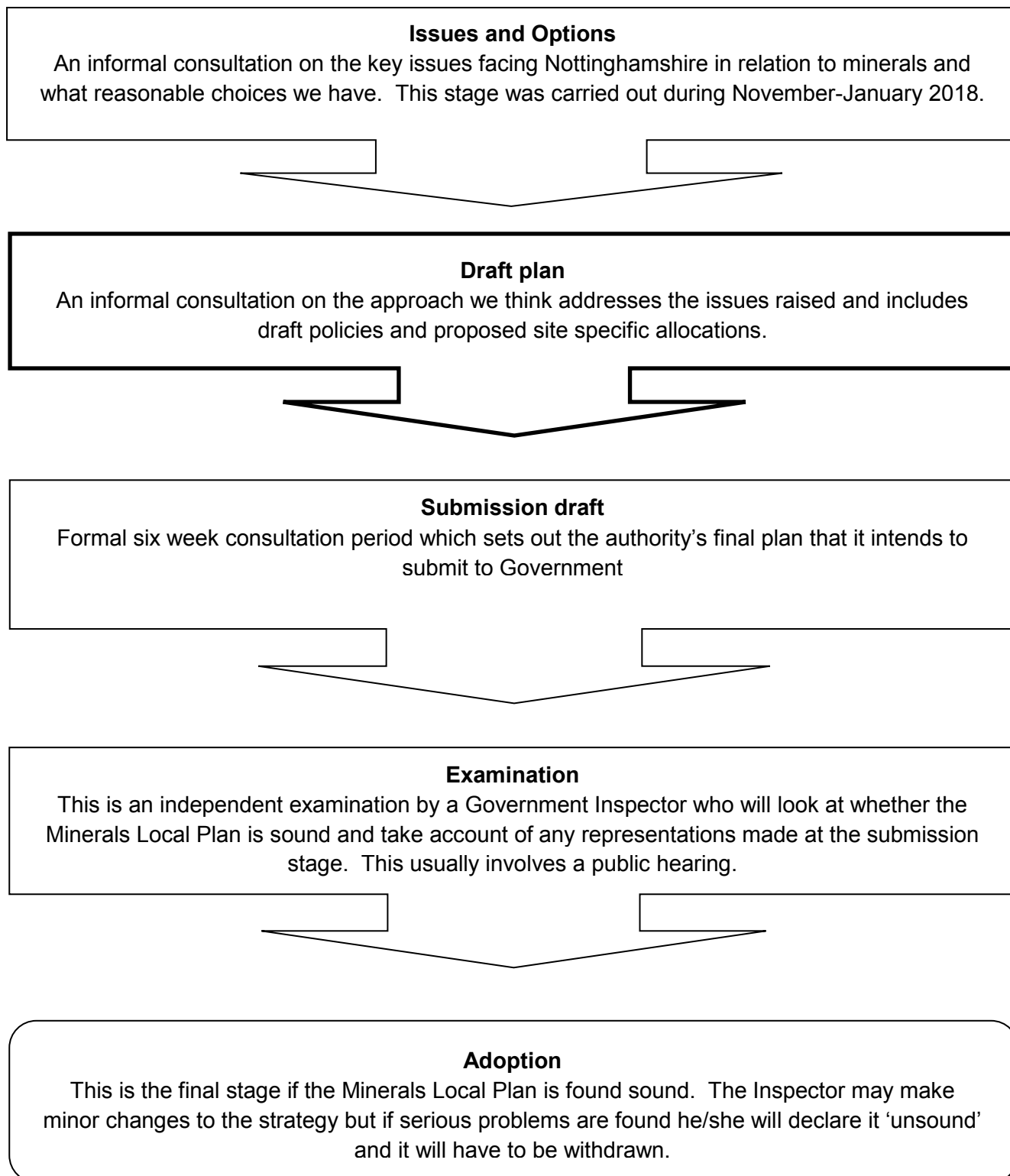
Biodiversity Opportunity Mapping

A project undertaken for the Sherwood and Trent Valley areas to identify particular opportunities for the enhancement, expansion, creation and re-linking of wildlife habitats across the county. The project will help to meet creation/restoration targets set in the UK Post 2010 Biodiversity Framework and Local Biodiversity Action Plan.

How is the new Minerals Local Plan being prepared?

The preparation of the Minerals Local Plan includes a number of key consultation and other stages as illustrated below.

Key stages in preparing the new Minerals Local Plan



How to read this document

The following chapters share a number of common features:

What you told us at the Issues and Options stage...

This sets out a summary of the response we received from members of the public, the minerals industry, stakeholders and interest groups during the first stage of consultation on the Minerals Local Plan, completed between November 2017 and January 2018.

These comments have been taken on board and where appropriate and where possible, have been incorporated into the draft plan

Issues and Options Sustainability Appraisal findings

As set out above, a Sustainability Appraisal (SA) of the options set out in the Issues and Options consultation document has been completed. These boxes set out a summary of the main findings of the SA in relation to the topic in each section. In some cases there are no findings presented. This is because no options were presented at the previous stage.

The full findings of the SA in relation to all of the options can be found on our website. Also available on our website is the SA of the draft plan document itself (split into the main report and a separate one looking at all of the individual sites we considered for allocation).

Introduction

This is a short introduction to the topic, which gives the context for each of the topic/policy areas.

Policies

Policies are set out in these boxes.

Where policies include land allocations, reference codes are used to identify each individual site. For all sites reference codes are related to the policy number (eg. MP2a).

Justification

This sets out in detail an explanation of the policy, including the reasons why it is needed, justification for the approach taken and what the policy seeks to achieve.

2. Overview, Vision and Strategic Objectives

What you told us at the issues and options stage...

- More explicit recognition should be given to the value of the range of ecologically designated sites in the County
- Update plan 1 to show correct greenbelt boundary and active mineral sites
- The overview covers important designations such as Sherwood Forest area including the SAC and the (ppSPA). However other nationally and locally important nature conservation sites throughout the county should be mentioned.
- Overview makes reference to the network of important sites for nature conservation however this should be balanced with a reference to the historic environment.
- Helpful if plan 1 showed the adjoining MPAs and relative size of principal towns and cities in Nottinghamshire.
- Overall, many comments accepted the proposed vision, with most of these respondents suggesting minor changes. Other, more detailed suggestions or recommended amendments to the vision are as follows.
- A number of respondents stated that there should be increased emphasis and more consideration given to the role played by alternative aggregates and recycled materials.
- There is a need to ensure that mineral development is concentrated in locations that offer the greatest level of accessibility to major markets and growth areas and provides a steady and adequate supply of minerals to meet objectively assessed development needs.
- A vision's aim that all mineral working will protect the County's environmental assets is welcome. All mineral working in flood zones 2 and 3 should reduce the flood risk to the site and others.
- Minerals infrastructure should also be included in the safeguarding regime.

Overview of the Plan area

- 2.1. Planning effectively for the future means having a good understanding of our current situation and what is likely to change. It is important to take account of environmental assets including our countryside, wildlife and heritage, as well as the quality of life and well-being of our communities.
- 2.2. Nottinghamshire is well known for its historic past, linked to tales of Robin Hood and its industrial heritage based on textiles and coal, but it also has an ambitious future with a growing population of over one million people and a diverse and expanding economy.

- 2.3. Nottinghamshire is part of the East Midlands, but also shares a boundary with South Yorkshire. Northern parts of Nottinghamshire therefore have significant employment, housing and business links with Sheffield, and the metropolitan areas of Barnsley, Rotherham and Doncaster. The more urbanised west of the County is also closely linked to neighbouring Derbyshire, with more rural eastern parts of the county having a similar character to neighbouring parts of Lincolnshire. In the south, Nottingham is a major regional centre with close physical links to the neighbouring cities of Derby and Leicester. Consequently there is a significant overlap of housing areas; business and employment between these three cities (see Plan 1 below).

Population

- 2.4. Nottinghamshire has a population of around 1,000,000 residents. Nottingham, in the south of the County, is one of the UK's eight Core Cities and a major centre for employment, retail and tourism. Around two thirds of the County's population live in, or close to, Nottingham. Most of the remainder live in, or close to, the other main towns of Mansfield, Kirkby-in-Ashfield, Sutton-in-Ashfield, Hucknall, Worksop, Newark and Retford.

Transport and Communications

- 2.5. Road and rail links to the rest of the UK are generally good, especially via the main north-south routes of the M1, A1, A46 and direct rail links to London from Retford, Newark and Nottingham. Links to the M1 have been enhanced with the widening of the A453 into Nottingham.
- 2.6. Most freight, including minerals, is currently moved by road rather than rail although there is some use of the County's network of rivers and canals for transport. The River Trent, especially, is a major waterway flowing from Nottingham to Newark and then northwards to the Humber, forming part of the County's eastern boundary.
- 2.7. Although just outside the County, both East Midlands Airport at Castle Donington and Robin Hood Airport near Doncaster provide national and international passenger and freight services.

Employment, Economy and Resources

- 2.8. This connectivity makes the County an important centre for warehousing, distribution, and other service based industries, which are replacing the more traditional industries of coal-mining, textiles and manufacturing, especially around Mansfield, Worksop and Newark.

- 2.9. Here, the legacy of former coal mining and heavy industry has left a surplus of derelict land and opportunities for enterprise and redevelopment. Nottingham and its surrounds also provide a major centre for technology, financial, knowledge and science based industries. Away from the main urban areas, agriculture and forestry are no longer major employers but still make up much of the County's rural landscape, particularly to the south and east. Minerals and energy production are important in parts of the County, especially sand and gravel extraction from the Trent and Idle Valleys and the four major power stations along the River Trent.
- 2.10. Nottinghamshire's economy generally compares well to the rest of the UK, with key urban areas expected to be the focus of significant housing and commercial development in future. However, there are also wide inequalities in the rates of employment, income, education and skills across the County, most notably in former mining areas.

Green Belt

- 2.11. In Nottinghamshire the Green Belt covers land around Greater Nottingham, Nottingham City and rural village areas. It covers more than 43,000 ha and exists to prevent towns from merging, limit urban sprawl and to safeguard the countryside (see Plan 1 below). National policy states that minerals extraction is not inappropriate in the green belt provided the openness of the green belt is preserved and where it would not conflict with the purposes of including land in the green belt.

Landscape and Countryside

- 2.12. The County's landscape is characterised by rich rolling farmlands to the south, with a central belt of mixed woodland and commercial forestry, giving way to heathland in the north and open, flat agricultural landscapes to the east. Although agriculture is a relatively small industry today, large parts of the County are made up of good quality agricultural land with the highest quality (Grade 1) being concentrated in the northern part of the County. The six country parks around Nottinghamshire provide valuable areas of open space.

Nature

- 2.13. Nottinghamshire supports a wide range of important sites for nature conservation, including a Special Area of Conservation within Sherwood Forest, near Edwinstowe, that is of international importance. A large part of central Nottinghamshire is also being considered as a possible Special Protection Area for birds which would provide protection at the international level under European regulations. The quality of Nottinghamshire's natural environment has suffered in the past from the impacts of development and there has been a significant decline in biodiversity, with losses of ancient woodland, heathland, species-rich grassland, hedgerow and wetland habitats, as well as the species that these habitats support.

Some of these historic declines are now being halted, and in some cases reversed, with neglected sites brought into positive management and new areas of habitat created as a result of the activities of partner organisations in the Nottinghamshire Biodiversity Action Group, by initiatives such as Environmental Stewardship and the English Woodland Grant Scheme, and as a result of restoration schemes. This action is being co-ordinated and quantified through the Nottinghamshire Local Biodiversity Action Plan.

Heritage

- 2.14. Nottinghamshire's heritage is very diverse. Creswell Crags on the Nottinghamshire-Derbyshire boundary has the most northerly Ice Age cave art in the world. The historic landscape of the Trent Valley is an important area for archaeological remains of prehistoric settlement. There is important evidence of Roman field patterns in the north of the County and the modern day A1 and A46 follow the line of old Roman routes. Evidence of Viking influence is apparent in many of the County's place names. Sherwood Forest boasts a unique heritage of folklore, monasticism and large country house estates (the Dukeries). The County has a fine collection of historic market towns including Worksop, Newark, Retford, Mansfield and Southwell. They are all rich in architectural and archaeological heritage. The Rivers Trent and Idle, which historically provided important cultural and trade links and the focus of many of our early settlements, are still relied on today by industry, agriculture and the County's power stations.
- 2.15. For hundreds of year's coal mining and other quarrying was very significant in the west of the County. Nottingham's industrial past was dominated by the textile industry throughout the 18th, 19th into the 20th centuries and has left a rich built heritage. The majority of Nottinghamshire's conservation areas, listed buildings, historic parks, and Scheduled Ancient Monuments are in good condition, but a proportion (around 10%) are in a vulnerable condition or situation.

Water, Soil and Air

- 2.16. Much of Nottinghamshire is underlain by important groundwater resources used for industry, agriculture and drinking water. The Rivers Trent and Idle also provide important surface water resources. Whilst water quality is good overall, there are problems with the level of nitrates in the soil in large parts of the County which can in turn affect water quality. The whole of north Nottinghamshire is therefore designated as a nitrate vulnerable zone.
- 2.17. Flood risk varies across the County and, although there are several areas at risk of localised surface flooding, the main risk comes from the River Trent, especially around Nottingham and Newark and in some of the outlying villages.

- 2.18. Air quality is generally good across the County but several Air Quality Management Areas (AQMAs) have been designated around Nottinghamshire because of known traffic and congestion problems.

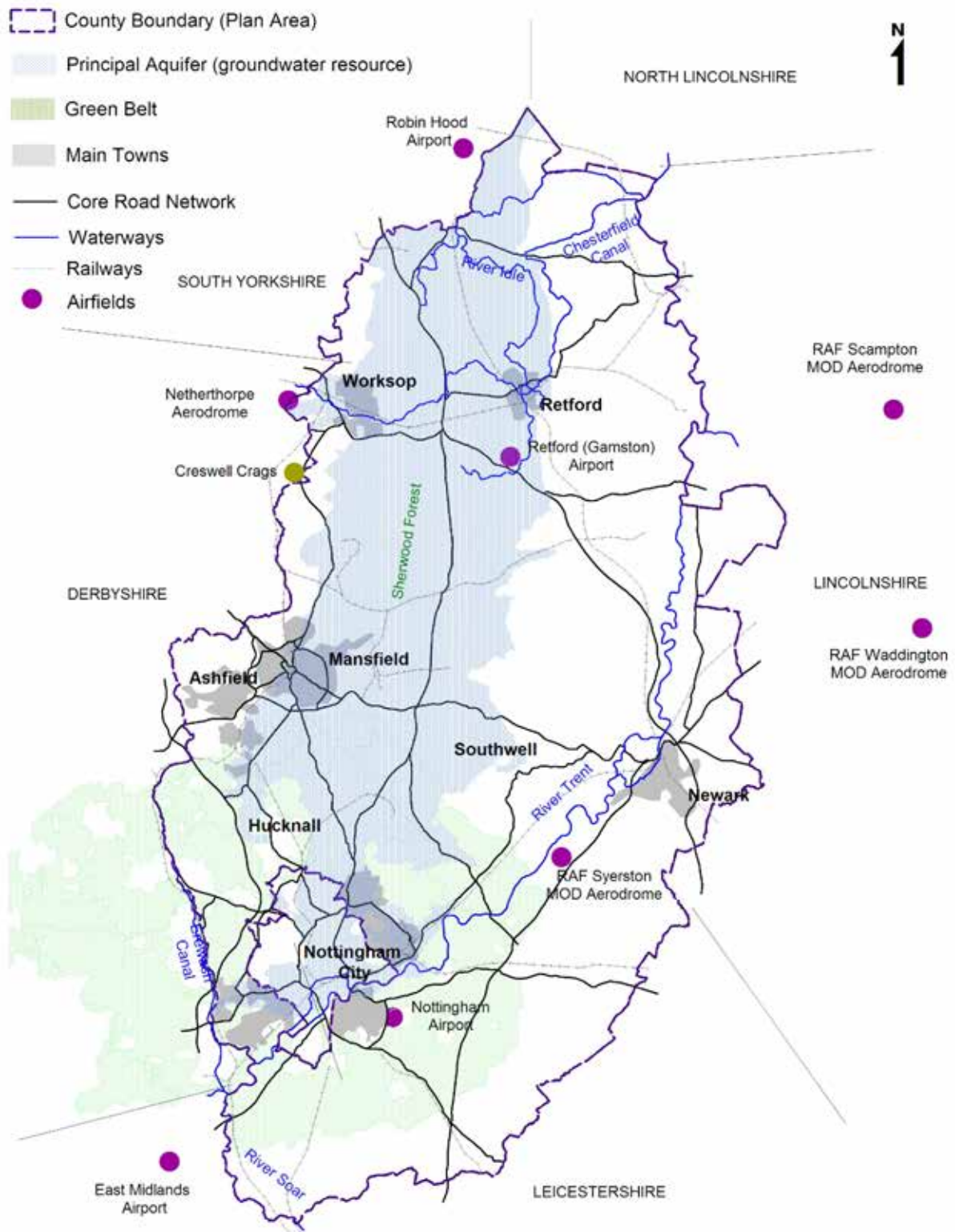
Health

- 2.19. Overall health indicators are slightly lower than both the regional and national average although life expectancy has recently grown closer to the national average. There are also wide variations in life expectancy with a twelve year gap in average life expectancy between the least and most deprived wards. In some areas low levels of income, and high levels of unemployment and stress, are seen as having a significant impact on health and wellbeing. The main urban areas of Mansfield and Ashfield are worst affected, whilst more rural, affluent areas within Rushcliffe and Gedling generally fare far better in line with national trends. Obesity, amongst both children and adults is also a concern.

Climate

- 2.20. Parts of Nottinghamshire have already experienced more frequent and heavier flooding previously and, overall, this pattern is expected to continue. In common with the rest of the UK there is also an increased likelihood of higher average temperatures, drier summers, wetter winters and more frequent and extreme storms.

Plan 1: Overview of the Plan area



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Principal Aquifer derived from Environment Agency data © Environment Agency 2010
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Nottinghamshire's mineral resource and industry

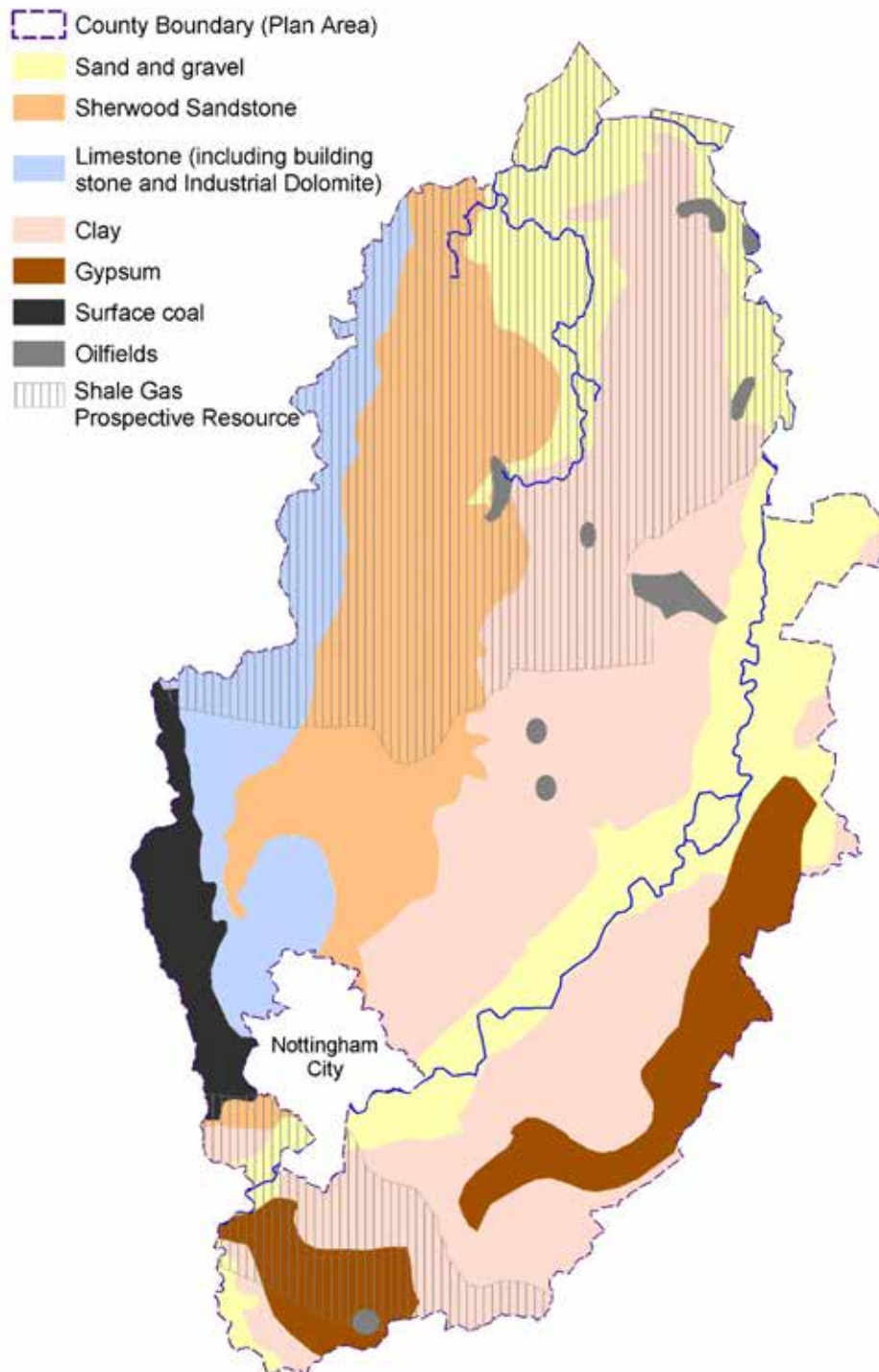
- 2.21. Nottinghamshire is rich in minerals and most widely known for its coal mining industry which has had a major impact on the social and economic development and environment of many parts of the County. The legacy of the coal industry is still very evident; the most visible reminders are the large spoil tips, many of which have been restored but some still present environmental issues. Most former colliery sites have now been redeveloped to provide new employment opportunities for communities that were hit hard with the closure of collieries.
- 2.22. Today, sand and gravel is the biggest extractive industry in the County. Most quarries work the river deposits found in the Trent and Idle valleys, although Sherwood Sandstone is also exploited. This activity has transformed large areas of the Trent and Idle Valleys into wetlands and in doing so has changed the landscape character of the area. Some former workings are now used for sports and recreation and others have become important wildlife habitats. As the County has suffered from a loss of habitats, sand and gravel restoration schemes have had a very significant role in redressing the balance.
- 2.23. Gypsum is another major minerals industry in Nottinghamshire, and has been extensively mined in the south of the County and quarried between Newark and Kilvington. The associated plasterboard and plaster works that these mineral operations support are important local employers although few are actually directly employed in the extractive process itself.
- 2.24. Other minerals worked are brick clay, silica sand, building stone, aggregate limestone, and oil. Some of these minerals also support locally important associated industries such as brick works.
- 2.25. Building stone was worked much more extensively in the past and has contributed towards the traditional character of many villages and historic buildings. Today extraction is limited to just one small quarry.
- 2.26. Nottinghamshire has potential mineral resources that have not been exploited but which could be in the future. This includes industrial dolomite found in a small area in the north west of the County and potential shale gas resources which are thought to exist in the north and the south of the County.

Wider issues

- 2.27. There is a significant movement of minerals both in and out of the County which provides opportunities to work with other Mineral Planning Authorities to manage these movements and minimise the environmental impacts of the extraction.
- 2.28. Plan 2 illustrates the geological resource of Nottinghamshire.

Plan 2: Nottinghamshire's mineral resources

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British Geological Survey, 2013. Digital Geological Map of Great Britain 1:625 000 scale (DiGMapGB-625)
Superficial Deposits data [CD-Rom] Version 1.10. Keyworth, Nottingham: British Geological Survey. Release date 03-07-2013

Vision

- 2.29. The Vision for managing minerals seeks to address the issues facing the Plan Area and take into account the views of local communities and other stakeholders as well as supporting the delivery of national planning policies. The broad aims are then developed in more detail in the Strategic Objectives, the policies, and the Implementation section.

“Over the plan period to 2036 minerals will continue to be used as efficiently as possible across Nottinghamshire. Minerals are a valuable natural resource and should be worked and used in a sustainable manner and where possible reused to minimise waste

Mineral development will be designed, located and operated to ensure that environmental harm and impacts on climate change are minimised.

Within geological constraints, mineral development will be concentrated in locations that offer the greatest level of accessibility to the major markets and growth areas and to sustainable transport nodes to encourage sustainable patterns and modes of movement.

Nottinghamshire will continue to provide minerals to meet its share of local and national needs. Sites will be available to support the economic, social and environmental benefits of sustainable growth. Mineral reserves, and minerals related infrastructure will be identified and safeguarded against inappropriate development. Consumption will be minimised, by promoting the use of secondary and recycled minerals.

Quarries will be designed, operated and managed in ways which help to reduce flood risk, particularly in the Trent Valley flood plain, manage surface water sustainably and maintain or enhance water quality.

All mineral workings will contribute towards ‘a greener Nottinghamshire’ by ensuring that the County’s diverse environmental assets are protected, maintained and enhanced through appropriate working, restoration and after-use and by ensuring that proposals have regard to Nottinghamshire’s historic environment, townscape and landscape character, biodiversity, geodiversity, agricultural land quality and public rights of way. This will result in improvements to the environment, contribute to landscape-scale biodiversity delivery, including through the improvements to existing habitats, the creation of large areas of new priority habitat, and the re-connection of ecological networks, with sensitivity to surrounding land uses.

The quality of life and health of those living, working in, or visiting Nottinghamshire will be protected.”

Strategic Objectives

- 2.30. The following objectives have been identified as central to achieving the delivery of the spatial vision for future Minerals development in Nottinghamshire:

SO1: Improving the sustainability of minerals development

Ensure more efficient exploitation and use of primary mineral resources by minimising waste, increasing levels of aggregate recycling and the use of alternatives from secondary and recycled sources. Secure a spatial pattern of mineral development that efficiently delivers resources to markets within and outside Nottinghamshire. Prioritise the improved use or extension of existing sites before considering new locations. Make use of sustainable modes of transport.

SO2: Providing an adequate supply of minerals

Assist in creating a prosperous, environmentally sustainable and economically vibrant County through an adequate supply of all minerals to assist in economic growth both locally and nationally. Provide sufficient land to enable a steady and adequate supply of minerals over the plan period. Assist in creating a sustainable and economically vibrant County through providing an adequate supply of all minerals to assist in economic growth both locally and nationally.

SO3: Addressing climate change

Minimise and mitigate the impact of mineral developments on climate change by encouraging efficient ways of working including reductions in transport and onsite machinery emissions. Reduce existing and future flood risks linked to, and aid in adaptation to, climate change through good quarry design and operation, water management, location of plant and appropriate restoration, particularly for quarries in the Trent Valley flood plain. Contribute to climate change adaptation by relinking fragmented habitats and creating new areas of habitat to allow the migration and dispersal of species.

SO4: Safeguarding of mineral resources

Protect the County's potential mineral resources of economic importance from development which would prevent or hinder their future use.

SO5: Minimising impacts on communities

Minimise the adverse impacts on Nottinghamshire's communities by protecting their quality of life and health from impacts such as traffic, visual impact, dust, water resources etc. Make sure that local people have the opportunity to be involved in decisions about new mineral developments by providing information, encouraging wider involvement and targeting key groups or individuals where appropriate. Protect and enhance rights of way and access to open space.

SO6: Protecting and enhancing natural assets

Conserve and enhance Nottinghamshire's natural environment, including its distinctive landscapes, habitats, geology, wildlife species and ecological health of water bodies by avoiding, minimising and mitigating potential negative impacts. Maximise biodiversity gain by creating new habitats at a landscape-scale through mineral restoration schemes which take in to account the Council's priority for biodiversity-led restoration, focusing on priorities set out in the Nottinghamshire

Local Biodiversity Action Plan, in particular meeting reed bed and floodplain grazing marsh targets through sand and gravel restoration schemes, and heathland targets through sandstone restoration schemes, and achieving the targets set out in the Water Framework Directive objectives. Support minerals development that will provide long term enhancements to landscape character and which avoids damaging the highest quality landscapes. Appropriate restoration will result in a net gain for biodiversity through the creation of new ecologically valuable habitats, and will contribute to the delivery of biodiversity at a landscape-scale and the enhancement of ecological networks.

SO7: Protecting and enhancing historic assets

Protect and where appropriate enhance Nottinghamshire's distinct historic environment. Ensure heritage assets (archaeological, historic buildings, settlements, landscapes, parks and gardens) and their settings are adequately protected and where appropriate enhanced. Recognise the important role of locally sourced building stone in the repair of heritage assets and in maintaining local distinctiveness.

SO8: Protecting agricultural soils

Support minerals developments that will safeguard the long-term potential of best and most versatile agricultural soils.

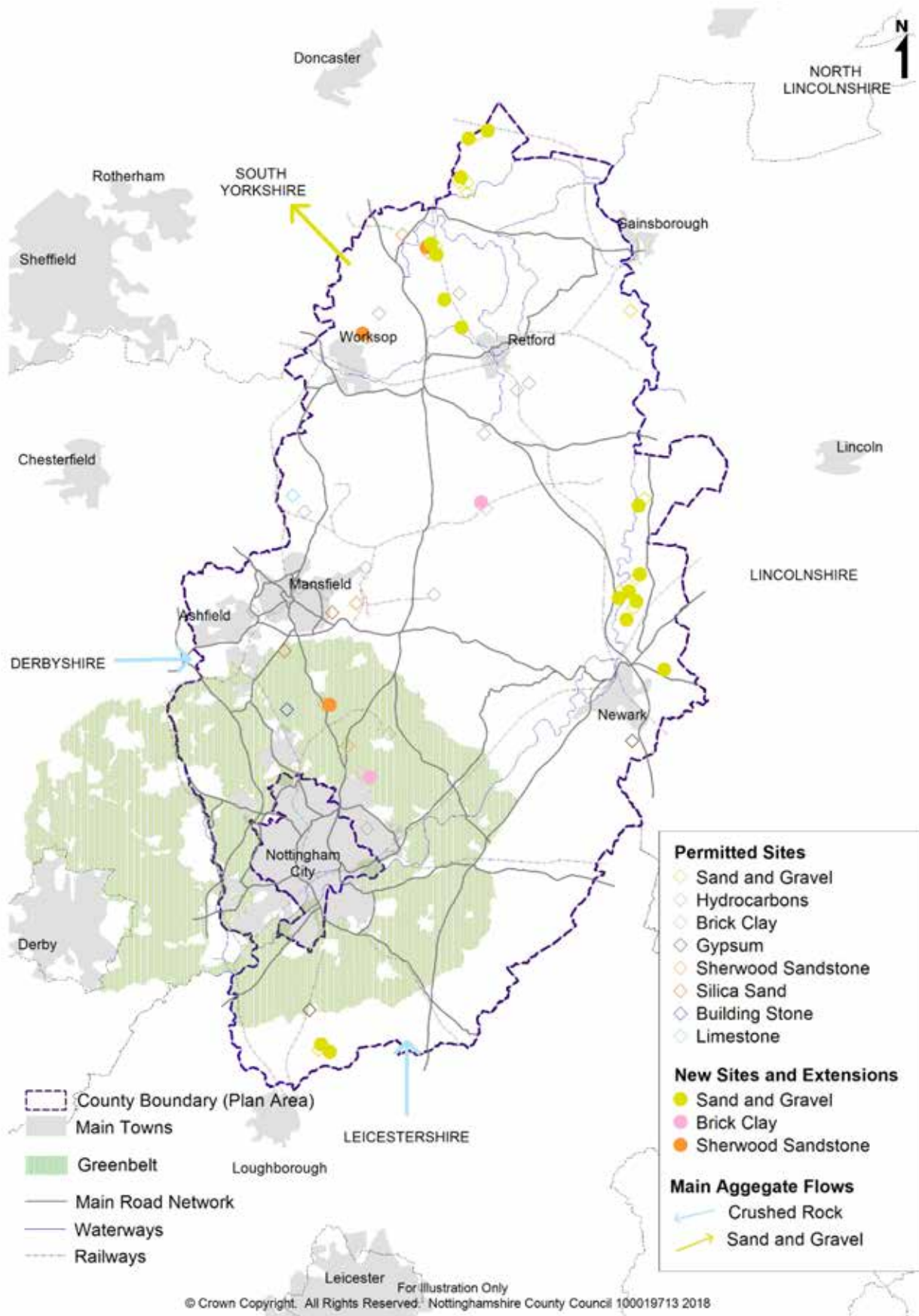
Key Diagram

- 2.31. The components of the spatial strategy are illustrated on the Key Diagram below (Plan 3). It shows the main supply sources for aggregates and the principal constraints.
- 2.32. The Key Diagram is intended to be a diagrammatic interpretation of the Spatial Strategy set out in this document and is not intended to portray any specific site activity or proposal with spatial accuracy.
- 2.33. The remaining sections of the Plan develop the Spatial Strategy's principles and objectives. Specific details relating to the policies are shown on the Policies Map.

Question 1

What do you think to the draft vision and strategic objectives set out in the plan?

Plan 3: Key Diagram



3. Strategic Policies

- 3.1. The strategic policies aim to deliver the vision and strategic objectives for future minerals development in Nottinghamshire and have been prepared to support and encourage sustainable development. They provide the strategic framework to ensure that the right amount of minerals development takes place in appropriate locations, and at the right time, whilst ensuring that amenity as well as the built, natural and historic environment is protected.

What you told us at the Issues and Options stage...

- There was broad agreement with the strategic issues outlined in the issues and Options document.
- Respondents were generally pleased to see restoration and safeguarding of minerals identified as a key strategic issue and that restoration proposals should be addressed at an early stage.
- It is felt that protection of Nottinghamshire's high quality agricultural land should be included
- It was suggested that the strategic issues should be broadened to minimise all adverse impacts of development, including on environmental and heritage features such as biodiversity, landscape, archaeology and communities.
- The importance of minimising the adverse impacts on Nottinghamshire's communities has been highlighted, by protecting resident's quality of life and health impacts from impacts such as traffic, visual impacts, noise and dust.
- Respondents felt that the supply and demand of aggregates must be carefully and transparently assessed,
- Respondents felt that minimising impacts on communities should be a matter of priority.
- Generally, respondents feel that the environment, wildlife and ecosystems should have greater weight in this section
- Hydrocarbon development should be highlighted as a strategic issue.
- Although minimising impacts on communities is raised, no mention is made of flood risk and its potential effects on quality of life.
- The Minerals Safeguarding and Minerals Consultation areas provide a good overall position, however they need to be high on the agenda to ensure District and Borough Councils take account of them in their local plans.

SP1: Sustainable development

Introduction

- 3.2. National Planning Policy Framework (NPPF) paragraph 14 states, that *“at the heart of the NPPF is a presumption in favour of sustainable development, which should be seen as a golden thread running through both plan-making and decision-taking”*.
- 3.3. Paragraph 15 further continues that *“all plans should be based upon and reflect the presumption in favour of sustainable development, with clear policies that will guide how the presumption should be applied locally”*.

Policy SP1 – Sustainable Development

1. When considering development proposals the Council will take a positive approach that reflects the presumption in favour of sustainable development contained in the National Planning Policy Framework. The Council will work proactively with applicants jointly to find solutions which mean that proposals can be permitted wherever possible, and to secure development that improves the economic, social and environmental conditions in the area.
2. Planning applications that accord with the policies in this Local Plan (and, where relevant, with policies in other plans which form part of the development plan) will be approved unless material considerations indicate otherwise.
3. Where there are no policies relevant to the application or relevant policies are out of date at the time of making the decision the Council will grant planning permission unless material considerations indicate otherwise – taking into account whether:
 - a) Any adverse impacts of granting planning permission would significantly and demonstrably outweigh the benefits, when assessed against policies in the National Planning Policy Framework taken as whole; or
 - b) Specific policies in that Framework indicate that development should be restricted.

Justification

- 3.4. The NPPF sets out the planning policies for England and how these are expected to be applied. It confirms that the purpose of the planning system is to contribute to the achievement of sustainable development along the three dimensions of economic, social, and environmental sustainability. The Framework makes it clear that these roles are mutually dependent and that Local Plans are the key to delivering sustainable development. Local Planning Authorities, when plan-

making, are advised to positively seek opportunities to meet objectively assessed development needs, with sufficient flexibility to adapt to rapid change.

- 3.5. The NPPF indicates that proposed development in accordance with an up-to-date Local Plan should be approved without delay, and proposed development that conflicts with the Local Plan should be refused unless other material considerations indicate otherwise. Policy SP1 above is consistent with the NPPF requirements on decision-taking.
- 3.6. It is a national planning objective that planning, including planning for mineral development supports the transition to a low-carbon economy, taking into account flood risk, water supply and changes to biodiversity and the landscape. All new mineral development proposals will be expected to be planned from the outset to avoid increased vulnerability to the range of impacts resulting from climate change, care will need to be taken to ensure any potential risks can be managed through suitable adaptation measures.

This policy helps meet the following objectives:

SO1: Improving the sustainability of minerals development

Question 2

What do you think of the draft strategic policy for sustainable development?

SP2: Minerals Provision

Introduction

- 3.7. Minerals are essential to support economic growth and quality of life by providing the raw materials to create new infrastructure, buildings and goods as well as providing energy and a source of local jobs. Nottinghamshire is rich in minerals and supplies a wide range of markets both regionally and nationally. In line with national policy, it is important to identify suitable reserves to provide a steady and adequate supply of minerals to meet future needs.
- 3.8. Minerals are a finite natural resource and can only be worked where they are found. It is therefore essential that the best use of available resources is made in order to secure their long-term conservation. Within Nottinghamshire the priority is therefore to extend existing sites, in preference to developing new sites, and to encourage the use of secondary and recycled aggregates far as possible (see Policy MP5) and safeguard important resources from sterilisation (see Policy DM13).

3.9.

Policy SP2 – Minerals Provision

1. The strategy for the supply of minerals in Nottinghamshire is as follows:
 - a) Identify suitable land for mineral extraction to maintain a steady and adequate supply of minerals during the plan period;
 - b) Give priority to the extension of existing sites, where economically, socially and environmentally acceptable;
 - c) Allow for development on non-allocated sites where a need can be demonstrated; and
 - d) Ensure the provision of minerals in the plan remains in-line with wider economic trends through regular monitoring.
2. All proposals for mineral development must demonstrate that they have prioritised the avoidance of adverse social, economic and environmental impacts of the proposed development. Where planning permission is granted, appropriate mitigation and compensation measures will be required.

Justification

- 3.10. To ensure that adequate and steady supplies can be maintained the National Planning Policy Framework sets out specific requirements for the different types of minerals according to their end use and the need to maintain a landbank of permitted reserves for certain minerals. 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. As part of preparing this plan, the Council has carried out a detailed assessment of its remaining permitted mineral reserves and

identified where additional reserves should be provided. Therefore, alongside the strategic position set out in policy SP2 above, policies MP1 – MP12 make specific provision for each of the minerals which are likely to be worked in Nottinghamshire during the plan period.

- 3.11. Extending existing sites, where feasible, is considered to be more sustainable than developing new sites. This can be more efficient as the existing site access and processing plant can be used to recover mineral that may not otherwise be worked and the environmental impacts are generally less than those associated with opening up a new site. However it is important that the potential cumulative impacts of continuing minerals development are considered in all cases. All new proposals, whether allocated or otherwise, will need to be assessed in terms of their impact on local communities and the environment including matters such as landscape, heritage, biodiversity and climate, and what contribution they would make to achieving local and national biodiversity targets. These issues are set out in more detail within the detailed development management policies DM1-17 which provide appropriate safeguards for the location, operation, restoration and after-use of future minerals sites.

This policy helps meet the following objectives:

SO2: Providing an adequate supply of minerals

Question 3

What do you think to the draft strategic policy for minerals provision?

SP3: Biodiversity-Led Restoration

Introduction

- 3.12. Nottinghamshire County Council promotes a restoration led approach when considering proposed mineral workings. It is seen as vital that the restoration and future use of the land is addressed at the outset not just at the pre-application discussion stage of preparing planning applications.
- 3.13. The County Council aims to ensure mineral sites are reclaimed in a way that seeks to maintain and significantly enhance the County's diverse environment and biodiversity, in line with Local Plan Strategic Objective 6.
- 3.14. Restoration has to be seen as an integral part of the management of the whole extraction process and phasing. This includes biodiversity, landscape, and recreational opportunities. This does not mean placing an added onus or burden upon the minerals industry, rather it ensures that the right restoration solutions are formulated and opportunities are realised.

Policy SP3 – Biodiversity-Led Restoration

1. Restoration schemes that seek to maximise biodiversity gains in accordance with the targets and opportunities identified within the Nottinghamshire Local Biodiversity Action Plan and Biodiversity Opportunity Mapping Project will be supported.
2. Where appropriate, schemes will be expected to demonstrate how restoration will contribute to the delivery of Water Framework Directive objectives.
3. Restoration schemes for allocated sites should be in line with the relevant Site Allocation Development Briefs contained within Appendix 3.

Justification

- 3.15. The Government's Natural Environment White Paper (2011) places the value of nature at the centre of the choices that are made ensuring that the environment is enhanced and economic growth and personal wellbeing is taken into account. Once minerals extraction sites have fulfilled their primary purpose of providing mineral, the restoration of such sites can have a major environmental benefit. There is considerable potential to create large new areas of habitat and to improve the links between existing fragmented areas of habitat.
- 3.16. The restoration of mineral sites therefore has an important role to play in meeting targets for the creation of new habitat, both nationally and locally. Nationally the RSPB estimates that minerals restoration schemes could meet, or in some cases,

exceed the targets for a number of Habitats of Principal Importance for Conservation in England. These supersede what were previously known as UK Biodiversity Action Plan (UKBAP) priority habitats.

- 3.17. The restoration of mineral voids offers a significant opportunity for the establishment or re-establishment of priority habitats, particularly through providing re-created linkages between fragmented blocks of specific habitat types and with river floodplains, where appropriate, thereby strengthening and enhancing ecological networks.
- 3.18. Whilst new habitat has been delivered in Nottinghamshire through minerals restoration schemes in the past, a more systematic approach offers far greater opportunities. With careful planning at an early stage, the level of high-quality habitat delivered by mineral extraction can be increased, creating valuable places for both wildlife and people and contributing to the delivery of landscape-scale conservation, supporting initiatives such as the RSPB's Futurescapes and the Wildlife Trusts' Living Landscapes.
- 3.19. This landscape-scale approach seeks to look beyond small protected sites to deliver nature conservation on a larger scale across the countryside. The Trent and Idle Valleys are considered to be a key area for such a landscape-scale approach with opportunities for cross-boundary action between Minerals Planning Authorities to enable a coordinated, strategic approach to maximise the restoration potential of individual sites.
- 3.20. By creating new habitats, and contributing to landscape-scale nature conservation, considerable progress can be made towards creating a countryside that is more permeable to wildlife by establishing linkages, stepping stones and corridors of habitat and more coherent ecological networks which are more resilient to future pressures such as climate change and which allow the movement and dispersal of wildlife species.
- 3.21. National targets for the creation of priority habitats are set out in the Government's 'Biodiversity 2020' strategy and these are broken down by the different National Character Areas (NCAs) identified by Natural England. Within Nottinghamshire there are eight NCAs including the Sherwood NCA and the Trent and Belvoir Vales NCA. At the local level, the County Council is a signatory to the Nottinghamshire Local Biodiversity Action Plan (LBAP) that aims to aid the recovery of threatened priority habitats and species.
- 3.22. Minerals extraction, particularly sand and gravel extraction in the Trent Valley, but also the extraction of resources in other parts of the County, can contribute significantly towards meeting these targets and add to the success of existing

wetland restoration schemes. Restoration schemes should be carefully considered so that they can deliver as much LBAP priority habitat as possible and that such habitats are appropriate to the relevant National Character Area. Applicants are therefore encouraged to engage in early discussions with the County Council and other appropriate bodies in relation to restoration proposals.

3.23. Priority habitats that should be created or restored/enhanced in the Trent and Idle Valleys are:

- Floodplain Grazing Marsh;
- Reedbed;
- Marsh and Swamp;
- Lowland Fen;
- Wet Woodland;
- Other habitats such as Lowland Neutral Grassland and Mixed Ash-dominated Woodland may also be appropriate in some cases, and there are also potential opportunities for Lowland Dry Acid Grassland and Oak-birch Woodland in some eastern areas of the Trent Valley.

3.24. Priority habitats that should be created or restored/enhanced in the Sherwood Sandstone area are:

- Lowland Heathland;
- Lowland Dry Acid Grassland;
- Oak-birch Woodland;
- Other habitats such as Marsh and Swamp may also be appropriate in some cases.

3.25. Priority habitats that should be created or restored/enhanced in the Magnesian Limestone area are:

- Lowland Calcareous Grassland;
- Mixed Ash-dominated Woodland;
- Other habitats such as Marsh and Swamp may also be appropriate in some cases.

3.26. LBAP priority habitats in areas where the extraction of clay, gypsum and coal takes place should reflect those habitats occurring in the vicinity and will differ depending on locality. More generally, other habitats, including Ponds and Hedgerows, can be incorporated into most restorations independent of location. It is also expected that Eutrophic Standing Waters will be created as a result of quarrying, although this habitat should be minimised as far as possible in favour of the other habitat types listed above.

3.27. As a principle, restorations should also seek to restore more extensive areas of a small number of habitats at any one site, rather than try to create smaller areas of many different habitats, so that the value of restored areas is maximised and

future management is made easier. Habitats should be re-created that are appropriate to that Natural Character Area and optimal use should be made of the edaphic conditions on the site to create priority habitats. Within larger habitat types, there is also the potential for important micro-habitats.

- 3.28. It is recognised that in some cases, restoration for leisure uses or for agriculture may be appropriate. Nevertheless, such restorations can still be 'biodiversity-led', for example by ensuring that agricultural restorations reinstate native hedgerows with wide field margins, and create new areas of species-rich grassland, copses and ponds.

Water Framework Directive

- 3.29. The Humber River Basin Management Plan has been prepared by the Environment Agency under the Water Framework Directive which requires all countries throughout the European Union to manage the water environment to consistent standards. The Humber River Basin District is one of the most diverse regions in England, ranging from the upland areas of the Peak District, South Pennines and the North York Moors, across the Derbyshire and Yorkshire Dales and the fertile river valleys of the Trent and Ouse, to the free-draining chalk of the Wolds. Water supports these landscapes and their wildlife and pressures that the water environment faces need to be considered.
- 3.30. Minerals development can contribute towards meeting Water Framework Directive objectives, including by facilitating improvements to water quality, riverine habitats, floodplain reconnection and improving the status of fish populations, and restoration schemes will be expected to contribute towards these objectives, where appropriate.

This policy helps meet the following objectives:

SO6: Protecting and enhancing natural assets

Question 4

What do you think of the draft strategic policy for biodiversity led restoration?

SP4: Climate Change

Introduction

- 3.31. The Government is committed to tackling the causes of climate change and planning can play a key role in securing reductions in greenhouse gas emissions, minimising vulnerability and providing resilience to the impacts of climate change. This is central to the economic, social and environmental dimensions of sustainable development. Nottinghamshire County Council is committed to reducing the impact from development on climate change.
- 3.32. All new development, including minerals extraction, should therefore seek to reduce greenhouse gas emissions and avoid increased vulnerability to the impacts of climate change, including flooding, where practicable.

Policy SP4 – Climate Change

1. All minerals development, including site preparation, operational practices and restoration proposals should minimise their impact on the causes of climate change for the lifetime of the development. Where applicable development should assist in the reduction of vulnerability and provide resilience to the impacts of climate change by:
 - a) Being located, designed and operated to help reduce greenhouse gas emissions, withstand unavoidable climate impacts and move towards a low-carbon economy;
 - b) Avoiding areas of vulnerability to climate change and flood risk. Where avoidance is not possible, impacts should be fully mitigated;
 - c) Developing restoration schemes which will contribute to addressing future climate change adaptation, including through biodiversity and habitat creation, carbon storage and flood alleviation.

Justification

- 3.33. The Nottinghamshire Sustainable Community Strategy (SCS) is committed to taking a sustainable approach to planning development that responds to the challenges of climate change and takes wider environmental considerations into account when making decisions about the location, nature and size of new development.
- 3.34. The nature and scale of new minerals development will influence the extent to which climate change resilience measures will be most effective and appropriate. Mineral development can provide a number of opportunities to mitigate and adapt to the impacts of future climate change.

3.35. This could include:

- Restoration of mineral sites and restoration schemes that include measures such as flood water storage, the creation of biodiversity habitats, living carbon sinks, and wider ecosystem services
- The use of on-site renewable energy installations
- The use of energy efficient plant
- The use of sustainable modes of transport, low emission vehicles, travel plans
- Sustainable Drainage Systems (SuDS), water efficiency and adaptive responses to the impacts of excess heat and drought

3.36. Other measures may include the sustainable use of resources through the use of recycled and secondary aggregates in the construction industry.

3.37. This policy does not presume against the future extraction of energy minerals. Indigenous mineral extraction has potential benefits in environmental and climate change terms.

This policy helps meet the following objectives:

SO3: Addressing climate change

Question 5

What do you think of the draft strategic policy for climate change?

SP5: Sustainable Transport

Introduction

- 3.38. Most minerals extracted in Nottinghamshire are currently transported by road, as this often the cheapest and most flexible way of serving a diverse range of markets. Historically some sand and gravel has been transported by barge and there may be potential for some minerals to be moved by water or rail in future.
- 3.39. Minerals development therefore has the potential to generate large volumes of HGV traffic which can have adverse impacts on local communities in terms of noise, air pollution, vibration and dust. Increased levels of traffic can also cause potential safety issues for other road users and increase the level of greenhouse gas emissions impacting on the climate.
- 3.40. When dealing with proposals for future mineral extraction consideration needs to be given to the distances over which minerals need to be transported, how they are to be transported, and assess the likely impacts on the natural and built environment, climate, local amenity and quality of life. In order to minimise any possible transport related impacts, alternative, more sustainable forms of transport will be encouraged.

Policy SP5 – Sustainable Transport

1. All mineral proposals should seek to maximise the use of sustainable forms of transport, including barge and rail.
2. Where it can be demonstrated that there is no viable alternative to road transport, all new mineral working and mineral related development should be located as follows:
 - a) within close proximity to existing or proposed markets to minimise transport movement; and
 - b) within close proximity to the County's main highway network and existing transport routes in order to avoid residential areas, minor roads, and minimise the impact of road transportation.
3. Proposals requiring the bulk transport of minerals, minerals waste/fill or materials/substances used for the extraction of minerals by road will be required to demonstrate that more sustainable forms of transport are not viable.

Justification

- 3.41. Minerals in Nottinghamshire are predominantly transported by road, generating significant HGV movements which can impact on local amenity, environmental quality and climate issues. The National Planning Policy Framework highlights the importance of reducing both greenhouse gases and congestion. Consequently, developments which generate significant movement should be located so as to minimise the need for travel and maximise the use of sustainable means of transport.
- 3.42. Wherever possible therefore, minerals sites should be located close to their end market in order to minimise overall transport distances. However, this will not always be feasible where the site is needed to supply a regional or national market and so the promotion of alternative, more sustainable forms of transport such as barge or rail transport is important.
- 3.43. Sand and gravel is a relatively low cost mineral and is not generally cost effective to transport over long distances. However, it can be transported economically over long distances by water. Barge transport has historically been used to transport sand and gravel along the River Trent to Yorkshire and Humberside from Besthorpe quarry north of Newark. Studies have shown there is potential to increase water-borne freight on parts of the river. However, restrictions on barge sizes upstream of Cromwell Lock may restrict the viability of barging minerals downstream to Nottingham.
- 3.44. Rail transport of minerals is possible, but expensive, and therefore only likely to be viable over very long distances. Its potential use will also depend upon whether there is sufficient infrastructure and capacity on the rail network. Pipelines and conveyors can be used to move minerals on-site from the extraction area to the processing plant reducing the need to use heavy machinery minimising noise and dust. In certain cases it may be possible to use conveyors or pipelines to import fill materials such as power station ash on to quarries as part of the restoration although this is only possible if the source of the material is close by.
- 3.45. Where road transport is necessary, sites should be located close to the main highway network in order to minimise potential impacts on local communities and Nottinghamshire's environment. In line with national policy, proposals should be accompanied by a Transport Assessment or Transport Statement to set out the transport issues associated with the proposed development and what measures will be needed to manage those issues. This may include improvements to the existing transport infrastructure to improve junction visibility or vehicle capacity, or the use of routing agreements to control traffic movement and direct vehicles

away from sensitive areas such as residential areas or important habitats. This can be achieved by the use of planning conditions or legal (S106) agreements where appropriate (see Policy DM11). Policy DM9 considers highway safety and vehicle movements/routeing in more detail.

This policy helps meet the following objectives:

SO1: Improving the sustainability of minerals development

SO3: Addressing climate change

SO5: Minimising impacts on communities

Question 6

What do you think of the draft strategic policy for sustainable transport?

SP6: The Built, Historic and Natural Environment

Introduction

- 3.46. Mineral extraction by its very nature can have a detrimental impact on the natural and built environment, albeit temporary in nature. Nevertheless, mineral extraction can also bring about many environmental benefits. The restoration of worked out quarries can significantly increase biodiversity, provide increased access and recreational opportunities or return the land to agriculture.

Policy SP6 – The Built, Historic and Natural Environment

All mineral development proposals will be required to deliver a high standard of environmental protection and enhancement to ensure that there are no unacceptable adverse impacts on the built, historic and natural environment unless it can be demonstrated that there is an overriding need for a development and any impacts can be adequately mitigated and/or compensated for. The consideration of adverse impacts will include effects upon:

- International, national, regional and local nature conservation sites and priority habitats and species as identified in the Nottinghamshire Local Biodiversity Action Plan;
- Sites of geological interest;
- Heritage assets (designated and non-designated) and their setting, and other cultural assets;
- Landscape and townscape character;
- Best and most versatile agricultural land and soil;
- Flood risk;
- Infrastructure;
- Highways;
- Community amenity; and
- Water quality (including groundwater) and water provision and air quality.

Justification

Nature conservation

- 3.47. The County contains important habitats and species and it is essential these areas are maintained for future generations. The most important areas are protected by international, national or local designations. At present the County has 1 Special Area of Conservation (SAC), 1 National Nature Reserve (NNR), 67 Sites of Special Scientific Interest (SSSI), 64 Local Nature Reserves (LNR), over 1400 Local Wildlife Sites (LWS) (formally known as Sites of Importance for Nature

Conservation (SINCs) and around 130 Local Geological Sites (formally known as Regionally Important Geological Sites (RIGs).

- 3.48. Outside these designated sites, areas of habitat and populations of species of national conservation importance also exist; Habitats of Principal Importance for Conservation in England ('Habitats of Principal Importance') are those identified through Section 41 of the Natural Environment and Rural Communities Act (2006); similarly, this legislation also identifies Species of Principal Importance for Conservation in England ('Species of Principal Importance'). A number of additional species and habitats are also identified as local conservation priorities through their inclusion in the Nottinghamshire Local Biodiversity Action Plan (LBAP).
- 3.49. It is therefore important to ensure that new minerals development is correctly managed and that no adverse impacts occur to designated sites, or priority habitats and species, as far as possible. Policy SP3 promotes a biodiversity-led restoration approach which seeks to maximise the biodiversity gains resulting from the restoration of mineral sites.

Geology

- 3.50. As well as those sites designated specifically for their nature conservation interest, the County also has 130 Regionally Important Geological/ Geomorphological sites (RIGs). Some of these sites have come about as a result of mineral working and it is important that future minerals development conserves and, where possible, enhances such sites.

Heritage and cultural assets

- 3.51. Nottinghamshire is not only rich in minerals, but also has an extensive historic environment. Mineral extraction by its very nature can destroy archaeological sites and features, however, where sites are properly investigated and recorded it can provide major opportunities to understand the County's rich archaeological heritage and what they say about the past.
- 3.52. There are currently over 18,000 archaeological sites and historic features in Nottinghamshire registered on the Historic Environment Record, including:

National designations:

- 3,700 listed buildings
- Over 150 scheduled monuments
- 19 Registered Parks and Gardens
- 1 Battlefield

Local designations:

- 174 Conservation Areas
- Creswell Crags (which straddles the boundary between Nottinghamshire and Derbyshire) is also reorganised for its international importance as this is currently on the UNESCO tentative list for Inscription as a World Heritage Site

- 3.53. Mineral extraction may affect the setting of heritage assets, be they buried remains, buildings, landscapes or places and extraction can cause change in the character of the landscape.
- 3.54. A recent research project looking at aggregate resources in Nottinghamshire and the archaeological remains they contain revealed that discoveries within mineral workings have yielded a wealth of new information about the Iron Age and Roman periods in the Trent and Idle Valleys. The report also highlights the fact that other areas outside the Trent and Idle Valleys are currently poorly understood in archaeological terms due to the lack of archaeological investigation.
- 3.55. The Strategic Stone study for Nottinghamshire (2013) undertaken by the British Geological Survey (BGS) highlighted the wide variety of local stones that have been quarried in the past. These stones are a key component of the County's local distinctiveness and maybe required in the future for historic building repair or to allow sympathetic new development in historic areas.
- 3.56. National policy states that the significance of the most important heritage assets and their settings should be protected, and that balancing the need for development against potential harm to heritage assets needs to be proportionate.

Landscape

- 3.57. The landscape character of Nottinghamshire is complex and has been created from the interaction of natural and man-made influences, such as geology, soil, climate and land use. All landscapes hold value, with some having the potential to be improved and restored. Many mineral developments have the potential to change the landscape, but their restoration can also help to improve landscapes, especially those which may be of a lower quality.
- 3.58. In order to manage future landscape alterations Nottinghamshire County Council has completed a Landscape Character Assessment (LCA) which divides the County into eleven Landscape Character Areas, of which the Trent Washlands is particularly under pressure from minerals development. Each Landscape Character Area has a unique combination of elements and features making them distinct. The LCA can be used to provide special protection to a specific feature,

identify suitable mitigation measures when loss is unavoidable and is valuable in the design of restoration schemes.

Agricultural land and soil

- 3.59. Much of the County's land is in agricultural use. It is a vital natural and economic resource that needs to be protected from unsuitable development.
- 3.60. Minerals development often involves large areas of land and is limited to areas where the mineral naturally occurs and agricultural land quality is often heavily influenced by the underlying geology. This means that a balance has to be made between the need for the mineral and the protection of the agricultural land. Land quality varies from place to place. The Agricultural Land Classification (ALC) provides a method for assessing the quality of farmland to enable informed choices to be made about its future use within the planning system. The ALC system classifies land into five grades, with Grade 3 subdivided into Subgrades 3a and 3b. The best and most versatile land is defined as Grades 1, 2 and 3a. The majority of sand and gravel extraction in the Trent and Idle Valleys will result in the substantial permanent loss of agricultural land to wetland which along, with other development pressures, is causing a continuous erosion of the County's finite agricultural resources. However, appropriate management and restoration of mineral workings can secure the safeguarding of best and most versatile soils.

Flooding

- 3.61. Flooding from rivers is a natural process that plays an important role in shaping the natural environment. However, flooding threatens life and causes substantial damage to property and infrastructure. Although flooding cannot be wholly prevented, its impacts can be greatly reduced through good planning and management. Such planning will have to take account of the impacts of potentially more extreme flood events.
- 3.62. National policy requires all local plans to take flood risk into account and where possible to direct development to areas of lower risk. For some minerals, especially alluvial sand and gravel, this may not always be possible and development in the floodplain will be unavoidable, as has occurred on a large scale in the Trent and Idle Valleys. Priority should be given to those options that pose the least risk and/or provide opportunities to improve flood defences and flood storage capacity.
- 3.63. In order to appraise these risks the County Council has undertaken a Strategic Flood Risk Assessment (SFRA). The aim of the SFRA is to map all forms of flood risk and use this as an evidence base to locate new development wherever possible in low flood risk areas.

- 3.64. Major flood risks exist along the Trent Valley and its tributaries and these risks may be increased by climate change.
- 3.65. Future mineral extraction within high risk areas is unlikely to be avoidable but mineral restoration schemes can in some cases provide opportunities to reduce flood risks.

Infrastructure

- 3.66. Nottinghamshire has an extensive physical network of transport, communications, water, energy, and waste infrastructure. Mineral working provides the raw materials to maintain much of this essential infrastructure but it is important that the process of mineral extraction does not compromise the operation of existing or planned future infrastructure. When considering development proposals, consultation with the utility companies, rail operators and other network providers will be required to identify potential risks and to ensure appropriate safeguards and/or mitigation measures. This is likely to include the need for appropriate stand-offs from overhead or underground transmission cables, buried or surface pipelines and rail infrastructure.

Highways

- 3.67. The majority of minerals are transported by road due to the relatively short distances to local or regional markets. Minerals proposals therefore need to take into account the likely impacts upon both the local highway network and nearby communities arising from increased levels of traffic. Potential impacts could include congestion, road safety, noise, dust, and vehicle emissions. National policy requires all development that is likely to generate significant amounts of movement to be accompanied by a Transport Assessment or Transport Statement which should include details of how potential impacts will be minimised. However development should only be prevented or refused on transport grounds where the residual cumulative impacts are severe. Further details in relation to potential impacts on highway safety and vehicle movements are set out in Policy DM9.

Community amenity

- 3.68. Minerals extraction by its very nature can have significant effects on the existing environment and the amenity of those living nearby and visiting Nottinghamshire. It is therefore important that proposals for new minerals development take into account the potential issues to ensure that where possible they are avoided in the first instance. Potential impacts include noise, dust, increased levels of traffic and loss of landscape. Further details in relation to potential impacts on amenity are set out in Policy DM1.
- 3.69. National guidance seeks to ensure that the environmental effects of minerals extraction such as noise and dust should be controlled, mitigated or removed at

source. This includes information on the proximity of minerals workings to communities, dust emissions and noise standards limits.

Water

- 3.70. Minerals development by its very nature will at some point affect surface and or ground water resources. This could be as a result of pumping water from areas where mineral is worked below the water table or where mineral is extracted in the flood plain. These activities could have impacts on a much wider area than just the boundary of the proposal. It is therefore important that these impacts are avoided and reduced through good design and site management.
- 3.71. Under the Water Framework Directive, the environmental objectives for groundwater and surface water bodies are:-
- To prevent deterioration in the status of water bodies, improve their ecological and chemical status and prevent further pollution.
 - Aim to achieve good quantitative and good groundwater chemical status by 2015 in all water bodies. For a groundwater water body to be in overall 'good' status, both its quantitative and chemical status must be 'good'- Implement actions to reverse any significant and sustained upward trends in pollutant concentrations in groundwater
 - Comply with the objectives and standards for protected areas where relevant
 - Hazardous substances must be prevented from entry into groundwater and the entry into groundwater of all other pollutants must be limited to prevent pollution. Water supply and the disposal of sewage and foul water from any site should be discussed with the relevant water company and the Environment Agency to ensure no deterioration of surface water or groundwater quality.
- 3.72. This approach is important for Nottinghamshire as the County is situated on Principal and Secondary Aquifers. These are layers of rock or drift deposits that provide a high level of water storage. They may support water supply and/or river base flow on a strategic scale. Secondary aquifers are permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers.

Environmental Impact Assessment

- 3.73. Environmental Impact Assessment (EIA) regulations require an assessment of the likely significant environmental effects of some minerals development. EIA is undertaken by developers as a means of drawing together, in a systematic way, an assessment of the likely significant environmental effects of certain types of minerals proposals.
- 3.74. Where there is a possibility that a proposed mineral development will require an EIA, developers are advised to consult the County Council well in advance of a

planning application, and formally request an opinion on whether an EIA is required and, if so, the scope of such an assessment.

This policy helps meet the following objectives:

SO6: Protecting and enhancing natural assets

SO7: Protecting and enhancing historic assets

Question 7

What do you think of the draft strategic policy for the built, historic and natural environment?

SP7: The Nottinghamshire Green Belt

Introduction

- 3.75. The Nottingham -Derby Green Belt covers the southern part of the County and comprises of an area of more than 43,000 ha and covers land around Greater Nottingham, Nottingham City and rural village areas. The Green Belt was principally designated to prevent coalescence between Nottingham and Derby.

Policy SP7 – The Nottinghamshire Green Belt

Within the Green Belt, minerals developments will be supported:

- Provided that the openness of the Green Belt is preserved; or
- Where very special circumstances can be demonstrated; and
- Where the highest standards of development, operation and restoration will be undertaken to enhance the beneficial use of the Green Belt.

Justification

- 3.76. Minerals can only be worked where they are found, and in the south of the county sand and gravel is predominately found in the River Trent valley. This area of the county is also largely covered by the Nottinghamshire green belt.
- 3.77. National policy states that minerals extraction is not inappropriate provided the openness of the green belt is preserved and where it would not conflict with the purposes of including land in the green belt. The purposes of the Green Belt as defined in national policy include:
- to check the unrestricted sprawl of large built up areas;
 - to prevent neighbouring towns merging into one another;
 - to assist in safeguarding the countryside from encroachment;
 - to preserve the setting and special character of historic towns; and
 - to assist in urban regeneration, by encouraging the recycling of derelict and other urban land
- 3.78. In many cases it is likely that suitably designed, landscaped and restored minerals workings can be accommodated in the greenbelt. Where proposals for extraction in the greenbelt are made, applicants should ensure that careful consideration has been given to the potential impact of the development on the openness of the Green Belt and the purposes of the relevant Green Belt designation. This is both the operational phase and could include the location, scale and impact from any associated plant and infrastructure and as part of the restoration scheme to ensure that the site is returned to a use compatible with Green Belt objectives.

This policy helps meet the following objectives:

SO6: Protecting and enhancing natural assets

Question 8

What do you think of the draft strategic policy for the Nottinghamshire Green Belt?

SP8: Minerals Safeguarding, Consultation areas and Associated Minerals Infrastructure

Issues and Options Sustainability Appraisal findings:

- Two options were appraised when considering what approach the plan should take towards the safeguarding of minerals.
- In summary Option A: 'Safeguard all mineral resources' and option B: 'Safeguard economically important mineral resources' were considered to be equal in terms of their sustainability

Introduction

- 3.79. Minerals can only be worked where they are found. In the plan area, potential mineral working areas may be limited by landscape and environmental designations or existing settlements; there may also be competition from non-minerals development. The National Planning Policy Framework requires that known locations of specific minerals be safeguarded from needless sterilisation by non-minerals development (such as built development) and that where it is necessary for non-minerals development to take place, there should be prior extraction of the mineral where practicable and environmentally feasible.

Policy SP8: Minerals Safeguarding, Consultation Areas and Associated Minerals Infrastructure

Safeguarding Areas

1. Economically important mineral resources and associated minerals infrastructure will be safeguarded from needless sterilisation by non-mineral development through the designation of minerals safeguarding areas as identified on the Policies Map.
2. Development within minerals safeguarding areas will have to demonstrate that mineral resources of economic importance will not be needlessly sterilised as a result of the development and that the development would not pose a serious hindrance to future extraction in the vicinity.
3. Where this cannot be demonstrated, and where there is a clear and demonstrable need for the non-minerals development, prior extraction will be sought where practicable.

Consultation Areas

4. District and Borough Councils within Nottinghamshire will consult the County Council as Minerals Planning Authority on proposals for non-minerals development within the designated Mineral Consultation Area, as shown on the Policies Map.

The Minerals Planning Authority will resist inappropriate development within the Minerals Consultation Areas.

Justification text

- 3.80. The Minerals Safeguarding Areas (MSA) identify the mineral resources which are worthy of safeguarding and the Minerals Consultation Area (MCA) identify the areas within Nottinghamshire where the District and Borough authorities are required to consult the Mineral Planning Authority over non-minerals development. The NPPF encourages the prior extraction of minerals before alternative uses are permitted. In Nottinghamshire the safeguarding and consultation areas are identical (with the exception of Colwick Wharf) and as such one map has been produced and is included on the Minerals Policies Map.
- 3.81. The mineral safeguarding approach does not seek to predict how much mineral is likely to be needed over the plan period but safeguards the viable mineral resource. Viability will change over time. With increasing scarcity, resources that are currently considered non-viable will become increasingly viable. However, the entire mineral resource is not safeguarded; it is only the most meaningful and best current estimate of viable resources which has been safeguarded for future assessment and possible use. See Plan 4 below.

3.82. For the purposes of safeguarding, Nottinghamshire has eight distinct mineral resources. These are:

- Sand and gravel
- Sherwood Sandstone
- Alluvial Sand and Gravel;
- Limestone(including building stone);
- Industrial dolomite;
- Brick Clay;
- Gypsum;
- Surface Coal

3.83. Not every non-mineral development proposal within or close to a Minerals Safeguarding and Consultation Areas represents a risk to future minerals extraction. The main risks will arise from proposals to extend built up areas and new development in the open countryside, as such; the following categories of development are exempt from both consultation and safeguarding:

- Development which is in accordance with adopted District/Borough Local Plan allocations which took account of minerals sterilisation and where prior extraction is not feasible or appropriate;
 - Temporary development;
 - Householder planning applications (except for new dwellings);
 - All applications for advertisements;
 - Infill development;
 - Reserved matters; and
- Prior notifications (telecoms, forestry, agriculture, demolition).

3.84. The British Geological Survey Resource Map (2013) provides information on the County's resources but excludes minerals that can only be worked by underground methods, such as deep mined coal, oil and gas and some gypsum deposits.

3.85. It is expected that the developer will carry out the necessary site investigations to prove the mineral resource. These will take into account factors such as the availability of the mineral, its relative scarcity, the timescale for the development going ahead, the possible extraction of the mineral and the viability of such extraction.

3.86. It is accepted that there may be circumstances where prior extraction may not be appropriate. In these cases the County Council would expect the developer to demonstrate that:

- The mineral concerned is no longer of any value or potential value; or
- There is an overriding need for the non-mineral development which outweighs the need for the mineral; or
- The proposed non-minerals development site is located on the urban fringe and mineral extraction would be inappropriate in this location; or
- The non-mineral development is of a minor nature as defined by the exemption criteria in paragraph 5.140.

3.87. Where prior extraction can be undertaken, an assessment should be undertaken to include an explanation of how this will be carried out as part of the overall development scheme.

3.88. Identification of minerals safeguarding areas does not provide a presumption in favour of working the mineral, and is not a guarantee that there is mineral present of viable quantity or quality. The Minerals Safeguarding and Consultation Areas are identified on the Minerals Policies Map and reflected in each Nottinghamshire District/Borough Adopted Local Plan Policies Maps.

3.89. The NPPF states that Mineral Planning Authorities , when preparing their plans should include policies to safeguard:

- Existing, planned and potential rail heads, rail links to quarries, wharfage and associated storage, handling and processing facilities for the bulk transport by rail, sea or inland waterways of minerals, including recycled, secondary and marine dredged materials, and
- Existing, planned and potential sites for concrete batching, the manufacture of coated materials and other concrete products, and the handling, processing and distribution of recycled and secondary aggregate mineral.

Wharfs

3.90. Nottinghamshire does not contain any rail heads and rail links to quarries, however, two wharfs are located within the County:

- Besthorpe – this wharf is directly linked to Besthorpe quarry and has been used to transfer sand and gravel by barge to South Yorkshire.
- Colwick – this is a general purpose wharf that has been used as a river dredging transfer facility. It has also been previously identified as a location to land sand and gravel from a previous quarry proposal at Shelford.

3.91. It is not considered appropriate to safeguard the Besthorpe Wharf as it is located in a remote greenfield location and is poorly connected to the road network should sand and gravel cease to be worked in this area in the future. However as Colwick

Wharf is well located close to the built up area and is on an existing industrial estate it is considered necessary to identify it as part of the consultation areas.

Secondary Processing Facilities

- 3.92. Concrete batching plants, coated road stone and other minerals infrastructure provide materials to maintain both existing infrastructure and new developments. In Nottinghamshire these facilities are associated with concrete, mortar and asphalt plants which utilise sources of aggregates to make 'value added' products. The facilities are relatively small in nature and whilst some are located on existing mineral workings, other are stand-alone facilities on industrial estates in urban areas.
- 3.93. Due to the large number of these sites within the County and the majority of these being located on existing industrial estates, which are identified within District/Borough Local Plans, there is no indication that any individual plant is important in its own right. In addition, such plants are also physically relocatable and as such are considered non-strategic and will not be safeguarded by the County Council.

This policy helps meet the following objectives:

SO1: Improving the sustainability of minerals development

SO2: Providing and adequate supply of minerals

SO3: Addressing climate change

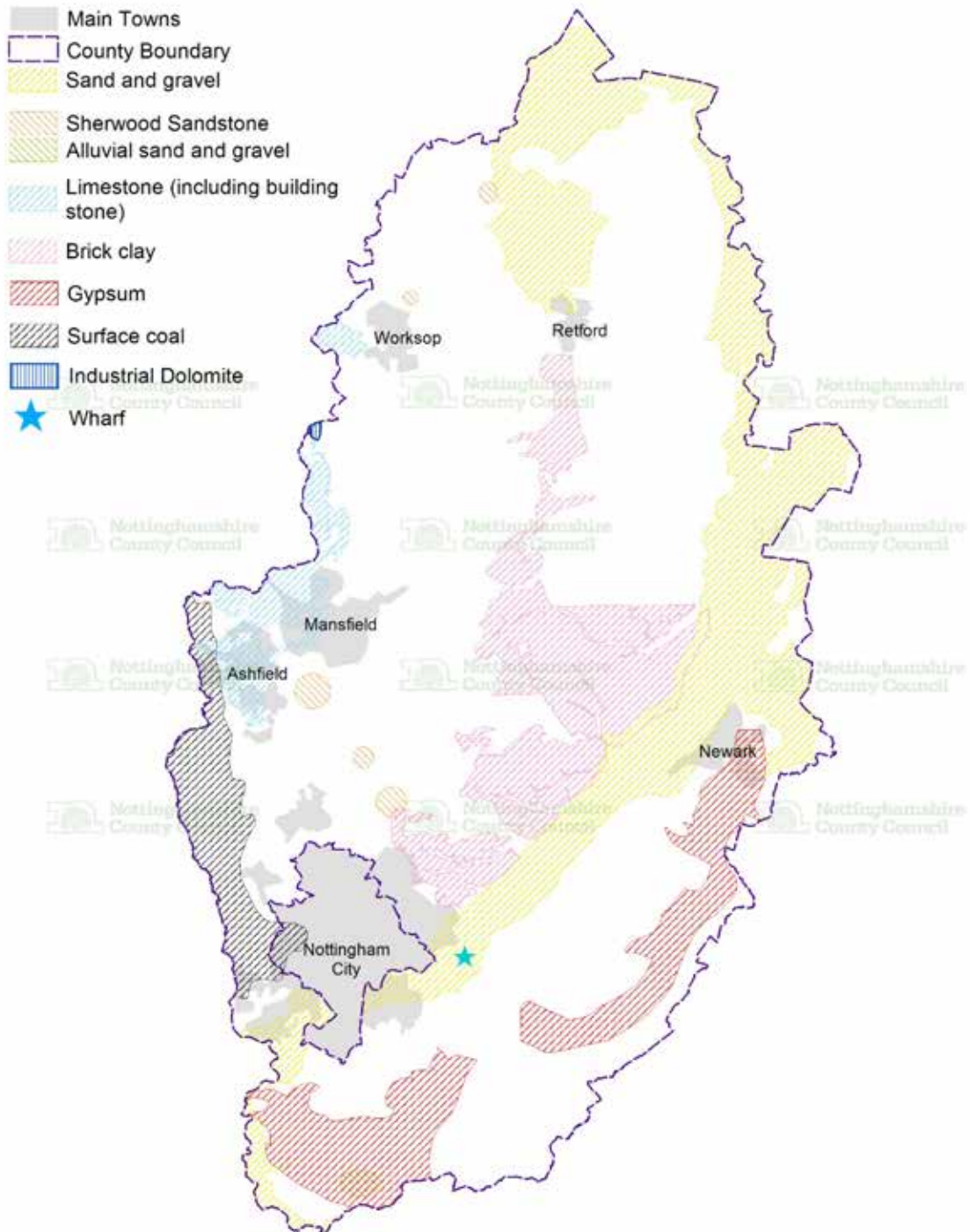
SO4: Safeguarding minerals resources

Question 9

What do you think of the draft strategic policy for Mineral Safeguarding, Consultation Areas and associated minerals infrastructure?

Plan 4: Minerals Safeguarding and Associated Minerals Infrastructure

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British Geological Survey. 2013. Digital Geological Map of Great Britain 1:625 000 scale (DiGMapGB-625) Superficial Deposits data [CD-Rom] Version 1.10. Keyworth, Nottingham: British Geological Survey. Release date 03-07-2013

4. Minerals Provision Policies

- 4.1. As explained in Chapter 3, minerals resources are very important to the County and a steady and adequate supply of minerals to meet future needs has to be planned for. Strategic policy SP4 sets the overall context for future mineral provision whilst the minerals provision policies set out within this chapter identify how and where these needs will be met for the different types of aggregate, industrial and energy minerals.
- 4.2. In most cases, existing sites which have not yet been worked out will meet some of this demand but the policies show where additional provision will be needed to make up any expected shortfall. Where a shortfall is identified, this will be met from a combination of new and/or extended sites although the priority is to extend existing sites wherever possible in line with strategic objective (SO1) to improve the sustainability of minerals development.
- 4.3. In order to identify the range of sites that could be available for mineral extraction over the plan period the council has worked with the minerals industry and local landowners to understand the location of workable mineral resources across the County. In response to a 'call for sites' exercise, mineral operators and landowners submitted a range of sites for which there were inferred minerals resources. This included both new sites and extensions to existing sites.
- 4.4. These sites have been carefully assessed to decide which are the most suitable and realistic options to allocate in the Plan. The sites which are allocated are shown in Policies MP2-12. The justification text following each policy includes more detail about each site and how they relate to any existing permitted site. Full details of this site assessment process can be found in the Site Selection Background Paper.
- 4.5. All of the sites will be subject to site allocation development briefs which will deal with site specific issues, including how the sites should be restored. These individual site development briefs are included in Appendix 3.

MP1: Aggregate provision

What you told us at the Issues and Options stage...

- Feedback regarding the methodology used to identify future demand was split between those who thought the approach was in-line with the NPPF methodology and those who thought the approach significantly underplayed future demand as it is based predominately on recession/austerity sales data.
- Some respondents thought that recycled aggregates should be encouraged to reduce the need for additional primary aggregates.
- It was generally considered appropriate to use the same basic methodology for forecasting demand for all aggregates minerals. However local factors for each of the aggregate types should be applied as these factors could influence the level of demand.
- It was generally agreed that the most suitable approach to site selection (extensions to existing quarries compared to new green field quarries) was to assess all proposals on their individual merits rather than prioritising one over the other.

Issues and Options Sustainability Appraisal findings:

- Four options were appraised when looking at how future demand should be forecast. A: Use the Local Aggregates Assessment (LAA) average 10 year sales figure for all types of aggregates, B: Use an alternative realistic and deliverable methodology for all types of aggregates which produces a lower figure than option A, C: Use an alternative realistic and deliverable methodology for all types of aggregates which produces a higher figure than option A, D: Use different methodologies for different aggregates
- In conclusion option A: 'Use the Local Aggregates Assessment (LAA) average 10 years sales figure for all types of aggregates' was considered the most suitable
- Five options were appraised when considering which approach should be adopted when identifying adequate minerals provision in the plan. A: Prioritise extensions to existing permitted quarries, B: Prioritise new greenfield sites, C: Allocate sites based on their individual merits, D: Use criteria based policy approach for all mineral types, E: Consider on a mineral by mineral basis.
- In conclusion option A: 'Prioritise extensions to existing permitted quarries' was considered to be most sustainable.

Introduction

- 4.6. Aggregates make a significant contribution to the construction industry, accounting for around 90% of the materials used. In England alone, nearly a quarter of a billion tonnes are consumed every year. Sustaining this level of demand is of national concern and raises major planning and environmental issues. All mineral planning authorities are required to plan for a certain proportion of the national demand for all aggregate minerals, known as the local apportionment, and to maintain a certain level of permitted reserves, known as the landbank.
- 4.7. Nottinghamshire has historically been a significant producer of sand and gravel the East Midlands, most of which comes from the Trent and Idle Valleys. This river or 'alluvial' mineral is mainly used in the production of concrete. Building and asphalt sand is produced from the Sherwood Sandstone resource but in much smaller quantities. Nottinghamshire's limestone production is relatively small, accounting for just 0.1% of the regional output, reflecting the County's limited resource of this mineral.

Policy MP1: Aggregate Provision

1. To meet identified levels of demand for aggregate mineral over the plan period (2017-2036) the following provision will be made:
 - 32.30 million tonnes of Sand and Gravel
 - 7.03 million tonnes of Sherwood Sandstone
 - 0.09 million tonnes of crushed rock
2. The County Council will make provision for the maintenance of landbanks of at least 7 years for sand and gravel, 7 years for Sherwood Sandstone and 10 years for crushed rock, whilst maintaining a steady and adequate supply over the plan period.
3. Proposals for aggregate extraction outside those areas identified in policies MP2, MP3 and MP4 will be supported where a need can be demonstrated.

Justification

- 4.8. The National Planning Policy Framework requires MPAs to produce a Local Aggregates Assessment (LAA) on an annual basis. This assesses both the demand for and supply of aggregates based on the average of the last 10 and 3 year sales data. This takes into account all possible supply options including the availability or otherwise of secondary or recycled aggregates as well as land-won sources. It also takes account of any significant local infrastructure projects that are taking place, or planned, and any opportunities or constraints that might influence future aggregate production.

- 4.9. MPAs are also required to work with other local Mineral Planning Authorities through an Aggregate Working Party to ensure that the approaches taken remain consistent and adequate supply is maintained. Nottinghamshire is part of the East Midlands Aggregate Working Party.
- 4.10. Based on the findings of the Local Aggregates Assessment published in October 2017 (December 2016 data) demand over the plan period has been calculated. For this exercise the plan period covers a 19 year period from 2017-2036. Tables 1 and 2 set out the production figures and demand over the plan period.

Table 1 Annual aggregate production (million tonnes)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Sand and gravel	2.97	2.37	1.27	1.56	1.71	1.55	1.39	1.43	1.52	1.27
Sherwood Sandstone	0.55	0.46	0.32	0.32	0.35	0.36	0.34	0.34	0.38	0.32
Crushed rock	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 2 LAA Average Production Figure and Estimated Total Aggregate Demand (million tonnes)

	LAA derived annual production figure	Estimated demand 2017-2036 (19 years)
Sand and gravel	1.7	32.3
Sherwood Sandstone	0.37	7.03
Crushed rock	0.005	0.095

- 4.11. Some of the estimated demand shown in Table 2 above, can be met from remaining permitted reserves (i.e. the mineral that is left in existing quarries that can still be worked). However, for most minerals, this will not be sufficient to cover the whole of the plan period and additional reserves will need to be permitted in order to make up the shortfall.
- 4.12. For each of the minerals (sand and gravel, Sherwood Sandstone and crushed rock) the shortfall has been calculated by deducting the estimated level of permitted reserves from the total amount of aggregate required over the life of the Plan. However it is important to remember that the level of permitted reserves can change over time as minerals operators re-assess the available reserves at each site. The level of remaining reserves will also be affected by any change in the annual output from each site. This highlights the importance of annual monitoring as set out in Chapter 6.

- 4.13. One of the most important indicators for aggregates is to assess how long the current stock of permitted reserves is likely to last. This is known as the 'landbank'. All MPAs are required to maintain a landbank of at least seven years' worth of sand and gravel reserves and ten years' worth of crushed rock reserves. The average production figures set out in the LAA will be compared against the permitted reserves of aggregates to monitor the level of the landbanks. If permitted reserves fall significantly below the required amount this could trigger a review of this section of the plan. Further information is available in the monitoring chapter.
- 4.14. The specific provision policies MP2 – MP4, below, show how the Plan will meet the anticipated shortfalls for each aggregate mineral and how the proposed sites have been selected.

This policy helps meet the following objectives:

SO1: Improving the sustainability of minerals development

SO2: Providing an adequate supply of minerals

Question 10

What do you think of the draft policy approach towards aggregate provision?

MP2: Sand and Gravel provision

What you told us at the Issues and Options stage...

- Responses were split between those who thought it was important to maintain a geographical spread of minerals. Reasoning given focuses on the need to minimise transportations distances, minimising environmental impacts, providing a steady and adequate supply of resources and ensuring that sites are located in relation to markets and demand (both within and outside the County).
- Other respondents thought that a geographical spread is just one factor that needs to be evaluated due to impacts on local residents, the availability of capacity on the highway network and the availability of recycled minerals in the main urban areas.
- Generally, respondents felt that prioritising specific geographic areas above others would not be appropriate, instead, each site should be judged on its own merits.
- Other suggestions included prioritising sites closest to the market, prioritising those with good transport links/access to barging or those that have the least impact on the local area.
- There was general agreement that the use of barges along the River Trent would provide a sustainable form of transport minimising minerals related HGV's. However there was an equal amount of concern regarding the actual financial viability of setting up the infrastructure needed for river barging particularly over a shorter distances.
- It was highlighted that the East Inshore and East Offshore Marine Plans maybe relevant to the Nottinghamshire Minerals Local Plan.

Issues and Options Sustainability Appraisal Findings:

- Five options were appraised when considering the plans approach to the location of future sand and gravel quarries. Option A: Geographical spread across the County, B: Prioritise specific areas, C: Prioritise locations with potential for transport sand and gravel by river barge, D: Allocate sites based on their individual merits, E: Use criteria based policy approach.
- In summary options A: 'Geographical spread across the County' and C 'Prioritise locations with potential for transporting sand and gravel by river barge' were considered to be the most suitable.

Introduction

- 4.15. In geological terms the sand and gravel resource is extensive, located in the Trent and Idle River valleys. Within the Trent Valley, production has historically been concentrated around Nottingham and Newark. This pattern has developed at least in part in response to a need to be close to the main markets for the mineral (due to sand and gravel being a low cost bulk material, meaning that haulage is a significant element of its cost). Currently between a third to a half of the County's production supplies markets in Yorkshire and Humberside, which the Idle Valley is well placed to serve.

Policy MP2: Sand and Gravel Provision

1. An adequate supply of sand and gravel will be identified to meet expected demand over the plan period from:

- a) The extraction of remaining reserves at the following permitted quarries:

	(Million tonnes)
MP2a Misson West	0.03mt
MP2b Newington South	0.39mt
MP2c Finningley	0.45mt
MP2d Sturton Le Steeple	7.50mt
MP2e Bawtry Road	0.60mt
MP2f Cromwell	2.40mt
MP2g Besthorpe	0.50mt
MP2h Girton	3.56mt
MP2i Langford Lowfields	1.35mt
MP2j East Leake	2.34mt
MP2k Scrooby	0.62mt

- b) The following extensions to existing permitted quarries:

MP2l Bawtry Road west	0.18mt
MP2m Scrooby Thompson Land	0.40mt
MP2n Scrooby North	0.39mt* (0.62mt)
MP2o Langford Lowfields south and west	3.60mt
MP2p Langford Lowfields North	4.70mt* (8.00mt)
MP2q East Leake North	0.75mt

- c) New sand and gravel quarries:

MP2r Botany Bay	2.44mt
MP2s Mill Hill nr Barton in Fabis	3.0mt**

Note: The above sites are shown on the Policies Map

Proposals to extract specialist grey sand reserves will be supported where a need can be demonstrated.

Planning applications for site allocations should be made in accordance with the site development briefs set out in Appendix 3

* Available within the plan period (total estimated reserves in brackets).

**Excludes potential reserves within the Nottingham City administrative area.

Justification

- 4.16. Based on the average production figures set out in the aggregate provision policy MP1, the plan needs to provide an estimated 32.3 million tonnes of sand and gravel over the plan period (see Table 1).
- 4.17. As of December 2016 there were 11 permitted sand and gravel sites (MP2a-k) located around the County containing estimated reserves of 17.5 million tonnes. Whilst these sites will initially help to maintain a seven year landbank and ensure continuity of supplies, there is a need to secure additional reserves over the Plan period.
- 4.18. The estimated sand and gravel shortfall over the plan period will therefore be 14.8 million tonnes of sand and gravel up to 2036.
- 4.19. Given that sand and gravel can only be worked where it is found, a geographical spread of sites has been identified to enable the continued supply of sand and gravel to the different market areas to minimise the wider impacts of HGV transport.
- 4.20. As a result, Policy MP2 allocates 6 extensions to existing quarries (MP2l-q) and 2 new quarries (MP2r-s) which total 15.46 million tonnes.
- 4.21. Table 3 below sets out a summary of the site allocations and how each is expected to contribute towards the sand and gravel shortfall over the plan period. A delivery schedule, which looks at how each of the extensions and new sites will contribute to the shortfall, can also be found in Appendix 2.

Table 3 Contributions to the sand and gravel shortfall over the plan period

Site	Location	Reserves (million tonnes)	Operational period (inclusive)
Extensions			
MP2l Bawtry Road west	Idle Valley	0.18	2026-2031
MP2m Scrooby, Thompson Land	Idle Valley	0.40	2019-2029
MP2n Scrooby North	Idle Valley	0.39*	2023- beyond plan period
MP2o Langford Lowfields south and west	Newark	3.60	2018-2026

MP2p Langford Lowfields north	Newark	4.70*	2026 - beyond plan period
MP2q East Leake north	Nottingham	0.75	2026-2030
New sites			
MP2r Botany Bay	Idle Valley	2.44	2020-2032
MP2s Mill Hill nr Barton In Fabis	Nottingham	3.0**	2018-2033
Total		15.46	

*available within the plan period

** Excludes potential reserves within the Nottingham City administrative area

Misson Grey Sand

- 4.22. Deposits of grey building sand occur erratically in the Misson area, sometimes below the main sand and gravel resource and sometimes at the surface. Historically, this grey sand has been worked on a relatively small scale. This sand is used as grey mortar sand, which has a premium value because most local mortar sands are red and yellow being derived from the Sherwood Sandstone.
- 4.23. Although counted as sand and gravel in planning and landbank terms, it would be inappropriate to treat it as part of the normal sand and gravel resource when assessing 'need'. This is because the grey sand serves a particular niche market which alluvial sand and gravel cannot meet. It is therefore reasonable to allow continued production of this sand, irrespective of the prevailing Countywide sand and gravel landbank.

Site Information

Existing permitted quarries and proposed extensions – Idle Valley

Misson West (MP2a)

- 4.24. The existing permitted site is located 1.5km south west of Misson village and 4km north east of Bawtry. The quarry has permitted reserves which are expected to last until the end of 2018. There are no further extensions possible to this site. (See appendix 4 – inset 2)

Newington South (MP2b)

- 4.25. This existing permitted site is located 2km south west of Misson Village and 3.5km north east of Bawtry. The quarry has permitted reserves which are expected to last

until 2019. There are no further extensions possible to the quarry and it will be restored to low lying wetland. (See appendix 4 – inset 2)

Finningley (MP2c)

- 4.26. The existing permitted quarry is located to the south east of Finningley village and crosses the border between Nottinghamshire and Doncaster Metropolitan Borough Council (MBC). The quarry has a permitted reserves until 2019. No further extensions to the quarry are considered possible. (See appendix 4 – inset 1)

Sturton Le Steeple (MP2d)

- 4.27. The existing permitted area is located to the east of Sturton Le Steeple village, approximately 9km south of Gainsborough. The quarry has planning permission but extraction has yet to commence. The planned output for the site is 450,000 tonnes per annum and has an expected life of 20 years. The quarry will be restored to a combination of nature conservation including wetland, agriculture and forestry. (See appendix 4 – inset 6)

Bawtry Road (MP2e)

- 4.28. The existing permitted quarry is located between Misson to the east and Newington to the south. The quarry is expected to have sufficient permitted reserves until 2026. The quarry will be restored to agricultural land.
- 4.29. The proposed western extension to the quarry (MP2k) covers 3.4 Ha and is expected to be worked towards once existing reserves have been worked in 2026. Output will remain in line with the existing permitted quarry at approximately 30,000 tonnes per annum and will continue to use existing plant site and access. Reserves are expected to last approximately 6 years. (See appendix 4 – inset 2)

Scrooby

- 4.30. Extraction has taken place at Scrooby since the 1930s, working both sand and gravel and Sherwood Sandstone (see policy MP3 for Sherwood Sandstone). An existing permitted Sand and gravel quarry (MP2k) has sufficient reserves until 2023. The existing processing plant remains in use.
- 4.31. Two extensions to this quarry are allocated. Both would utilise the existing processing plant and site access. Need to talk about both extensions
- 4.32. The proposed Thompson Land (MP2m) is expected to be worked from 2019. The quarry would be worked over a 10 year period at a rate of approximately 40,000 tonnes per annum.
- 4.33. The proposed Scrooby north quarry (MP2n) will supplement the Scrooby Thompson Land quarry in 2023 at an approximate output of 15,000 tonnes per annum. (See appendix 4 – inset 3)

Existing permitted quarries and proposed extensions - Newark area

Cromwell Quarry (MP2f)

- 4.34. The existing quarry is located to the north-east of Cromwell village alongside the A1, nine kilometres north of Newark. The quarry is currently being worked and has reserves sufficient for a further 4 years production. Due to the quarry's location close to the A1, mineral can be transported to northern or southern markets.

Besthorpe Quarry (MP2g)

- 4.35. The existing quarry is located to the north west of Besthorpe village near Newark. The quarry has sufficient permitted reserves until the end of 2020. Output at the quarry is approximately 150-200,000 tonnes per annum. Historically a proportion of the sand and gravel produced at the quarry was barged up the river to the Europort at Wakefield. However this has not taken place for a number of years. The site is predominantly being restored to wetland habitats and is being managed by Nottinghamshire Wildlife Trust. (see appendix 4 - Inset 10)

Girton Quarry (MP2h)

- 4.36. The existing quarry is located 8km north of North Collingham and 16km from Newark. The quarry is currently 'mothballed' but has permission until 2036. Sand and gravel is being worked from existing stockpiles at around 50,000 tonnes per annum but this is expected to increase to 100,000 in approximately 2020 when the quarry is expected to re-open. The quarry will be restored back to agriculture and wetland conservation. (See appendix 4 – inset 9)

Langford Lowfields Quarry (MP2i)

- 4.37. The existing quarry is located between Langford and Collingham, north of Newark. A small southern extension to the site was permitted in 2014 extending the life of the site to 2018. Planned output at the quarry is approximately 450,000 tonnes per annum. The quarry is being reclaimed to a major wildfowl/wetland reserve which is being managed by the RSPB. A number of extensions were put forward and after assessing the sites, both have been allocated (set out below). All the proposed extensions would continue to utilise the existing plant site and access on to the A1133. (See appendix 4 – inset 10)

Langford South and West (MP2o)

- 4.38. The southern and western allocation covers an area of approx. 127.2 Ha and would follow on from the permitted quarry, maintaining output at its current level until 2026. A planning application for this area has been submitted to the County Council although a decision has yet to be made.

Langford North (MP2p)

- 4.39. The Northern allocation covers an area of approx. 124 ha and has an expected life beyond this plan period. This area would be worked after the southern and western extension and would maintain output at its current level. (See appendix 4 – inset 10)

Existing permitted quarries and proposed extensions –Nottingham area

East Leake Quarry (MP2j)

- 4.40. The existing permitted quarry is located 1km to the south of East Leake. The quarry has sufficient permitted reserves until the end of 2026 at an output of 180,000 tonnes per annum. The quarry is being restored to agriculture and nature conservation. One extension to the site is allocated which would utilise the existing processing plant and site access.
- 4.41. The northern extension (MP2q) covers approx. ha and has an expected life of 3-4 years. It is expected the extension would be started once the existing site has been worked out. Output is expected to be between 180,000-250,000 tonnes per annum and would continue to utilise the existing processing plant and site access. (See appendix 4 – inset 19)

New greenfield quarries - Idle Valley area

Botany Bay (MP2r)

- 4.42. This is an allocation for a new greenfield allocation located 3km northwest of Retford. The site is being promoted as a replacement for the recent production loss in the Idle Valley particularly through the closure of Finningley expected in 2019/2020. The allocation covers 100ha and has an estimated life of 12 years, with an output of 200,000 tonnes per annum. (See appendix 4 – inset 5)

New greenfield quarries - Nottingham area

Mill Hill near Barton In Fabis (MP2s)

- 4.43. This is a draft allocation for a new greenfield site that is located 6km west of Nottingham. Output from the site would be approximately 280,000 tonnes per annum. The site is expected to be operational in 2019 and would be worked over a 15 year period. The quarry would be restored using a range of habitats including floodplain grazing marsh, reed bed, low land grassland and agricultural land. The draft allocation area contains approximately 3 million tonnes of reserves, however a planning application for a larger site that also covers an area within the Nottingham City administrative area has been received by both the County and City Councils. (appendix 4 – inset 18)

This policy helps meet the following strategic objectives:

SO1: Improving the sustainability of minerals development

SO2: Providing an adequate supply of minerals

Question 11

What do you think of the draft site specific sand and gravel allocations?

MP3: Sherwood Sandstone provision

What you told us at the Issues and Options stage...

- The industry stated that there is a need, where resources exist, to maintain production of Sherwood Sandstone through extensions to existing quarries or new quarries to meet the specific market needs.
- It was highlighted that it was important to protect the sandstone aquifer and that the broad area is in close proximity to areas important for nightjars and woodlarks and that have been identified for inclusion in the Sherwood Forest ppSPA.

Issues and Options Sustainability Appraisal findings:

- Four options were assessed when considering the plans approach to the location of future Sherwood Sandstone quarries. Option A: Prioritise extensions to existing permitted quarries, Option B: Prioritise new greenfield sites, Option C: Allocate sites based on their individual merits, Option D: use criteria based policy approach.
- In summary option A: 'Prioritise extensions to existing permitted quarries' was considered to be the most sustainable.

Introduction

- 4.44. Sherwood Sandstone is a specialist form of sand and gravel that is used primarily as asphalt and mortar sand. It accounts for around a sixth of the County's sand and gravel production. The Sherwood Sandstone resource covers nearly a quarter of the County, occurring as a broad belt between Nottingham and South Yorkshire. This is also a major aquifer and serves as an important water source for a wide area. Different grades and colours of sands (which have varying end uses) are found in the resource, however there is no comprehensive geological information about how these are distributed.

Policy MP3: Sherwood Sandstone Provision

An adequate supply of Sherwood Sandstone will be identified to meet expected demand over the plan period from:

- a) The extraction of remaining reserves at the following permitted quarries:

	(Million tonnes)
MP3a Burntstump	1.88mt
MP3b Bestwood 2	1.30mt
MP3c Carlton Forest	0.07mt
MP3d Scrooby Top	0.60mt

- b) The following extensions to existing quarries.

MP3e Bestwood 2 East	1.44mt
MP3f Bestwood 2 North	0.75mt
MP3g Scrooby Top North	1.68mt* (4.83mt)

Note: The above sites are shown on the Policies Map

Planning applications for site allocations should be made in accordance with the site development briefs set out in Appendix 3

* Available within the plan period (total estimated reserves in brackets).

- 4.45. Based on the Sherwood Sandstone requirement set out in the aggregate provision policy (MP1), the plan needs to provide 7.03 million tonnes of Sherwood Sandstone over the plan period.
- 4.46. As of December 2016 there were 4 permitted Sherwood Sandstone sites which contained estimated reserves of 3.85 million tonnes. Whilst these sites will help to maintain a seven year landbank and ensure continuity of supplies, there is a need to secure additional reserves over the plan period.
- 4.47. Using the annual production figure included in Table 1 and the estimated Sherwood Sandstone reserves from 2016, the plan would need to provide an additional 3.3 million tonnes of Sherwood Sandstone up to 2036.
- 4.48. The plan will therefore have to allocate further reserves to make up the expected shortfall in provision. Policy MP3 therefore identifies proposed extensions at three existing sites as discussed below. The delivery schedule, in Appendix 2 shows how these extensions are expected to contribute towards the shortfall.

Table 4 Contributions to the Sherwood Sandstone shortfall over the plan period

Site	Reserves (million tonnes)	Operational period (inclusive)
MP3g Scrooby Top North	1.68*	2022 - beyond plan period
MP3e Bestwood II East	1.44	2018-2029
MP3f Bestwood II North	0.75	2029-2035
Total	3.87	

*available within the plan period

Site information

Burnt stump (MP3a)

- 4.49. This existing quarry is located 3.5km west of Calverton. The quarry has planning permission until the end of 2021, although given the high level of permitted reserves the operator may apply for an extension of time in the future. Restoration will be to agriculture and woodland. (See appendix 4 – inset 15)

Bestwood 2 (MP3b)

- 4.50. This existing permitted quarry is located 1 mile south of Ravenshead and 6 miles south of Mansfield. The existing quarry has a planned output of 140,000 tonnes per annum and is due to be worked out by 2020. The site restoration will include heathland, marshland and sandstone cliff habitats.
- 4.51. An eastern extension is allocated (MP3e). The allocation will be commenced once the existing permitted reserves have been worked out at the current extraction rate of 140,000 tonnes per annum. The quarry is expected to have a life of 11 years and will utilise the existing processing plant and access. (See appendix 4 – inset 14)
- 4.52. A northern extension is also allocated (MP3f). The allocation will be commenced once the eastern extension has been worked out in 2029. Output will remain at 140,000 tonnes per annum for approximately 6 years. The existing processing plant and access will be used. (see appendix 4 – inset 14)

Carlton Forest (MP3c)

- 4.53. This existing quarry is located 2 miles to the north east of Worksop. The quarry is currently dormant but still has 54,000 tonnes of permitted reserves remaining. The quarry will be restored to agriculture.

Scrooby Top (MP3d)

- 4.54. Extraction has taken place at Scrooby since the 1930s working both sand and gravel and Sherwood Sandstone (see policy MP2 for sand and gravel). Extraction at this site is expected to be adequate until 2022.
- 4.55. A northern extension is allocated (MP3g) The allocation covers 25 ha and will be commenced once the existing permitted reserves are worked out. Output is planned at 120,000 tonnes per annum for 40 years and will utilise the existing processing plant and access. (See appendix 4 – inset 3)

This policy helps meet the following strategic objectives:

SO1: Improving the sustainability of minerals development

SO2: Providing an adequate supply of minerals

Question 12

What do you think of the draft site specific Sherwood Sandstone allocations?

MP4: Crushed rock (limestone) provision

What you told us at the Issues and Options stage...

- It was stated that demand for crushed rock is increasing both at a national and regional level and has returned to pre-recession levels. This trend may increase the need for crushed rock in Nottinghamshire.
- No other issues were forward that may impact on future demand for crushed rock.

Issues and Options Sustainability Appraisal findings:

- Three options were assessed when considering how additional further reserves would be identified if additional demand is required over the plan period. Option A: Allocate site (s), option B: Criteria based policy subject to need for additional provision, option C: Combination of site allocations and criteria based policy (subject to need)
- In summary option C: 'combination of site allocations and criteria based policy (subject to need)' was considered to be the most sustainable.

Introduction

- 4.56. Around 60 million tonnes of limestone are extracted in Great Britain every year making it the largest mineral extractive industry in the Country¹. The majority of this is used as an aggregate, the remainder being used in the cement, chemical, glass, iron and steel industries and agriculture. Limestone is also an important source of building and ornamental stone.
- 4.57. Although the East Midlands is one of the most important limestone producing areas, Nottinghamshire's resources are relatively limited and the only permitted reserves are at Nether Langwith Quarry (currently dormant). Limestone is the only 'hard rock' of any economic interest to be found in the County and by regional standards output is very low.

¹ UK Minerals Statistics Yearbook 2011 British Geological Survey 2012, page 12

Policy MP4: Crushed Rock (limestone) Provision

An adequate supply of limestone will be identified to meet expected demand over the plan period from the extraction of remaining reserves at the following permitted site:

	(Million tonnes)
MP4a Nether Langwith	3.34mt

Note: The above site is shown on the Policies Map

Justification

- 4.58. Based on the limestone requirements set out in the aggregate provision policy (MP1), the plan does not need to provide any further limestone as current permitted reserves at Nether Langwith quarry (see appendix 4 – inset 7) are adequate to cover the plan period. The quarry has planning permission until 2035 at a planned output of 250,000 tonnes per annum, however actual output has been much lower and it has not been worked for a number of years. At this point it would provide the opportunity to review the restoration scheme to ensure it is in-line with policy SP2 Biodiversity-Led Restoration.

This policy helps meet the following strategic objectives:

- SO1: Improving the sustainability of minerals development
- SO2: Providing an adequate supply of minerals

Question 13

What do you think of the draft policy to meet expected crushed rock demand over the plan period?

MP5: Secondary and recycled aggregates

What you told us at the Issues and Options stage...

- Responses were split between those who thought that alternative aggregates had reached a peak, and that recycling levels will rise and fall in line with the level of construction activity and economic conditions.
- And those that thought that a much greater emphasis and commitment to alternative aggregates (and their recycling) should be demonstrated in order to significantly increase levels recycled.
- It was stated that the fall in the availability of certain alternative aggregates such as power station ash and desulphogypsum was likely in the mid-term due to the closer of the coal fired power stations.
- Overall a policy on Alternative Aggregates was welcomed by many respondents.
- The potential to use material from colliery spoil heaps as aggregate was stated as an opportunity that should be investigated.

Issues and Options Sustainability Appraisal findings:

- Two options were appraised when considering how the plan will deal with alternative aggregates. Option A: Include a policy to promote the use of alternative aggregates, option B: Do not include a policy on alternative aggregates.
- In summary option A: 'Include a policy to promote the use of alternative aggregates' was considered to be most sustainable.

Introduction

- 4.59. The terms 'recycled' and 'secondary' aggregate are often used interchangeably. The term 'recycled aggregates' refers to aggregates that have been used previously in construction. Recycled aggregates can comprise construction and demolition wastes, asphalt road planings and used railway ballast.
- 4.60. 'Secondary aggregates' are by-products of other processes, and will not have been used previously as aggregates. They include colliery spoil, china clay waste, slate waste, power station ashes, blast furnace and steel slags, incinerator ashes and foundry sands.

Policy MP5: Secondary and Recycled Aggregates

Development proposals which will increase the supply of secondary and/or recycled aggregates will be supported where it can be demonstrated that there are no significant environmental, transport or other unacceptable impacts.

Justification

- 4.61. Government policy continues to encourage the use of secondary and recycled materials in construction in order to reduce the need for material from traditional sources. There are substantial amounts of these materials that could contribute further to aggregate supply. In order to conserve natural resources, aggregates (and products manufactured from aggregates) should be recycled wherever possible.
- 4.62. Although, there is considerable potential for using certain waste materials as secondary aggregates, large quantities either remain on site or end up in landfill. Making greater use of by-products and other waste materials will therefore also help to meet the Government's aim of reducing waste disposal to landfill. The Nottinghamshire and Nottingham Replacement Waste Local Plan sets out strategic policies to promote both temporary and permanent facilities for recycling aggregates centres.
- 4.63. Where recycled materials are technically, economically and environmentally acceptable as substitutes for primary materials, then they should be used. It is accepted, however, that there may be problems associated with the ability of these materials to meet required British Standard specifications and that their availability or location might make their use disadvantageous in economic terms.
- 4.64. It is recognised that many of the adverse environmental effects resulting from the extraction of primary aggregates apply to the use of secondary materials. This is because the processes are similar involving the generation of noise, dust and visual intrusion, and road transport using heavy goods vehicles. Incorporating recycling and secondary aggregate operations into an existing mineral development could also increase the overall harmful effect that the site has on the amenity of the surrounding area, or could increase the life of the development beyond that which is considered acceptable.

This policy helps meet the following strategic objectives:

SO1: Improving the sustainability of minerals development

SO2: Providing an adequate supply of minerals

Question 14

What do you think to the draft policy regarding secondary and recycled aggregates?

MP6: Brick Clay provision

What you told us at the Issues and Options stage...

- There was general agreement that site specific allocations would provide the most certainty for the industry and local community and assist in forward planning. If this was not possible it was considered adequate to rely on a criteria based policy.
- There was general agreement that a criteria based policy to consider potential new brick works was the most appropriate method for the Minerals Local Plan.

Issues and Options Sustainability Appraisal findings:

- Three options were appraised when considering how brick clay reserves and brick works should be identified to ensure a steady and adequate supply over the plan period. Option A: Allocate sites/extensions, Option B: Criteria based policy, Option C: Combination of allocations and a criteria based policy.
- In summary Options A: 'Allocate sites/extensions' and C: 'combination of allocations and criteria based policy' were considered to be the most sustainable.

Introduction

- 4.65. Brick clay refers to the clay and shale used in the manufacture of building and construction materials. In Nottinghamshire the clay extracted is used for facing bricks, pavers, roofing tiles and clay pipes, although nationally other important uses include cement production.
- 4.66. Extraction currently only takes place from the Mercia Mudstone resource to the east and south of the County. Resources do exist within the smaller Edlington Formation and Coal measures to the west of the County, however these have not been worked since the 1970s. No detailed assessment has been completed regarding the areas of the Mercia Mudstone which are best suited to brick manufacture; however the 'Gunthorpe Formation' location close to both of Nottinghamshire's existing brick works has been identified by the current operators as particularly suitable.

Policy MP6: Brick Clay Provision

1. An adequate supply of brick clay will be identified to meet expected demand over the plan period and enable a 25 year landbank per brick works to be maintained from:

a) The extraction of remaining reserves at the following permitted sites:

MP6a Kirton

MP6b Dorket Head

b) The following extensions to existing sites:

MP6c Woodborough Lane

2.7 million cubic metres

Note: The above sites are shown on the Policies Map

2. Proposals for clay extraction outside the sites identified above will be supported where it can be demonstrated that there are insufficient reserves available to meet the 25 year landbank requirement per site and that the identified sites are not deliverable.

Planning applications for site allocations should be made in accordance with the site development briefs set out in Appendix 3

Justification

4.67. There is no national demand forecast or local apportionment for brick clay although the National Planning Policy Framework (NPPF) does require a 25 year landbank of permitted brick clay reserves to be identified for each brick works. In Nottinghamshire there are two brick works with associated clay pits operated by two national producers – Dorket Head near Arnold and Kirton near Ollerton. Each site is discussed below:

Kirton (MP6a)

4.68. The existing brick pit is located to the east of Kirton village, 3km from New Ollerton and provides both red-firing and cream-firing clays directly to the brick works adjacent. The red-firing clay accounts for about 90% of demand. Reserves of red-firing clay is expected to be adequate until 2044. Reserves of cream- firing clay are located to the east of the brick works within a separate working area and are expected to be sufficient until at least 2030. The existing pits are being restored to agricultural land at a lower ground level. A small proportion of clay is imported from Waingroves quarry in Derbyshire for use as a blending material. (Appendix 4 – inset 8)

Dorket Head (MP6b)

- 4.69. The existing brick pit is located to the north of Arnold, ten kilometres from Nottingham. Clay from the pit is supplied directly to the brick works adjacent with permitted reserves expected to be sufficient until 2030. A planning application for a small southern extension has been submitted to the County Council which would provide an additional 3 years worth clay supply. Part of the site is being restored to agricultural land through a landfill scheme whilst the remainder of the site will be restored to agricultural land and woodland at a lower ground level. (see appendix 4 – inset 16)
- 4.70. An area on Woodborough Lane was put forward by the operator of Dorket Head clay pit as a remote extension and has been allocated. The clay pit would provide additional reserves from the early 2030s for approximately 20 -25 years. This would maintain supplies to the existing brick works. No additional processing plant would be required as the clay would be transported from the extension across the B684 to the existing stockpile within the currently permitted quarry. Restoration would either be to a lower ground level reflecting the existing surroundings or filled with inert materials. This would be considered in further detail at the appropriate time.

New brick works and clay pits

- 4.71. Any applications for new brick works and clay pits would need to have regard to the Strategic and Development Management policies of the plan, but more particularly be considered in light of the need for the development and any potential environmental, social or economic impacts

This policy helps meet the following strategic objectives:

SO1: Improving the sustainability of minerals development

SO2: Providing an adequate supply of minerals

Question 15

What do you think of the draft site specific allocation for brick clay?

MP7: Gypsum provision

What you told us at the Issues and Options stage...

- Having both site specific allocations and a criteria based policy was generally considered preferable. This would enable suitable future reserves to be identified over the plan period.
- The closure of coal fired power stations across the country is likely to increase the demand for natural gypsum to replace the loss of Desulphogypsum.

Issues and Options Sustainability Appraisal findings:

- Two options were appraised to consider how adequate gypsum reserves should be identified to meet demand over the plan period. Option A: Allocate sites/extensions, Option B: Use a criteria based policy approach.
- In summary Option A: 'Allocate sites/extensions' was considered to be the most sustainable.

Introduction

- 4.72. In Nottinghamshire two distinct gypsum resources are worked. The Marblaegis Mine at East Leake exploits the 'Tutbury Gypsum' and supplies an associated plasterboard plant and plaster works. Bantycok Quarry near Balderton, Newark exploits the 'Newark Gypsum'. The lowest seams at this site are very high quality and are the only mineral of this grade to be found in the UK. It is used in specialist plasters and a wide range of other products ranging from dentistry to food additives.
- 4.73. Since the mid-1990s national and local gypsum production has declined due to increased supplies of desulphogypsum (DSG), a by-product of flue gas desulphurisation plants that have been retrofitted at most coal fired power stations, including all three power stations in Nottinghamshire. The long term future of desulphogypsum is uncertain as new emission controls due in the 2020s could see more coal fired power stations close or switch to other fuels. This is likely to increase the demand for natural gypsum.

Policy MP7: Gypsum Provision

1. An adequate supply of Gypsum will be identified to meet demand over the plan period from:

a) The extraction of remaining reserves at the following permitted sites:

MP7a	Marblaegis Mine
MP7b	Bantycok Quarry

b) The following extension to the existing bantycok quarry:

MP7c	Bantycok Quarry South	(Million tonnes) 8.5 million tonnes
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Note: The above sites are shown on the Policies Map

2. Proposals for gypsum extraction outside the permitted sites identified above will be supported where a need can be demonstrated.

Planning applications for site allocations should be made in accordance with the site development briefs set out in Appendix 3

Justification

- 4.74. There is no national demand forecast or requirement to identify a local apportionment figure for Gypsum production and it is up to the industry to identify adequate reserves to maintain production.
- 4.75. Permitted reserves at the Marblaegis Mine (MP7a) are sufficient until at least 2026 and represent the full extent of the mine within Nottinghamshire. (See appendix 4 – inset 22). When these reserves are utilised, mining will move eastwards towards Wymeswold in Leicestershire.
- 4.76. Permitted reserves at Bantycok Quarry are currently expected to be adequate until around 2023 at current rates of extraction. (See appendix 4 – inset 17)

Bantycok Quarry South (MP7c)

- 4.77. A southern extension to the existing quarry is being proposed for allocation which would be worked once the existing permitted quarry has been exhausted. Output is expected to be between 350,000 – 500,000 tonnes per annum giving the quarry an additional 15-24 years. The restoration of the quarry is proposed to be largely back to agriculture in line with the existing quarry restoration.

This policy helps meet the following strategic objectives:

SO1: Improving the sustainability of minerals development

SO2: Providing an adequate supply of minerals

Question 16

What do you think of the draft site specific allocation for gypsum?

MP8: Silica sand provision

What you told us at the Issues and Options stage...

- A criteria based policy was considered the most appropriate approach for this important industrial mineral given that there is a requirement to maintain an adequate landbank over the plan period.
- It was suggested that additional text could be included to state that any additional future working at Two Oaks quarry should consider the impact on the Sherwood ppSPA and the nightjar and woodlark populations

Issues and Options Sustainability Appraisal findings:

- Three options were assessed when considering how additional further reserves would be identified if additional demand is required over the plan period. Option A: Criteria based policy subject to need for additional provision, Option B: Identify broad locations, Option C: Rely on development management (DM) policies.
- In summary options A: 'Criteria based policy subject to need for additional provision' and option B: 'Identify broad locations' were considered to be the most suitable.

Introduction

- 4.78. Silica sand is a non-aggregate form of Sherwood Sandstone that is also known as 'industrial sand'. Unlike aggregate sands, which are used for their physical properties alone, silica sands are valued for a combination of chemical and physical properties. It is used in the making of glass and creating molds and castings in industrial processing. This sand is also used in sand blasting, adding texture to slick roads and as a raw material in production of ceramics and sports surfaces. Compared to aggregate sand, silica sand resources are much less widespread. In Nottinghamshire silica sand is found within the 'Nottingham Castle Formation'.
- 4.79. The specialist nature of silica sand products means that the market area is very large and serves local, regional and national requirements. Due to the relatively small volumes of material and the varied destinations all silica sand extracted in Nottinghamshire is currently transported by road.

Policy MP8: Silica Sand Provision

1. The extraction of remaining reserves at the following permitted sites will be utilised to contribute towards the provision of an adequate and steady supply of silica sand sufficient for at least ten years:

MP8a Two Oaks Farm

Note: The above sites are shown on the Policies Map

2. Proposals for silica sand extraction outside the sites identified above will be supported where a need can be demonstrated.

Justification

- 4.80. There is no national demand forecast or local apportionment for silica sand although the NPPF does require a 10 year landbank of permitted reserves to be identified.
- 4.81. A silica sand quarry at Two Oaks Farm (see appendix 4 – inset 11), south of Mansfield has permitted reserves of approximately 12 million tonnes which is expected to be adequate for around 40 years. This satisfies the recommended 10 year landbank per quarry (or 15 years when significant new capital is needed) set out in national policy.

This policy helps meet the following strategic objectives:

SO1: Improving the sustainability of minerals development

SO2: Providing an adequate supply of minerals

Question 17

What do you think of the draft policy to meet demand for silica sand over the plan period?

MP9: Industrial Dolomite provision

What you told us at the Issues and Options stage...

- Respondents stressed the importance of protecting heritage assets including Creswell Crags SAM, SSSI and Registered Park and Garden if a quarry proposal was put forward.

Issues and Options Sustainability Appraisal findings:

- Two options were appraised when considering how additional reserves should be identified in the plan if a demand is identified. Option A: Allocate sites, B: Use a criteria based policy approach.
- In summary option A: 'Allocate sites' was considered to be the most sustainable

Introduction

- 4.82. Industrial dolomite is an industrial grade limestone that is mainly used in the iron and steel industry. The resource in the UK is rare and locally is only found in parts of the Magnesian Limestone which is mainly worked for aggregate grade mineral. The end market for industrial dolomite products is international due to the scarcity of this high quality mineral.
- 4.83. No industrial dolomite is currently worked in Nottinghamshire although there are known reserves in a small area near Holbeck village. Just across the County boundary at Whitwell in Derbyshire industrial dolomite is quarried alongside aggregate stone on a large scale. Typically around 1 million tonnes are extracted every year at this quarry with the tonnage being split evenly between the industrial grade and aggregate limestone. The industrial dolomite is processed into a range of refractory and other products in the on-site kilns and then exported to 28 countries spanning 4 continents.

Policy MP9: Industrial Dolomite Provision

Proposals for industrial dolomite extraction will be supported where a need can be demonstrated.

Justification

- 4.84. There is no national demand forecast or local apportionment for industrial dolomite. However, the NPPF states that Minerals Planning Authorities should plan for a steady and adequate supply of industrial minerals. Given the scarcity of the resource and the international market it supplies it will be important to work with Derbyshire County Council in relation to the existing site at Whitwell Quarry, to ensure that this can be achieved.
- 4.85. Existing permitted reserves at Whitwell quarry in Derbyshire are expected to be adequate until 2033 for industrial dolomite and 2040 for aggregate grade limestone, however due to operational requirements further reserves are likely to be needed before this date to maintain future production.
- 4.86. No site specific proposals for Industrial Dolomite were put forward for consideration as part of the evidence gathering process. As a result a criteria based policy is being proposed.
- 4.87. The known industrial dolomite reserve in Nottinghamshire is located close to Creswell Crags which is categorised as a Scheduled Ancient Monument, a Site of Special Scientific Interest and forms part of the Registered Park and Garden of Welbeck Abbey. The Crags are also identified on a short list for a potential future World Heritage Site. Therefore any proposal would require careful consideration of the potential impacts on the historic environment offset against the international need for the mineral.

This policy helps meet the following strategic objectives:

SO1: Improving the sustainability of minerals development

SO2: Providing an adequate supply of minerals

Question 18

What do you think of the draft policy to meet demand for Industrial dolomite over the plan period?

MP10: Building Stone provision

What you told us at the Issues and Options stage...

- No evidence was put forward to suggest additional reserves would be required over the plan period or that there were any other issues that needed to be considered.

Issues and Options Sustainability Appraisal findings:

- Three options were appraised when considering how the plan should identify future building stone reserves to meet local demand. Option A: Allocate sites/extensions, Option B: use a criteria based policy approach, Option C: combination of the allocations and criteria based policy.
- In summary Options A: 'Allocate sites / extensions' and C: 'Combination of site allocations and criteria-based policy' were considered to be the most sustainable.

Introduction

- 4.88. The continued quarrying of local building stones play an important role in helping to preserve the historic environment and enhancing the local distinctiveness of an area. Local stone is needed to allow existing historic buildings to be properly repaired and it also means new buildings in historic areas can blend in more effectively. The only permitted building stone quarry in Nottinghamshire quarries Bulwell Stone, a buff coloured limestone used as a building stone and more widely as a walling stone used to front many older properties in Nottingham and its suburbs.

Policy MP10: Building Stone Provision

1. The extraction of building stone at the following permitted site will be utilised to maintain future supply:

MP10a Yellowstone Quarry

2. Proposals for the extraction of building stone outside the permitted site identified above will be supported where it can be demonstrated that extraction will be primarily for non-aggregate use.

Note: The above site is shown on the Policies Map

Justification

- 4.89. National policy is reflected through Strategic Objective 7 (page 15), in that the identification of building stone quarries should be supported to ensure that adequate provision can be made to help conserve the historic built environment and local distinctiveness. Yellowstone quarry at Linby has planning permission to extract building stone but it is currently inactive. If reopened this could provide building stone to serve the local market and is the only such quarry in Nottinghamshire. (see appendix 4 – inset 16)
- 4.90. To date no other sites have been put forward, however demand for a specific building stone could drive the need to develop a new quarry. In this instance criterion 2 in policy MP10 will be used to assess future applications at other sites to ensure that the specialised resource is not used for aggregate purposes. This is in line with national requirements to make the best use of the limited resources to secure long term conservation.
- 4.91. In demonstrating a need, regard should be had to the Strategic Stone Study for Nottinghamshire, which sets out the significant building stones used in historical buildings and the potential quarries which could supply it.

This policy helps meet the following strategic objectives:

SO1: Improving the sustainability of minerals development

SO2: Providing an adequate supply of minerals

SO7: Protecting and enhancing historic assets

Question 19

What do you think to the draft policy to meet demand for building stone over the plan period?

MP11: Coal

What you told us at the Issues and Options stage...

- Some respondents suggested that consideration is given to 'softening' planning requirements for coal extraction for power plants that use carbon capture storage.
- Other respondents thought that fossil fuels should be withdrawn and all energies should be put into sustainable and renewable sources of energy.

Issues and Options Sustainability Appraisal findings:

- Two options were appraised to consider how the plan should consider the future requirements for coal provision or the reworking of spoil tips/lagoons. Option A: Use a criteria based policy approach, Option B: Rely on development management (DM) policies.
- In summary Option A: 'use a criteria based policy approach' was considered to be the most sustainable.

Introduction

- 4.92. Most of Nottinghamshire's coal resources are deeply buried and have to be exploited by deep coal mining. It is only in the far west of the County along the Erewash Valley where the coal measures are exposed, that surface (opencast) extraction is possible. The last deep mine in Nottinghamshire located at Thoresby Colliery closed in July 2015. A proposal to work surface mined coal at Shortwood Farm near Cossall has planning permission but has yet to be worked. (see Plan 4).

Colliery tipping

- 4.93. When coal is mined, a considerable amount of waste spoil is removed, which has to be disposed of. Due to the closures of the remaining collieries in Nottinghamshire, it is unlikely that any additional land will be required for spoil disposal over the plan period. If in the future new coal reserves are exploited this may be a significant consideration for any new proposal.

Coal recovery

- 4.94. Historical coal processing was often inefficient and substantial quantities of coal were left in the spoil. At some sites it may now be economic to recover this coal,

which can amount to several hundred thousand tonnes in a single large tip. Coal recovery involves the re-excavation of spoil for processing, the remainder of which is then re-deposited within the original tipping area. The last tip to be worked in this way was Langton Colliery tip near Kirkby in Ashfield, between 2011 and 2013 (see Plan 4).

Policy MP11: Coal

1. Permission for the extraction of coal will only be granted where:
 - a) the proposal is environmentally acceptable, or can be made so by mitigation; or
 - b) the proposal provides national, local or community benefits which clearly outweigh the likely adverse impacts.

Along with the above the following will be taken into account:

Surface mined coal: Incidental mineral extraction

2. Where proposals for surface mined coal are acceptable, proposals for the recovery and stockpiling of fireclays and other incidental minerals will be supported where this does not result in any unacceptable environmental or amenity impact.

Colliery Tipping

3. Proposals for colliery tipping will be supported where:
 - a) a need can be demonstrated; and
 - b) the proposal is environmentally acceptable.

Reworking colliery spoil tips/lagoons

4. Applications will be supported for the reworking of colliery spoil tips/lagoons where the environmental and economic benefits of the development, including addressing the likelihood of spontaneous combustion and substantial environmental improvement of the site, outweigh the environmental or amenity impacts of the development or the loss of established landscape and wildlife features.

Justification

- 4.95. National guidance sets out that permission should not be granted for the extraction of coal unless it can be made environmentally acceptable through planning conditions or if not where local or national benefits outweigh the likely impacts. There are no production targets as the Government believes this is a matter for the markets reinforced by long term policy measures.

- 4.96. Although it is unlikely that additional colliery tipping will be required during the plan period, this activity can have significant impacts in terms of land take and visual prominence. Should proposals for future coal extraction come forward, these will need to be accompanied by details of how the spoil would be managed.
- 4.97. The reworking of colliery spoil tips and lagoons is in principle a sustainable activity as it recovers coal that has been discarded as waste and it can provide an opportunity to properly reclaim old tips/lagoons that may have been left in a poor state. However, it can also have a significant impact on the environment in terms of visual intrusion, traffic movements, noise and dust. These impacts have to be weighed against the benefits, which could include opportunities for landscape or habitat enhancement.

This policy helps meet the following strategic objectives:

SO1: Improving the sustainability of minerals development

SO2: Providing an adequate supply of minerals

Question 20

What do you think of the draft policy relating to meet demand for coal over the plan period?

MP12: Hydrocarbon Minerals

What you told us at the Issues and Options stage...

- Generally a single criteria-based policy which covers exploration, appraisal and production stages was considered in line with national policy.
- However the main focus of the responses related to shale gas and 'fracking'. Concerns regarding this type extraction related to impacts on local communities, climate emission reduction, well casing reliability, groundwater protection and gas leakage.

Issues and Options Sustainability Appraisal findings:

- Three options were appraised when considering what approach the plan should take towards hydrocarbons. Option A: Use single criteria based policy approach for all hydrocarbons, Option B: Have separate criteria based policies for each type of hydrocarbon, Option C: Allocate sites.
- In summary Option C: 'Allocate sites' was considered to be the most sustainable.

Introduction

- 4.98. Hydrocarbon minerals comprising oil and gas are the most important energy minerals produced and consumed in the UK. In 2010, 125 million tonnes were produced in the UK, whilst 165 million tonnes were consumed².
- 4.99. Historically, two main forms of hydrocarbons have been worked in Nottinghamshire; oil and mine gas, however other unconventional hydrocarbons such as coal bed methane and shale gas extraction are being developed and could be worked over the plan period. Plan 4 identifies the hydrocarbon resources and sites in Nottinghamshire. Further information regarding the existing permitted sites can be found in the Hydrocarbons background paper on the County Council website.

Oil

- 4.100. Oil has been extracted on a small scale since the Second World War when oil reserves in deeply buried sandstones were identified at Eakring. Since then further oil fields have been identified, mostly in north Nottinghamshire, but also as far south as Rempstone near the boundary with Leicestershire. The oil recovered in Nottinghamshire is of high quality and mainly used in the plastics and chemical

² UK Minerals Statistics Yearbook 2011 British Geological Survey 2012, page 68-69

industries rather than as a fuel. The majority of oil is taken by rail from the central collecting station at Gainsborough to refineries at Immingham, Humberside.

Mine gas

- 4.101. Mine gas refers to the methane that is released from coal seams during deep mining. When mining ceases and ventilation shafts are closed, this gas can fill the mineshafts and other voids and can escape to the surface where it can pose a threat to health and safety in the locality. The situation has become much more prevalent recently because of the number of Nottinghamshire collieries that have closed over the last 30 years. Mine gas can be recovered and burnt to generate electricity.

Coal bed methane

- 4.102. Coal bed methane extraction involves removing methane directly from the coal seam without actually mining the coal. The industry is most developed in the USA, whilst in the UK and Europe it remains in its infancy. Interest is however developing and it could become a significant energy source for the future. In Nottinghamshire a number of proposals for coal bed methane exploration have been granted planning permission. Nearly all of Nottinghamshire overlies a potential coal bed methane resource but the most promising prospects are believed to exist in the eastern half of the County due to the geological formation.

Underground coal gasification

- 4.103. Energy can also be recovered from coal in the ground by a process known as 'underground coal gasification'. This burns the coal underground using steam/water and oxygen to generate hydrogen, carbon monoxide and methane. It generates far more energy than coal bed methane which does not extract any energy from the solid coal itself. This technology has not been applied to any significant extent and the prospect of this technology being developed remains uncertain.

Shale gas

- 4.104. Vast quantities of methane exist in many shale deposits worldwide and recent technological advances have now made it economically possible to exploit them. The technology and exploitation of shale gas is most advanced in the USA where it has gone through a period of very rapid development and is now exploited on a very large scale. The UK also has a significant, but as yet largely untested potential shale gas resource. In Nottinghamshire, potential shale gas resources are thought to exist in deeply buried shale deposits found in the far south and north of the County.

- 4.105. Shale gas extraction is a very intensive activity that involves vertical and horizontal drilling to reach the shale rock formation. A mixture of water, sand and additives is then pumped under high pressure into the bore hole to fracture the rock (a process known as 'fracking'). The gas trapped in the rock is then released and can be collected.

Policy MP12: Hydrocarbon Minerals

Exploration

1. Proposals for hydrocarbon exploration will be supported provided they do not give rise to any unacceptable impacts on the environment or residential amenity.

Appraisal

2. Where hydrocarbons are discovered, proposals to appraise, drill and test the resource will be permitted provided that they are consistent with an overall scheme for the appraisal and delineation of the resource and do not give rise to any unacceptable impacts on the environment or residential amenity.

Extraction

3. Proposals for the extraction of hydrocarbons will be supported provided they are consistent with an overall scheme enabling the full development of the resource and do not give rise to unacceptable impacts on the environment or residential amenity.

Restoration

4. All applications for hydrocarbon development will be accompanied with details of how the site will be restored once the development is no longer required.

Justification

- 4.106. The majority of national production is offshore and one of the biggest energy issues facing the UK is the expected rapid decline in our domestic oil and gas production due to the depletion of these resources. By 2020, the UK could be importing around three quarters of its primary energy needs. This factor, combined with high energy prices and recent technological advances has created a very strong impetus to explore and develop new domestic sources of oil and gas. This includes previously untapped 'unconventional' resources such as coal bed methane and shale gas, both of which are known to exist below Nottinghamshire.
- 4.107. The NPPF states that for oil and gas including unconventional hydrocarbons, minerals planning authorities should develop criteria based policies that clearly distinguish between the three phases of development (exploration, appraisal and production) and to address constraints that apply within licensed areas. It also

encourages the capture and use of mine gas from abandoned mines. National energy policy suggests a broadly positive stance subject to the necessary environmental safeguards would be appropriate.

- 4.108. The Planning Practice Guidance states that existing hydrocarbon developments, along with Petroleum Licence Areas should be identified in local plans (see plan 5). Site specific allocations can be included in the local plan if put forward by the industry, however no such sites were put forward as part of the 'call for sites' exercise undertaken as part of the evidence gathering process.
- 4.109. It is considered that there is no justifiable reason in planning policy terms to separate shale gas from other hydrocarbon development. All hydrocarbon development has the potential to deliver national energy requirements, but should be subject to environmental safeguards. Applied to the local circumstances of the Minerals Local Plan, the assessment of environmental and amenity impact (i.e. the constraints on hydrocarbon development) is covered by and can be delivered through the application of the development management policies.
- 4.110. Petroleum Exploration and Development Licenses (PEDL) are issued by The Oil and Gas Authority under powers granted by the Petroleum Act 1998. The current licensed areas are shown on the policies map.
- 4.111. A UK Petroleum Exploration and Development Licence (PEDL) allows a company to pursue a range of oil and gas exploration activities, subject to necessary drilling/development consents and planning permission.
- 4.112. Planning permission is one of the main regulatory requirements that operators must meet before drilling a well for both conventional and unconventional hydrocarbons. The County Council is responsible for granting permission for the location of any wells and well pads, and will impose conditions to ensure that the impact on the land is acceptable. However it is not the only regulatory body that permission for extraction is required from. They include:
- The Oil and Gas Authority issues PEDL, gives consent to drill under the Licence once other permissions and approvals are in place, and have responsibility for assessing risk of and monitoring seismic activity, as well as granting consent for flaring or venting;
 - Environment Agency (EA) – protect water resources (including groundwater aquifers), ensure appropriate treatment and disposal of mining waste, emissions to air, and suitable treatment and manage any naturally occurring radioactive materials;

- Health and Safety Executive (HSE) – regulates the safety aspects of all phases of extraction, in particular responsibility for ensuring the appropriate design and construction of a well casing for any borehole.

4.113. A hydrological assessment will be required in support of any planning application and water availability may be a limiting factor in any proposal.

4.114. A Frequently Asked Questions (FAQ) document on unconventional hydrocarbons has been produced by the County Council and can be found on the Council's website.

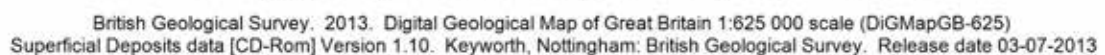
This policy helps meet the following strategic objectives:

SO2: Providing an adequate supply of minerals

Question 21

What do you think of the draft policy to meet demand for hydrocarbon minerals over the plan period?

**N
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5. Development Management Policies

What you told us at the Issues and Options stage...

- The proposed list of development management policies was generally considered appropriate.

Issues and Options Sustainability Appraisal findings:

- Two options were appraised as to how the development management plan should be dealt with in the plan. Option A: Develop specific policies for specific topic areas. Option B: Develop criteria based policies for broad groupings of topic areas.
- In summary Option A: 'Develop specific policies for specific topic areas' was considered to be the most sustainable.

- 5.1. The purpose of development management policies is to help to deliver the strategic policies and objectives by providing the criteria against which future minerals development will be assessed. They relate specifically to individual, site level criteria such as environmental impacts and standards and provide guidance about how planning applications for minerals development in the County will be assessed.
- 5.2. Applicants are advised to discuss proposals for minerals development with the County Council prior to submission of a planning application, as set out in the adopted Statement of Community Involvement (SCI). Such pre-application engagement can enable early identification of potential constraints and has the potential to improve efficiency and effectiveness of the planning system. This approach is encouraged by the Government and more details are set out in the National Planning Policy Framework.
- 5.3. Applications for minerals development should provide sufficient information to allow a balanced assessment to be made. A list of the information that may be required is set out in Appendix 1.

Environmental Impact Assessment

- 5.4. Environmental Impact Assessment (EIA) is often required for major developments that are likely to have significant impacts on the environment. The EIA process is used to identify the likelihood of significant impacts occurring as a result of a development, how these could be mitigated, and alternative ways in which the development could be carried out. Where EIA is required, the findings of this

process must be included in a separate Environmental Statement to be submitted alongside the planning application.

- 5.5. All mineral planning applications that meet the appropriate thresholds and criteria set out in the EIA Regulations (2011) will therefore be screened to determine whether or not EIA is required. Applicants may also request a formal screening opinion from the MPA prior to submitting a planning application. Where EIA is required, applicants may also request a scoping opinion setting out the issues to be addressed within the Environmental Statement.

Review of Mineral Permissions

- 5.6. Mineral planning permissions are subject to periodic review in accordance with the legislative requirements of the Planning and Compensation Act 1991 and the Environment Act 1995. This review process is used to ensure that mineral sites continue to work under modern conditions which reflect sustainability aspirations and offer appropriate environmental protection.
- 5.7. The review process is carried out in a similar way to the processing of a planning application but is focussed on bringing planning conditions up to date. The process cannot be used to remove legal working rights and compensation may be payable if working rights are unreasonably affected. Review submissions may be subject to Environmental Impact Assessment in the same way as a planning application. Applicants submitting review schemes should have regard to the requirements of the policies contained in this document, and ensure that all the environmental issues are satisfactorily addressed.

DM1: Protecting local amenity

Introduction

- 5.8. Minerals extraction by its very nature can have significant effects on the existing environment and the amenity of those living and working nearby. Potential impacts include noise, blasting, dust, increased levels of traffic and visual impact. It is therefore important that proposals for new minerals development take into account potential issues to ensure that, where possible, they are avoided in the first instance. Where this is not possible, adequate mitigation measures should be put in place to minimise the impacts of the development to an acceptable level.

Policy DM1: Protecting Local Amenity

Proposals for minerals development will be supported where it can be demonstrated that any adverse impacts on amenity are avoided or adequately mitigated to an acceptable level. The types of impacts that need to be considered include but are not restricted to:

- Landscape and Visual impacts;
- Noise;
- Blast vibration;
- Dust;
- Mud
- Air emissions;
- Lighting;
- Transport;
- Stability of the land at and around the site, both above and below ground level.

Justification

- 5.9. Ensuring a good standard of amenity for all existing and future occupants of land and buildings is a core planning principle of the National Planning Policy Framework. New and existing development should not contribute to, or be put at risk from, pollution or other sources of nuisance or intrusion which could adversely affect local amenity, particularly in relation to sensitive receptors.
- 5.10. The precise level of impacts will vary according to local conditions and the type, scale, and intensity of development proposed. Factors to be considered will therefore include the local topography, the position of the proposed development in relation to other uses and the degree to which any adverse effects can be mitigated. Depending upon the proximity and sensitivity of surrounding land uses an appropriate stand-off distance may be required between the proposed mineral working area and nearby residential or other sensitive uses. This will be

determined on a case by case basis taking account of any proposed mitigation measures.

- 5.11. The visual impacts of mineral working will vary depending on the scale, duration, and type of operation proposed. It is important that sites are located sensitively in terms of their wider setting and that the detailed site layout is designed to minimise potential impacts. This could include measures such as additional landscape screening; the direction and phasing of site working and reclamation; and the location of fixed or mobile processing plant, buildings, stockpiles and internal haul roads. National guidance suggests that a landscaping strategy should accompany proposals for mineral development which should define the likely impacts and identify appropriate screening and mitigation measures to minimise visual impact and the impact on landscape quality.
- 5.12. In accordance with national policy, all mineral working proposals should ensure that any unavoidable noise, mud, dust and particle emissions and any blasting vibrations are controlled, mitigated or removed at source. Where appropriate this will include establishing appropriate noise limits for extraction in proximity to noise sensitive properties. Appropriate measures to mitigate potential noise impacts include the use of noise suppression equipment on plant and machinery and acoustic barriers, site specific noise limits and restrictions on site operating hours. Further guidance on noise assessment is provided within the Planning Practice Guidance and Explanatory Note of the Noise Policy Statement for England.
- 5.13. Proposals will also need to demonstrate that they will not have an adverse impact on air quality from dust, plant or vehicle emissions. A dust assessment study may be required to determine the impacts during site construction, operation and restoration. This should include details of appropriate mitigation measures such as relocating potential sources of dust within the site to minimise impacts and the use of dust suppression equipment, limiting on-site vehicle speeds and the temporary suspension of dust-causing activities during unfavourably dry or windy conditions. Dust monitoring may need to be carried out where dust generating activities are to be carried out close to neighbouring sensitive properties. The use of site sweepers and wheel-washing equipment may also be required to limit the spread of dust or mud off-site.
- 5.14. The planning process should ensure, wherever possible, that the potential for air emissions from site machinery and or related transport to occur from new, or changes to, existing development are dealt with through appropriate site layout, design, maintenance and operation.
- 5.15. Good site design is also encouraged in order to limit the impact of light pollution on local amenity, intrinsically dark landscapes and nature conservation. Guidance, such as that from the Institute of Lighting Professionals (Guidance Notes for the

Reduction of Obtrusive Light), should be considered to ensure lighting schemes are suitable for the site location. Factors to consider will include the height and angle of lighting installations, the use of shielding and proposed hours of use.

- 5.16. Potential impacts on local amenity arising from the transportation of minerals include an increase in the number and size of vehicles on the existing road network, damage to roads and verges, vibration, mud, dust and noise. Measures to limit the adverse effects on local amenity could include sheeting of lorries, wheel cleaning facilities; highway improvements and maintenance; and controls over the number of vehicles and hours of working. Policy DM9 contains further measures relating to highway safety.
- 5.17. Mineral development proposals must also take account of existing and potential future site stability issues. National policy is clear that, where a site is affected by contamination or land stability issues, responsibility for securing a safe development rests with the developer and/or landowner.
- 5.18. Most forms of minerals development are likely to require an Environmental Impact Assessment (EIA) to examine the likely significant environmental effects what is being proposed. EIA is undertaken by developers as a means of drawing together, in a systematic way, an assessment of the likely significant environmental effects of certain types of minerals proposal.
- 5.19. Where there is a possibility that a proposed mineral development will require an EIA, developers are advised to consult the County Council well in advance of a planning application, and formally request an opinion on whether an EIA is required and, if so, its scope.
- 5.20. Where appropriate, avoidance or mitigation measures required to make a minerals development acceptable as a result of this policy will be secured through planning conditions attached to the planning permission. Where measures cannot be secured in this way, planning obligations (also known as Section 106 Agreements) may be used to make the development acceptable in planning terms. See Policy DM11: Planning Obligations for further details.

This policy helps meet the following strategic objectives:

SO5: Minimising impacts on communities

Question 22

What do you think of the draft policy wording for DM1: Protecting local amenity?

DM2: Water resources and flood risk

Introduction

- 5.21. Minerals development by its very nature will at some point affect surface and or ground water resources. This could be as a result of pumping water from areas where mineral is worked below the water table or where mineral is extracted in the flood plain. These activities could have impacts on a much wider area than just the boundary of the proposal. It is therefore important that these impacts are avoided and reduced through good design and management of minerals sites.
- 5.22. The protection of ground and surface water quality is important for both people and wildlife. Proposals for mineral working must therefore ensure that there is no adverse impact on the flow, quantity and quality of surface and groundwater.

Policy DM2: Water Resources and Flood Risk

Water resources

1. Proposals for minerals development will be supported where it can be demonstrated that:
 - a. Surface water flows at or in the vicinity of the site are not detrimentally altered;
 - b. Groundwater quality and levels are not detrimentally altered;
 - c. There are no unacceptable risks of polluting ground or surface waters;
 - d. Water resources, where required, should be used as efficiently as possible.

Flooding

2. Proposals for minerals development will be supported where it can be demonstrated that there will be no unacceptable impact on:
 - a. Flood flows and storage capacity;
 - b. The integrity or function of flood defences or structures acting as flood defences;
 - c. Local land drainage systems.
3. Proposals for mineral extraction that increase flood risk to local communities will not be supported unless the risks can be fully mitigated.
4. Where the opportunity exists, restoration proposals should seek to incorporate flood risk reduction measures e.g. flood plain storage and reconnection, flood defence structures, and land management practices to benefit local communities.
5. Minerals development should include Sustainable Drainage Systems (SuDS) to manage surface water drainage unless it can be shown that it is impracticable to do so.

Justification

- 5.23. Applicants will be required to assess the potential impacts upon the water environment at both extraction and restoration phases, undertaking a hydrological/hydrogeological investigation where necessary. Where appropriate this should include details of how potential impacts from site pumping (de-watering) will be mitigated. Measures will also need to be taken to protect ground and surface water sources from potential contamination from dust or fuel spillage from plant, vehicles and storage tanks.
- 5.24. The Environment Agency is the main authority for safeguarding the water environment; it is responsible for improving and protecting inland and coastal waters ensuring sustainable use of natural water resources, creating better habitats and other factors that help to improve the quality of life. The Environment Agency publishes Information on groundwater vulnerability and the location of source protection zones for water supply.
- 5.25. The Environment Agency's Groundwater Protection: Principles and Practice uses aquifer designations which are consistent with the Water Framework Directive to reflect the importance of aquifers in terms of groundwater as a resource and also their role in supporting surface water flows and wetland ecosystems. Where water abstraction is required as part of the proposed working scheme, applicants should consult with the Environment Agency and refer to the Agency's local Catchment Abstraction Management Strategy.
- 5.26. Applicants must also consider potential flood risk issues at the outset of any scheme. National guidance states that inappropriate development in areas of flood risk should be avoided by directing development away from areas of highest risk. However minerals can only be worked where they are found and extraction is therefore classed as a temporary activity. Due to their specific nature, mineral workings are classified as either Water Compatible or Less Vulnerable development. As such, minerals development can be permitted within Flood Zones 1, 2 and 3a. Sand and gravel quarries are also appropriate in Flood Zone 3b subject to meeting additional criteria. The site selection process for the site allocations identified within the Local Plan has taken account of the Sequential Test, the purpose of which is to steer new development to areas with the lowest probability of flooding.
- 5.27. At the planning application stage, operators may be required to undertake a site specific Flood Risk Assessment where:
- Development sites are located in Flood Zone 2 or Flood Zone 3;
 - The proposed development is classed as a major development (all sites over 1 ha) and located in Flood Zone 1. Since the risk of fluvial or tidal flooding is minimal such assessments should focus on the management of surface water;

- Development sites located in an area known to have experienced flooding problems from any flood source;
- Where a development site is located within 20m of a Main River.

5.28. The national Planning Practice Guidance provides details as to the content of Site Specific Flood Risk Assessments. As a minimum assessments should take account of:

- The areas liable to flooding;
- The probability of flooding occurring, both during operations and after;
- The extent and standard of existing flood defences and their effectiveness over time;
- The likely depth of flooding;
- The rates of flow likely to be involved;
- The likelihood of impacts to other areas, properties and habitats;
- The potential effects of climate change;
- Identify opportunities to reduce overall flood risk
- Application of the sequential test at a site level

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

5.30. Careful site design at the planning application stage will be required to address potential flood issues and emergency planning, including locating any stockpiles, storage mounds, fixed plant or buildings in the least vulnerable parts of the site and, if it's not possible to locate any essential sleeping or residential accommodation for staff in areas not vulnerable to flooding, to ensure that they are subject to a specific flood warning and evacuation plan. Where appropriate, Sustainable Drainage Systems (SuDS) that are capable of storing and controlling the discharge of water should be incorporated into the design of proposals.

5.31. There may also be occasions where site operators are required to provide future flood defence maintenance to ensure the standard of protection is maintained for the duration of site operations.

5.32. Multiple environmental benefits can however be delivered through the restoration of mineral workings; simultaneous benefits to flood risk management, habitat creation and Water Framework Directive improvements can be achieved. The restoration of quarries should ensure that opportunities are explored for delivering wider environmental benefits through site restoration schemes. This could include river bank realignment and floodplain reconnection.

- 5.33. A number of different bodies have responsibilities in terms of managing flood risk. The Environment Agency is responsible for managing the risk of flooding from main rivers and reservoirs and coastal areas and prepares national and regional flood risk guidance and strategies.
- 5.34. Nottinghamshire County Council has a strategic role in overseeing the management of local flood risk, flooding from surface water runoff, groundwater and ordinary watercourses and will be working with the Environment Agency and the Water Companies on strategies to tackle this issue. The County Council is developing a Flood Risk Management Strategy in partnership with other organisations including District and Borough Councils, Severn Trent Water, the Environment Agency, Internal Drainage Boards and Nottingham City Council.
- 5.35. Internal Drainage Boards (IDBs) are statutory public bodies and operate in accordance with the Land Drainage Act and other legislation. There are two in Nottinghamshire; The Trent Valley Board's district extends through the Trent Valley from south Nottingham to just north of Gainsborough and part of the Vale of Belvoir. The Isle of Axholme and North Nottinghamshire Water Level Management Board covers the Idle Valley. Their principal role is to manage water levels in connection with flood risk and land drainage. Boards have powers to maintain a selected network of watercourses within their areas. Other watercourses are the responsibility of the landowner but the Boards also have permissive powers to ensure that they are satisfactorily maintained.

This policy helps meet the following strategic objectives:

SO3: Addressing climate change

SO6: Protecting and enhancing natural assets

Question 23

What do you think of the draft policy wording for DM2: Water resources and flood risk?

DM3: Agricultural land and soil quality

Introduction

- 5.36. Most of the County's undeveloped land is in agricultural use. It is a vital natural and economic resource and protecting the highest quality land from development is an important consideration.

Policy DM3: Agricultural Land and Soil Quality

Agricultural land

1. Proposals for minerals development located on the best and most versatile agricultural land (grades 1, 2 and 3a) will only be supported where it can be demonstrated that:
 - a. There is no available alternative and the need for development outweighs the adverse impact upon agricultural land quality; or
 - b. Proposals will not affect the long term agricultural potential of the land or soils; or
 - c. Alternative land of lower agricultural value has considerations which outweigh the adverse impact upon agricultural land quality.
2. Where alternative options are limited to varying grades of best and most versatile land, the development should be located within the lowest grade.

Soil quality

3. Measures will be taken to ensure that soil quality will be adequately protected and maintained throughout the life of the development and, in particular, during stripping, storage, management and final placement of soils, subsoils and overburden arising as a result of site operations.

Justification

- 5.37. Minerals development often involves the use of large areas of agricultural land as extraction is limited to where the minerals naturally occur. The National Planning Policy Framework (NPPF) states that where significant development of agricultural land is considered to be necessary, poorer quality land should be used in preference to that classed as best and most versatile, provided this is consistent with other sustainability criteria.
- 5.38. Where sites are already in agricultural use, it may be desirable for the land to be returned to agriculture following development although other uses may be appropriate provided that the long-term potential of the best and most versatile agricultural land can be maintained.

- 5.39. In keeping with the approach set out in Policy SP5, this could include biodiversity led-restoration schemes as long as the land and soil is maintained in a state capable of supporting agriculture in future, should the need arise.
- 5.40. Where agricultural restoration is the preferred option, this can still deliver significant benefits for 'farmland' biodiversity in the form of hedgerows, ponds small woodlands and other habitat features and, if well designed, thereby delivering a net gain for biodiversity. Moreover, many Habitats of Principal Importance such as Lowland Meadows or Floodplain Grazing Marsh can be compatible with commercial livestock systems, and are dependent upon agricultural management. Water features in agricultural restoration can contribute to agricultural irrigation, biodiversity, flood alleviation and storage, and landscape enhancement in a multi-functional way, and should all be considered.
- 5.41. Soils are an important and valuable restoration material and their proper handling and conservation is essential. The whole soil profile is not just important for agricultural restoration. It can also be important for other uses, such as sports pitches and nature conservation. Mismanagement of the soil resource is likely to seriously prejudice the standard of restoration. The practice of site restoration and returning soil to a good quality can help reduce surface water runoff, via improved infiltration. This can lead to reduced suspended solids running off into local water courses which is beneficial for both the objectives of the Water Framework Directive and flood risk management.
- 5.42. For most sites a detailed soil survey will be required to identify soil types, profiles and depths. Where different soils are recorded, separate stripping, storage and replacement may be required to allow reinstatement of the original or suitable alternative soil profiles. Operators may therefore be required to submit a soil handling scheme as part of their proposals.
- 5.43. In some circumstances the relocation of soils of sufficient quality to ensure better agricultural use elsewhere may be appropriate to protect this important resource. Policy DM12: Restoration, After-use and Aftercare provides further information.

This policy helps meet the following strategic objectives:

SO8: Protecting agricultural soils

Question 24

What do you think of the draft policy wording for DM3: Agricultural land and soil quality?

DM4: Protection and enhancement of biodiversity and geodiversity

Introduction

- 5.44. The importance of biodiversity cannot be underestimated. It consists of the rich diversity of flora and fauna which form a critical part of the earth's ecosystem which humans are a part of and depend on. Biodiversity brings other benefits too. It can be important in flood protection, filter air and waterborne pollutants, cool the urban environment, moderate noise, foster understanding of the natural environment, increase the attractiveness of an area and therefore encourage more people to interact with their local environment and contribute to healthier lifestyles. It is therefore important to ensure that new minerals development is appropriately managed.

Policy DM4: Protection and Enhancement of Biodiversity and Geodiversity

1. Proposals for minerals development will be supported where it can be demonstrated that:
 - a) They will not give rise to any likely significant adverse effects on the integrity of a European site (either alone or in combination with other plans or projects, including as a result of changes to air or water quality, hydrology, noise, light and dust), unless there are no alternative solutions, imperative reasons of overriding public interest and impacts can be fully mitigated;
 - b) They are not likely to give rise to a significant adverse effect on a Site of Special Scientific Interest, except where the benefits of the development clearly outweigh the importance of the site and where no suitable alternative exists;
 - c) They are not likely to give rise to the loss or deterioration of Local Sites (Local Wildlife Sites or Local Geological Sites) except where the need for and benefits of the development in that location outweigh the impacts;
 - d) They would not result in the loss of populations of a priority species or areas of priority habitat, or other irreplaceable habitats including ancient woodland or veteran trees, except where the need for and benefits of the development in that location clearly outweigh the loss.
2. Where impacts on designated sites or priority habitats or species cannot be avoided, then adequate mitigation relative to the scale of the impact and importance of the resource must be put in place, with compensation measures secured as a last resort.

3. Nottinghamshire's biodiversity and geological resources will be enhanced by ensuring that minerals development:
- a) Retains, protects, restores and enhances features of biodiversity or geological interest, and provides for appropriate management of these features, and in doing so contributes to targets within the Nottinghamshire Local Biodiversity Action Plan;
 - b) Makes provision for habitat adaptation and species migration, allowing species to respond to the impacts of climate change; and
 - c) Maintains and enhances ecological networks, both within the County and beyond, through the protection and creation of priority habitats and corridors, and linkages and stepping stones between such areas.

Justification

- 5.45. Nottinghamshire has an extensive network of sites, both designated and non-designated, which are important for their biodiversity and geological interest. At the international level, 'European sites' (also known as the Natura 2000 sites) are of exceptional importance in respect of rare, endangered or vulnerable natural habitats and species within the European Community. These sites consist of Special Areas of Conservation (SACs) and Special Protection Areas (SPAs). Ramsar sites are also designated at the international level; however, Nottinghamshire does not currently contain any of these.
- 5.46. Sites of international importance are specifically protected under national legislation and any proposal that would be likely to have a significant effect on a European site, either alone or in combination with other plans or projects, would need to ensure that all impacts can be mitigated. This protection applies to candidate³ sites as well as those that have already been designated. Any development that is not directly connected with the management of any European sites, but likely to have a significant effect on them, will require a Habitats Regulations Assessment to be carried out at the planning application stage to ensure that any such effects can be mitigated.
- 5.47. The Council is aware that a possible Special Protection Area (SPA) is under consideration for part of Nottinghamshire which could therefore become a candidate site. If a Special Protection Area is subsequently identified and sent to the European Commission for designation, the Council will assess the implications of this and what action is necessary to deal with any issues raised. In the meantime the Council will adopt a "risk based" approach, as advised by Natural

³ A candidate site is one which has been put forward for designation but not confirmed.

England, and assess any applications in accordance with the requirements of the Birds Directive.

- 5.48. At a national level, the County contains a number of SSSIs designated and protected under the Wildlife and Countryside Act 1981, as amended by the Countryside and Rights of Way Act 2000. Consultation with Natural England will be required for any development likely to affect a SSSI.
- 5.49. Local Sites are designated at a local level and include Local Wildlife Sites (LWSs) and Local Geological Sites (LGSs). Some, but not all, Ancient woodlands are designated as LWSs within Nottinghamshire and are considered to be an irreplaceable habitat. Together, these designated sites form part of the country's irreplaceable natural capital and the Minerals Local Plan will contribute towards their protection and encourage and support opportunities for enhancement.
- 5.50. When determining planning applications, national policy is clear that distinctions should be made between the hierarchy of international, national and locally designated sites, so that protection is commensurate with their status and gives appropriate weight to their importance and the contribution that they make to wider ecological networks.
- 5.51. Other habitats of conservation importance fall outside of these designated sites, and these are identified as Habitats of Principal Importance for Conservation in England, designated under Section 41 of the Natural Environment and Rural Communities Act 2006, and regarded as conservation priorities in the UK Post-2010 Biodiversity Framework. Similarly, many species in Nottinghamshire that do not receive legal protection are identified as Species of Principal Importance for Conservation in England. Both were formerly known as UK Biodiversity Action Plan (UKBAP) priority habitats or species, and are also listed in the Nottinghamshire Local Biodiversity Action Plan. They have high nature conservation value, contributing to the county's biodiversity and its ecological networks.
- 5.52. Where a site hosts a priority habitat or species, and there is no alternative solution, the only considerations which can justify the grant of planning permission are (a) those which relate to human health, public safety or beneficial consequences of primary importance to the environment or (b) other imperative reasons of overriding public interest agreed by the European Commission⁴.
- 5.53. The National Planning Policy Framework (NPPF) also sets out the so-called mitigation hierarchy, which requires for significant harm from development to be

⁴ Circular 06/2005

avoided, adequately mitigated, or, as a last resort, compensated for, stating that if this cannot be achieved, then planning permission should be refused.

- 5.54. Where compensation is required, this should ensure that there is no net loss of habitat, provide like for like replacements of habitat and make up for any lost connections between habitats. Where significant impacts on species are predicted, compensation schemes should also provide overall habitat improvements, in terms of quality or area, in comparison to the habitat that is being lost.
- 5.55. Biodiversity enhancement should be seen as a cross cutting theme and opportunities to create and improve habitats will be supported in accordance with local and national biodiversity targets. The prevention of fragmentation of existing habitats is key to allow species to respond to the impacts of climate change by making provision for habitat adaptation and species mitigation. Where minerals development adversely affects biodiversity interest, negative impacts should be minimised and mitigation to address these impacts should be provided.
- 5.56. A number of species are protected by law, principally the Wildlife and Countryside Act 1981 and the Conservation of Habitats and Species Regulations (2010), whilst efforts to support improvements in the population of targeted species are reflected through the Nottinghamshire Local Biodiversity Action Plan.
- 5.57. Biodiversity Opportunity Mapping has been substantially completed for approximately two-thirds of Nottinghamshire, including the Trent Valley. The study should be used to help inform proposals for mineral workings and restoration.
- 5.58. In order to assess biodiversity impacts fully, applicants may be required to carry out an ecological survey as part of their application.

This policy helps meet the following strategic objectives:

SO3: Addressing climate change

SO6: Protecting and enhancing natural assets

Question 25

What do you think of the draft policy wording for DM4: Protection and enhancement of biodiversity and geodiversity?

DM5: Landscape character

Introduction

- 5.59. People value the countryside and its landscape for many different reasons, not all of them related to traditional concepts of aesthetics and beauty. It can provide habitats for wildlife and evidence of how people have lived on the land and harnessed its resources. Landscape has a social and community value, as an important part of people's day-to-day lives. It has an economic value, providing the context for economic activity and often being a central factor in attracting business and tourism.

Policy DM5: Landscape Character

1. Proposals for minerals development will be supported where it can be demonstrated that it will not adversely impact on the character and distinctiveness of the landscape unless there is no available alternative and the need for development outweighs the landscape interest and the harmful impacts can be adequately mitigated;
2. Landscaping, planting and restoration proposals should take account of the relevant landscape character policy area as set out in the Landscape Character Assessments covering Nottinghamshire and, where appropriate, the output of the Biodiversity Opportunity Mapping study.

Justification

- 5.60. National Planning Guidance states that valued landscapes should be protected and enhanced, and requires Local Plans to include criteria based policies against which proposals for any development on or affecting landscape areas will be judged.
- 5.61. Landscapes form an important part of the character of Nottinghamshire and have been created from a complex mix of natural and man-made influences such as geology, soil, climate and land use. This has given rise to a variety of landscapes that continue to evolve over time. All landscapes hold value and some have more potential to be improved and restored than others.

- 5.62. Many activities have the potential to change the landscape and in the case of mineral extraction, this can be significant. Mineral workings can destroy landscape character, but their restoration can also help to improve landscapes, especially those which may be of a lower quality. Priority will be given to minerals developments that provide long term enhancements to landscape character.
- 5.63. In order to manage changes to landscape character, three Landscape Character Assessments (LCA) were published in 2009 (Bassetlaw, Newark and Sherwood and Greater Nottingham including Ashfield and Mansfield), these cover the whole of the County. 11 character areas have been identified and each Landscape Character Area has a unique combination of elements and features that make them distinctive:
- Derbyshire and Nottinghamshire Coalfields (DC);
 - East Nottinghamshire Sandlands (ES);
 - Idle Lowland (IL);
 - Leicestershire and Nottinghamshire Wolds (LW);
 - Magnesian Limestone (ML);
 - Mid Nottinghamshire Farmland (MN);
 - Sherwood (SH);
 - South Nottinghamshire Farmlands (SN)
 - Trent Valley (TV);
 - Trent Washlands (TW);Vale of Belvoir (VB).
- 5.64. The Trent Washlands in particular is identified under pressure from minerals development.
- 5.65. The LCAs identify specific features of the different Landscape Character Areas and this information can then be used to give special protection to the feature or to identify suitable mitigation measures when loss is unavoidable. It is also valuable in the design of restoration schemes.
- 5.66. An Areas of Multiple Environmental Sensitivity Study has been carried out for parts of Nottinghamshire in areas around the River Trent to help inform site allocations, future proposals for mineral workings and restoration schemes. A similar study has also been carried out in Derbyshire (Areas of Multiple Environmental Sensitivity) to inform their future Minerals Local Plan.
- 5.67. To ensure that new minerals development considers existing landscapes and visual impact, a local landscape and visual impact assessment will be required for all proposals to identify potential impacts on the surrounding areas. All landscape proposals for the restoration of minerals sites, such as earthworks, after-use and planting, should reflect the landscape type and character area.

This policy helps meet the following strategic objectives:

SO6: Protecting and enhancing natural assets

SO8: Protecting agricultural soils

Question 26

What do you think of the draft policy wording for DM5: Landscape character?

DM6: Historic environment

Introduction

- 5.68. Nottinghamshire has a rich history and this can be seen in the wide range of historic buildings, settlements, landscapes, parks, gardens and monuments as well archaeological sites and features that contribute to the local identity and sense of place. It is important to protect, conserve and, where opportunities arise, enhance the historic environment of the County.

Policy DM6: Historic Environment

1. Proposals for minerals development will be supported where it can be demonstrated that:
 - a) There will not be an adverse impact on any designated heritage asset or a non-designated heritage asset of archaeological interest that is demonstrably of equivalent significance to a scheduled monument, and/or their settings; or
 - b) Public benefits related to the development outweigh the harm to, or loss of, any designated heritage asset or non-designated heritage asset of archaeological interest that is demonstrably of equivalent significance to a scheduled monument and/or their settings. Where this is the case, the harm or loss should be mitigated as far as possible.
 - c) Proposals directly or indirectly affecting non-designated heritage assets, except those assets listed in point 1, will be supported where it can be demonstrated that the scale of any harm or loss balanced with the significance of the heritage asset affected is outweighed by the public benefits of the development
2. Proposals for minerals development on a site of archaeological importance must ensure that satisfactory mitigation measures are incorporated, including the preservation in situ or the excavation and recording of any affected archaeological remains.
3. The enhancement of specific features of the historic environment, including individual heritage assets or historic landscapes, as part of restoration schemes will be encouraged.
4. No development shall take place within the archaeological resource area at South Muskham.

Justification

- 5.69. Since minerals can only be worked where they exist, their development can lead to a conflict between the provision of essential mineral resources and the protection of heritage assets for the benefit of future generations.
- 5.70. National policy states that the most important heritage assets should be conserved, and that balancing the need for development against potential harm to heritage assets needs to be fully justified. The Council has a duty to protect, conserve and enhance the significance, character and appearance of the area's historic environment when carrying out its statutory functions and through the planning system.
- 5.71. National policy recognises the importance of minimising the impacts on designated and non-designated heritage assets and their settings and requires a distinction to be made between the relative significance of the heritage assets. The NPPF states that, when considering the impact of a proposed development on the significance of a designated heritage asset, 'great weight should be given to the asset's conservation. The more important the asset, the greater the weight should be.' It states that substantial harm or loss of designated heritage assets of the highest significance should be wholly exceptional. Where a proposed development will lead to substantial harm to or total loss or significance of a designated heritage asset, the NPPF states that Local Planning Authorities should refuse consent, unless it can be demonstrated that the substantial harm or loss is necessary to achieve substantial public benefits that outweigh that harm or loss.
- 5.72. The historic environment of Nottinghamshire is vast and ranges from major historic and nationally important buildings and grounds to the many thousands of archaeological sites that lie buried underground. The historic environment, by its very nature, is an irreplaceable resource.
- 5.73. Nottinghamshire contains thousands of archaeological sites and historic features including national designations (including Listed Buildings, Scheduled Monuments, Registered Historic Parks and Gardens and Battlefields), local designations (including Conservation Areas and locally listed buildings and parks) and undesignated assets such as known or unknown buried archaeology. One site, Creswell Crags, is currently on the UNESCO tentative list for Inscription as a World Heritage Site.
- 5.74. It is therefore important to conserve and enhance these assets in a manner appropriate to their significance.

Archaeology

- 5.75. The need for preservation in situ of other sites and remains will need to be assessed against their importance and the impact that their loss would have upon the overall archaeological resource in Nottinghamshire. Although the preservation of archaeological sites is a primary objective, it is clearly impracticable to preserve them all. Equally sites should not be destroyed without careful consideration and, treatment.
- 5.76. Where preservation in-situ is not feasible, sites need to be surveyed, excavated or otherwise appropriately recorded. These provisions can only be assessed after the archaeological characteristics or proposed development sites have been evaluated. An appropriate scheme of treatment is required to be agreed with the County Council prior to any development taking place.
- 5.77. A research project looking at aggregate resources in Nottinghamshire and the archaeological remains they contain revealed that discoveries within mineral workings have yielded a wealth of new information about the Iron Age and Roman periods in the Trent and Idle Valleys.

Archaeological resource area at South Muskham

- 5.78. South Muskham parish contains one of the densest areas of known archaeological remains in the Trent Valley, reflecting a long history of settlement and landscape development. Whilst this area is of major local and regional archaeological importance it is not fully understood. A field walking programme has been undertaken but further studies are still required to ascertain the effect of losing individual sites or features in this area. As such there will be a presumption against mineral extraction within the South Muskham area for the duration of the Plan period. (See appendix 4 - inset 12).

Other Heritage Assets

- 5.79. Nottinghamshire's Historic Environment Record holds information on a large number of Listed Buildings and Conservation Areas and sites of local interest. Nottinghamshire also has a number of parks which are listed on the 'Register of Historic Park and Gardens of Special Historic Interest in England' produced by Historic England and others that are of local interest. A Registered Battlefield is also identified within Nottinghamshire (Stoke Field) which is acknowledged as an important English battlefield. Some Nottinghamshire District/Borough Local Planning Authorities have adopted criteria for the identification of 'non-designated heritage assets' and have, or are producing a local list of these.

- 5.80. The potential direct or indirect impacts on the historic environment from minerals development may constitute harm. This should be avoided, however where public benefits related to the minerals development have been identified and justified, the use of careful design, buffer zones, considered restoration schemes and other mitigation may make it possible to accommodate mineral developments in the vicinity of designated heritage assets.
- 5.81. The role of Policy DM6 is to ensure that the historic environment is afforded the appropriate level of conservation and enhancement in conformity with national policy. As part of the process of preparing planning applications for new development, assessments should be carried out to describe and assess the significance of heritage assets (including significance derived from setting). This should be used by developers to inform the development proposals and, where necessary, including the preparation of a mitigation strategy for proposed minerals development to avoid or mitigate against any impacts.
- 5.82. In cases where it is necessary for an applicant to submit a Heritage Statement and/or Archaeological Evaluation, the scope and degree of detail necessary will vary according to the particular circumstances of each application. The level of detail required should be proportionate to the importance of the heritage asset, the size of the development and the level of its impact on the heritage asset.
- 5.83. As a minimum, the Nottinghamshire Historic Environment Records (HER) should be consulted. Other local heritage strategies and assessments have been prepared for some areas of the County and these should also be consulted, where appropriate. Where an application site includes, or is considered to have the potential to include, heritage assets with archaeological interest, the Council will require developers to submit an appropriate desk-based assessment and, where desk-based research is insufficient to properly assess the interest, a field evaluation. It is strongly advised that Heritage Statements and Archaeological Evaluations are compiled by a professional consultant or contractor so as to ensure that an appropriate statement is submitted. Applicants are advised to discuss proposals with the Council prior to submitting an application.

This policy helps meet the following strategic objectives:

SO7: Protecting and enhancing historic assets

Question 27

What do you think of the draft policy wording for DM6: Historic environment?

DM7: Public access

Introduction

- 5.84. Nottinghamshire is a largely rural County and has nearly 2,700km of routes providing access into the countryside for walking, cycling and horse riding. The rights of way network also provides vital links between towns and villages and is increasingly being used as a route to school, work and shops.
- 5.85. The size and location of minerals development can have a significant impact on the rights of way network but it can also provide opportunities to improve and extend existing infrastructure in the countryside.

Policy DM7: Public Access

1. Proposals for minerals development will be supported where it can be demonstrated this will not have an unacceptable impact on the existing rights of way network and its users.
2. Where this is not practicable, satisfactory proposals for temporary or permanent diversions, which are of at least an equivalent interest or quality, must be provided.
3. Improvements and enhancements to the rights of way network will be sought and, where possible, public access to restored minerals workings will be increased.

Justification

- 5.86. National policy states that policies should protect and enhance public rights of way and access. Opportunities to provide better facilities for users, such as adding links to the existing rights of way, should be sought. Where appropriate, manned crossing points will be required to ensure that the existing rights of way network is not compromised during development. Proposals for new rights of way will need to consider how they can best link into the existing rights of way network. All proposals for new or improved rights of way will also need to consider the needs of people with mobility problems and other disabilities and comply with the requirements of the Equality Act 2010.
- 5.87. There are parts of Nottinghamshire that suffer from a poor quality environment and where there is a lack of accessible green space. Therefore efforts to improve public rights of way and access within mineral developments should be targeted to help address deficiencies as well as providing infrastructure.

- 5.88. Reference should be made to the Nottinghamshire County Council Rights of Way Improvement Plan and advice sought from the County Council's rights of way officers regarding temporary or permanent diversions and the opportunities for future improvements in the area.
- 5.89. Consultation with the County Council on any public right of way affected by a proposed minerals development should take place at the earliest possible stage. The statutory process for footpath diversion or closure is separate from the planning process and as such delays or failures to secure any required amendments to the rights of way network could affect the implementation of future minerals development.
- 5.90. Enhancements to the rights of way network will be secured through legal agreements rather than planning conditions to ensure that the enhanced rights of way are available in perpetuity. Similarly, permissive paths will not be considered for temporary or permanent diversions to an existing definitive right of way.

This policy helps meet the following strategic objectives:

SO5: Minimising impacts on communities

SO6: Protecting and enhancing natural assets

Question 28

What do you think of the draft policy wording for DM7: Public access?

DM8: Cumulative impact

Introduction

- 5.91. In some areas of Nottinghamshire the extent of the mineral working may result in a large number of previously worked sites and further applications for extraction. The impacts, both real and perceived, of a concentration of workings close to a community or communities can impact on local amenity, quality of life and the wider environment and landscape character.

Policy DM8: Cumulative Impact

Proposals for minerals development will be supported where it can be demonstrated that there are no unacceptable cumulative impacts on the environment or on the amenity of a local community, either in relation to the collective effect of different impacts of an individual proposal, or in relation to the effects of a number of developments occurring either concurrently or successively.

Justification

- 5.92. National policy emphasises the need for cumulative impacts from multiple impacts from individual site and/or a number of sites in a locality to be taken into account.
- 5.93. Proposals for the simultaneous and/or successive working of a number of sites in a wider area of commercially-viable deposits may affect communities and localities over an extended period, depending on the nature, age and size of the site(s).
- 5.94. The capacity of a local area to accommodate minerals development depends upon the proximity of existing development, the type and duration of operations proposed, the phasing of working and the proposed restoration and after-use of the site.
- 5.95. A stage may be reached whereby it is the cumulative rather than the individual impact of a proposal that renders it environmentally unacceptable. Depending on local circumstances, there may also be a need to consider whether there are likely to be cumulative impacts resulting from proposed minerals development in combination with other existing or proposed non-mineral related development.
- 5.96. The plan therefore seeks to ensure that the impacts of a mineral proposal are considered in conjunction with the impacts of other past, present or reasonably foreseeable developments, and that cumulative impact on the environment of an area, or on the amenity of a local community, are fully addressed.

This policy helps meet the following strategic objectives:

SO1: Improving the sustainability of minerals development

SO3: Addressing climate change

SO5: Minimising impacts on communities

SO6: Protecting and enhancing natural assets

SO7: Protecting and enhancing historic assets

SO8: Protecting agricultural soils

Question 29

What do you think of the draft policy wording for DM8: Cumulative impact?

DM9: Highways safety and vehicle movements/routeing

Introduction

- 5.97. All new development proposals need to consider the needs of all road users. Safety and vehicular movements are key issues which must be addressed. The needs of pedestrians, cyclists and people with disabilities must be at the forefront of any considerations.

Policy DM9: Highways Safety and Vehicle Movements / Routeing

Proposals for minerals development will be supported where it can be demonstrated that:

- a) The highway network including any necessary improvements can satisfactorily and safely accommodate the vehicle movements, including peaks in vehicle movements, likely to be generated;
- b) The vehicle movements likely to be generated would not cause an unacceptable impact on the environment and/or disturbance to local amenity;
- c) Where appropriate, adequate vehicle routeing schemes have been put in place to minimise the impact of traffic on local communities;
- d) Measures have been put in place to prevent material such as mud contaminating public highways.

Justification

- 5.98. The vast majority of minerals are transported from quarries to the market via the existing road network due to the flexibility and relatively short distance most minerals are transported. This can cause a significant increase in the level of HGV traffic on the local and wider road networks. It is important that the impact of this traffic is minimised. This can be done through a number of different measures and can include:
- strategic signage for lorry movements;
 - sheeting of lorries;
 - installation of wheel cleaning facilities;
 - highway improvements;
 - hours of working / opening;
 - traffic regulation orders;
 - noise attenuation of reversing beepers, plant and equipment;
 - private haul roads;
 - road safety improvements;
 - traffic management arrangements, including off peak movements.

- 5.99. Highways England is responsible for the trunk road network which, in Nottinghamshire, includes the M1, A1, A46, A52 and the A453. They provide policy advice on other transport issues concerning their function, including the consideration of planning applications.
- 5.100. Nottinghamshire County Council is the Local Highway Authority and is responsible for the implementation of the Nottinghamshire Local Transport Plan. The County Council, as the Local Highway Authority, will require proposals to be accompanied by a Transport Assessment (TA) or Transport Statement (TS). In certain circumstances a Travel Plan may also need to be submitted. As such, planning applications must accord with current standards and other local guidance. In most instances, applicants will be required to attend a pre-application meeting to discuss the transport issues with officers from the Council.
- 5.101. Where a specific highways impact from the development is identified that requires mitigation, the Council will seek developer contributions to enable the necessary works to be completed.
- 5.102. Lorry routing can be a major consideration in assessing the acceptability of a mineral development proposal. Whilst a reasonable route may exist, which the mineral operator may well be willing to use, it may be necessary to control routing through planning conditions or in most instances through a legally binding agreements (known as planning obligations or Section 106 Agreements – see DM10 for more information) between the applicant and the Council.

This policy meets the following strategic objectives:

SO1: Improving the sustainability of minerals development

SO3: Addressing climate change

SO5: Minimising impacts on communities

SO6: Protecting and enhancing natural assets

SO7: Protecting and enhancing historic assets

Question 30

What do you think of the draft policy wording for DM9: Highways safety and vehicle movements/routing?

DM10: Airfield safeguarding

Introduction

- 5.103. Mineral extraction sites that are restored to open water can increase the risk of bird-strike to aircraft if they are located near airfields. Although bird strike is considered to be the main risk to aviation safety from minerals development, the risk of flicker, shadow, glare and the height of any tall buildings or structures may also need to be considered. To help resolve potential conflicts, Airfield Safeguarding Areas (13km/8 mile radius) are designated around airports and civil and military airfields. Within these safeguarding zones, consultation with owners or operators of relevant airfields will be required in order to consider potential bird strike or other hazards.

Policy DM10: Airfield Safeguarding

Proposals for minerals development within the following Airfield Safeguarding Areas will be supported where the applicant can demonstrate that the proposed extraction, restoration and after use will not result in any unacceptable adverse impacts on aviation safety:

- a) East Midlands Airport;
- b) Gamston (Retford) Airport;
- c) Netherthorpe Airfield;
- d) Nottingham City Airport;
- e) Robin Hood Airport Doncaster Sheffield;

- f) RAF Scampton MoD Aerodrome;
- g) RAF Syerston MoD Aerodrome;
- h) RAF Waddington MoD Aerodrome.

Any new safeguarding area notified to the Council during the Plan period will also be safeguarded.

Justification

- 5.104. The purpose of airfield safeguarding is to ensure that the operation and development of civil and military airfields is not inhibited by development that could pose a hazard to aircraft or radar operation. National policy requires mineral working, restoration and after-use proposals to take account of aviation safety. The planning process therefore has an important role in preventing any unacceptable adverse impacts on aviation safety arising from minerals development.
- 5.105. The restoration of minerals sites to open water may lead to the creation of areas that attract roosting or loafing birds such as gulls and geese, especially when

large areas of water greater than 200m across are created. This is potentially dangerous in the vicinity of airports or airfields where any increase in the number of birds can increase the overall risk of birdstrike to aircraft. However, it is possible to have water-based restoration without constituting an unacceptable risk to aviation safety through measures such as the creation of reed beds or fragmented ponds, instead of open water, which generally do not attract the flocking birds that present a bird strike hazard.

- 5.106. It is important to note that this policy applies to all types of mineral site restoration as risks to aviation safety are not solely associated with water-based habitats. For example, some bird species associated with bird strike can also be found on agricultural land.
- 5.107. Other hazards to aviation, although less common in association with minerals development, include tall buildings or structures such as chimneys, masts and pylons. Wind turbines can also cause problems due to the flicker effect of the rotating blades. Reflective surfaces such as solar panels also need to be carefully sited and angled to avoid glare.
- 5.108. This policy does not preclude any specific forms of restoration or after-use but seeks to ensure that aviation safety is fully considered and addressed through appropriate consultation, avoidance and mitigation. Advice Notes on the safeguarding of aerodromes have been produced by the Airport Operators' Association and General Aviation Awareness Council.
- 5.109. There are eight licenced safeguarded airfield areas affecting Nottinghamshire and these are identified on Plan 5. Other, non-licenced, aerodromes may be safeguarded by privately agreed consultation with the Local Planning Authority. This is called 'unofficial' safeguarding and is not obligatory under Statutory Direction. However, the County Council acknowledges the Governments advice that 'aerodrome owners should take steps to safeguard their operations' and as such Policy DM10 will also apply to these 'unofficial' safeguarded areas as recorded by Local Planning Authorities.

This policy helps meet the following strategic objectives:

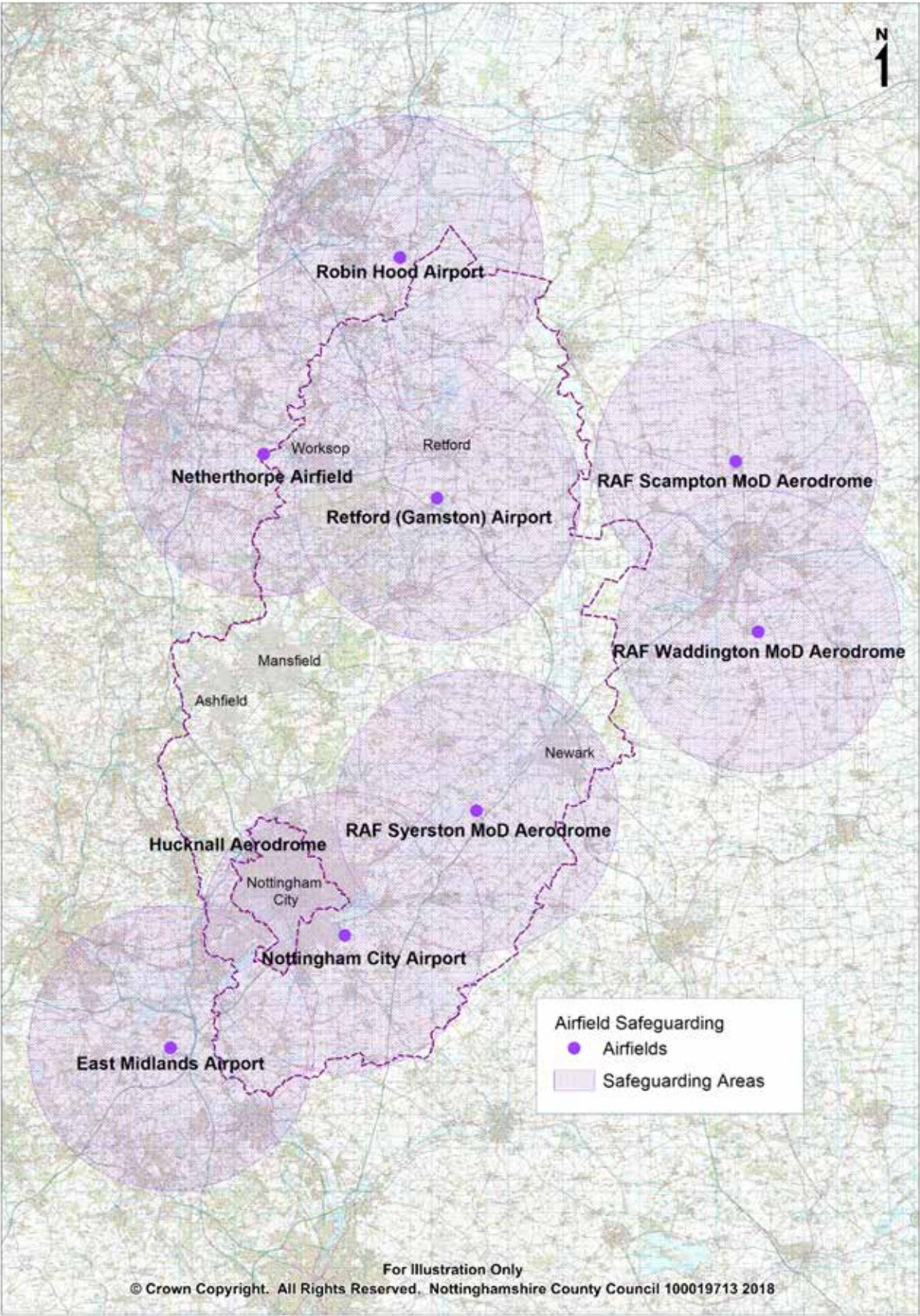
SO1: Improving the sustainability of minerals development

SO5: Minimising impacts on communities

Question 31

What do you think of the draft policy wording for DM10: Airfield safeguarding?

Plan 6: Airfield safeguarding



DM11: Planning Obligations

Introduction

- 5.110. To achieve sustainable development, additional planning requirements may be required to make a proposed development acceptable. The coordinated delivery of adequately funded infrastructure at the right time and in the right place is key to ensuring that local services, facilities and the transport network can cope with any added demand that arises from new minerals development.

Policy DM11: Planning Obligations

The County Council will seek to negotiate planning obligations as measures for controlling mineral operations and to secure sustainable development objectives which cannot be achieved by the use of planning conditions.

Justification

- 5.111. Planning obligations (also known as Section 106 agreement) are private agreements made between local authorities, developers and landowners which can be attached to a planning permission to make acceptable development which would otherwise be unacceptable in planning terms. The obligations set out in Section 106 agreements apply to the person or organisation that entered into the agreement, and any subsequent owner of the land to which the planning permission relates. This is something that any future owners will need to take in to account.
- 5.112. The National Planning Policy Framework provides Government guidance on the use of planning obligations. It contains three tests that planning obligations must meet:
- Necessary to make the proposed development acceptable in planning terms;
 - Directly related to the proposed development;
 - Fairly and reasonably related in scale and kind to the proposed development.
- 5.113. Circumstances where planning obligations may be sought include:
- Provision of off-site works such as highway improvements, landscape treatment and planting;
 - Facilitating the preservation by record of archaeological remains;
 - Contributing towards the delivery of the Nottinghamshire Local Biodiversity Action Plan targets (relevant to the site);
 - Providing long-term site management (where third parties are involved);
 - Flood risk management schemes.

- 5.114. The nature and scale of obligation requirements from a development will reflect:
- The nature and impact the development has upon strategic, local and on-site needs and requirements;
 - Current infrastructure and whether the development can be accommodated by the existing provision;
 - How the potential impacts of a development can be mitigated;
 - Viability. In considering issues of viability the Council will have regard to the quality and value of a scheme in the context of how the development contributed towards the vision, objectives and policies for the area.
- 5.115. Whether obligations will be ‘in kind’ (where the developer builds or directly provides the infrastructure), by means of financial payments or a combination of both will depend on the nature and circumstances of the infrastructure requirement. The National Planning Policy Framework sets out that development identified in the Local Plan should not be subject to such a scale of obligations and policy burdens that their ability to be developed viably is threatened. It emphasises that developers and landowners should receive a competitive return to enable the development to be delivered.
- 5.116. Planning obligations can be used to address the unacceptable impacts of minerals developments but cannot be used to provide more general unrelated community benefits. As such Nottinghamshire County Council would encourage negotiated agreements between relevant minerals operators and a community as a source of funding for local benefits. These benefit packages would comprise bilateral arrangements between the main parties. Agreements would be between operators and local bodies such as Parish Councils or residents associations. The County Council cannot be party to such agreements because planning decisions must be impartial and made on planning grounds alone.

This policy helps meet the following strategic objectives:

SO1: Improving the sustainability of minerals development

SO5: Minimising impacts on communities

Question 32

What do you think of the draft policy wording for DM11: Planning obligations?

DM12: Restoration, after-use and aftercare

Introduction

- 5.117. It is essential that mineral extraction and restoration are properly designed at the planning application stage to ensure that both are technically and economically feasible and that the impacts can be fully assessed.
- 5.118. Note: This policy should be considered along-side Policy SP3: Biodiversity-Led Restoration.

Policy DM12: Restoration, After-use and Aftercare

1. Proposals for minerals development will be supported where it can be demonstrated that the scheme includes details to allow an appropriate phased sequence of extraction, restoration, after-use and aftercare which will enable long-term enhancement of the environment.

Restoration

2. Restoration of minerals development should be in keeping with the character and setting of the local area, and should contribute to the delivery of local objectives for habitats, biodiversity, landscape, historic environment or community use where appropriate.
3. Where it is impracticable to submit full restoration details at the planning stage proposals should include:
 - a) An overall concept plan with sufficient detail to demonstrate that the scheme is feasible in both technical and economic terms and is consistent with the County Council's biodiversity-led restoration strategy; and
 - b) Illustrative details of contouring, landscaping and any other relevant information as appropriate.
4. Mineral extraction proposals which rely on the importation of waste for restoration must:
 - a) Include satisfactory evidence that the waste will be available over an appropriate timescale in the types and quantities assumed;
 - b) Provide the optimum restoration solution; and
 - c) Provide evidence that it is not practical to re-use or recycle the waste.

After-use

5. Where proposals for the after use includes habitat creation, applicants will be required to demonstrate how the proposals contribute to the delivery of Local Biodiversity Action Plan targets and have regard to the biodiversity-led restoration approach and the opportunities identified in the National Character Area profile.
6. All proposals will be required to make provision for the retention or replacement of soils, as appropriate, and for any necessary drainage, access, hedges and fences.
7. The after-use will be required to have regard to the wider context of the site, in terms of the character of the surrounding landscape and historic environment and existing land uses in the area.
8. Where opportunities arise, after-use proposals should provide benefits to the local and wider community which may include enhancement and creation of biodiversity and geodiversity interests, linking of site restoration to other green infrastructure initiatives, enhanced landscape character, improved public access, employment, tourism or provision of climate change mitigation measures, including flood plain storage and reconnection.

Aftercare

9. Restoration proposals will be subject to a minimum five year period of aftercare. Where proposals or elements of proposals, such as features of biodiversity interest, require a longer period of management the proposal will only be permitted if it includes details of the period of extended aftercare and how this will be achieved.

Justification

- 5.119. National policy requires local planning authorities to ensure that worked land is reclaimed at the earliest opportunity and that high quality restoration and aftercare takes place.
- 5.120. Although mineral working is a temporary land use, worked sites which are not appropriately restored can result in permanent adverse impacts on the environment. It is essential that the detailed restoration proposals for minerals development are properly considered at the application stage to minimise impacts and ensure long term benefits are secured.
- 5.121. The overall restoration proposal also establishes the long-term potential of the land for a wide range of after-uses that can benefit the local and/or wider community, including employment, conservation and recreation uses as well as improved public access for all users. The phasing of operations to achieve restoration at the earliest opportunity is an important factor influencing the acceptability of minerals extraction to local residents.

Achieving high quality restoration must be integral to any proposals for minerals development. At the national level, Natural England has published a series of National Character Area profiles which suggest where action can be best targeted to conserve and improve the natural environment.

- 5.122. The 'Bigger and Better' document prepared by the RSPB in partnership with other environmental organisations, promotes a strategic, landscape scale approach to biodiversity-led minerals restoration which will help to establish a coherent and resilient network of wetlands across the whole of the Trent and Tame River Valleys. In addition, a more detailed concept plan has been developed for the section of the Trent Valley between Newark and South Clifton which is intended to complement the existing positive approach towards future mineral sites restoration in this area.
- 5.123. The Council's biodiversity-led restoration approach is based on the biodiversity opportunities in Nottinghamshire which assist in maximising the potential value of minerals restoration by carefully planning which habitats can be created, and where. The restoration process will be required to ensure that the priority habitats identified in the Nottinghamshire Local Biodiversity Action Plan are created or enhanced, where appropriate.
- 5.124. Most mineral workings are on agricultural land. In general where the best and most versatile land is taken for mineral extraction, it is important that the potential for land to be returned to an agricultural after-use be maintained through appropriate landform and soil profiles.
- 5.125. The Landscape Character Assessments covering Nottinghamshire identify specific features of the different Landscape Character Areas within the County. This information can then be used to assist in the designing of restoration schemes.
- 5.126. Proposals for minerals development should be accompanied by a restoration scheme that provides comprehensive details of the order and timing of phases of mineral working, restoration and of the final main after uses. Where possible the proposed scheme should incorporate some element of flexibility to take account of changing circumstances during the life of the development and beyond. It should aim to integrate and facilitate the delivery of any relevant mitigation measures, as identified in assessments undertaken to support the planning application. It is strongly advised that these matters are discussed with the Mineral Planning Authority at the pre-application stage, and where possible involve input from relevant key stakeholders to resolve any potential conflicts of interest.
- 5.127. Soils must be adequately protected and maintained throughout the life of the development, particularly if a site comprises land that qualifies as best and most

versatile agricultural land (see Policy DM3: Agricultural land and soil quality). Where necessary, proposals for minerals development should be supported by a site specific Land Classification Survey, undertaken by an independent expert to determine the grading and agricultural value of the proposed site. The survey should incorporate a report/statement of physical characteristics, providing detailed information about the soils, subsoils and overburden within the boundaries of the site. Where the proposed after use is to be one which requires little or no soil, e.g. a lake or a nature reserve requiring impoverished soil resources, it would be better for soils to be removed from site and used beneficially elsewhere.

- 5.128. In some cases, materials (such as inert waste) will need to be imported to ensure that the site can be restored and returned to a beneficial after-use. Phased restoration of a site may require an adequate and timely supply of suitable material in order to ensure that the development can proceed on schedule. However, inert fill material may not necessarily be available in the required quantities and timescales, as the introduction and application of Landfill Tax has reduced the amount of inert material available. In addition, Government encourages the recycling and use of construction and demolition waste as an alternative to primary aggregates. Developers will be required to demonstrate that materials to be imported for restoration purposes are both suitable (based on the advice of the Environment Agency) and are available in sufficient quantity and when needed to achieve the proposed restoration scheme.
- 5.129. It should be noted that whilst a mineral extraction activity in one location may be appropriate, if the restoration/infill scheme intends to use waste material, then this activity may not be appropriate in that location, for example if there are amenity issues for nearby residents. Where waste material is to be imported, an Environmental Permit from the Environment Agency will be required. Where restoration involves the use of extractive waste (i.e. waste produced through the mineral extraction process, not imported) then the operator may be required to apply for a Mining Waste Environmental Permit from the Environment Agency.
- 5.130. Minerals development will be expected to contribute, where appropriate, to the green infrastructure (strategic networks of well-planned, multi-functional spaces) of Nottinghamshire, particularly through the restoration and after-use of minerals development sites.
- 5.131. After the mineral has been extracted and the stripped soils returned, the aftercare period is the time when the site is prepared for the agreed after-use. Aftercare can include the processes of cultivating, fertilising, planting, draining and otherwise treating the land. The minerals operator is normally still responsible for the site at

this time. An appropriate period of aftercare is needed to ensure mineral sites are restored to a standard suitable for their intended after-use.

- 5.132. Different after-uses may require different periods of aftercare. The statutory aftercare period is 5 years or such other maximum period as may be prescribed and some uses such as nature conservation may benefit from an aftercare period of up to 20 years or more, whilst agriculture may only need a 5 year aftercare period. Where possible and where appropriate, voluntary extended aftercare periods will be negotiated for those uses that would benefit from such longer periods and will be secured by condition.
- 5.133. It is important that management responsibilities are identified and agreed between the developer and those taking on the aftercare of the site to ensure that the proposed after-use can and will be delivered. Developers will be encouraged to enter into planning agreements to ensure that the appropriate aftercare provisions remain in effect for the required aftercare period.
- 5.134. All restoration proposals should take into account the relevant District/Borough Local Plans and where appropriate contribute to the delivery of those Plans. Minerals developers will also be encouraged to involve local communities and parish councils when considering options for restoration and aftercare.

This policy helps meet the following strategic objectives:

SO1: Improving the sustainability of minerals development

SO3: Addressing climate change

SO5: Minimising impacts on communities

SO6: Protection and enhancing natural assets

SO7: Protecting and enhancing historic assets

SO8: Protecting agricultural soils

Question 33

What do you think of the draft policy wording for DM12: Restoration, after-use and aftercare?

DM13: Incidental mineral extraction

Introduction

- 5.135. In principle, recovering minerals as an incidental element of another development proposal promotes sustainable development by helping to conserve mineral resources that might otherwise be lost.

Policy DM13: Incidental Mineral Extraction

1. Planning applications for the extraction of minerals as a necessary element of other development proposals on the same site will be supported where it can be demonstrated that the scale and duration of the mineral extraction does not result in adverse environmental impacts and that it brings environmental and other benefits to the development it is incidental to.
2. Where planning permission is granted, conditions will be imposed to ensure that the site can be adequately restored to a satisfactory after-use should the main development be delayed or not implemented.

Justification

- 5.136. District/Borough Councils within Nottinghamshire should advise the County Council on proposals, such as ornamental lakes and major built development, which involve the excavation and removal of significant quantities of soils, overburden and mineral. Failure to do so may result in planning permission being granted without taking into account potential mineral planning issues. Developers submitting proposals to District/Borough Councils are likewise encouraged to consult the County Council at the pre-application stage where they expect incidental mineral extraction to be necessary.
- 5.137. In many cases the planning application for the main development may be determined by the District/Borough Council, and, except where quantities are very small, the mineral extraction may need to take the form of a separate planning application to be determined by the County Council. In these cases, in order to ensure that both proposals are compatible, it is important to consider both planning applications at the same time. Interim reclamation proposals must be included to ensure that the primary development proposals are not delayed, or fail to be implemented.
- 5.138. Incidental mineral extraction is not precisely defined in terms of quantity of mineral worked or duration. It does not, however, apply to mineral development simply because it is small scale or short term. If mineral extraction is a significant reason for justifying or promoting the development, the proposal will need to be assessed against the relevant policies applicable to the mineral being worked.

This policy helps meet the following strategic objectives:

SO1: Improving the sustainability of minerals development

SO2: Providing an adequate supply of minerals

Question 34

What do you think of the draft policy wording for DM14: Incidental mineral extraction?

DM14: Irrigation lagoons

Introduction

- 5.139. Proposals to construct irrigation lagoons within agricultural land can involve the extraction of minerals to create the lagoon. The mineral is usually taken offsite for processing at a nearby quarry. Providing there is evidence of genuine agricultural benefits then the mineral extraction can normally be regarded as incidental.

Policy DM14: Irrigation Lagoons

Proposals for mineral extraction to create or extend irrigation lagoons will be supported where:

- a) There is satisfactory evidence that they will provide significant benefits to agricultural productivity;
- b) They can be worked and reclaimed without any unacceptable environmental impacts;
- c) The irrigation lagoon is landscaped and treated to maximise its potential for enhancing the landscape character and/or biodiversity.
- d) The irrigation lagoon is of a scale or degree that does not impact on the development of permitted or allocated mineral extraction sites.

Justification

- 5.140. The development of irrigation lagoons is often classed as 'permitted development' and would not require planning permission unless the mineral is taken off-site.
- 5.141. Sand and gravel deposits are technically very suited for this purpose because of the normally high water table level and relatively rapid recharge after the water is abstracted for irrigation. The cost of creating the lagoon is also likely to be offset by the value of the mineral. The main planning issues will generally comprise traffic during construction, the impact on archaeological sites, and the long term landscape impact of the lagoon. Wildlife impact is less likely to be an issue, as these lagoons tend to be sited within arable fields.
- 5.142. Whilst the purpose of these lagoons is to provide irrigation, it is important that they are shaped and landscaped to blend in with and, where possible, enhance the landscape character of the area, including biodiversity. The standard rectangular reservoir should be avoided, as this will generally detract from the area.

- 5.143. It should be noted that irrigation lagoons will usually require a water abstraction licence from the Environment Agency. In certain parts of Nottinghamshire, particularly in the River Idle and River Torne catchment areas, no new water abstraction is allowed. Whether abstraction is allowed in the proposed area (and similarly whether the applicant has started to pursue the securing of a licence) could be an indication of a genuine agricultural purpose for the lagoon and thus could be used as evidence referred to in part a) of the policy.

This policy helps meet the following strategic objectives:

SO1: Improving the sustainability of minerals development

SO2: Providing an adequate supply of minerals

Question 35

What do you think of the draft policy wording for DM15: Borrow pits?

DM15: Borrow pits

Introduction

- 5.144. The term 'borrow pit' is applied to a temporary mineral working supplying material for use solely in a specific construction project, particularly roads.
- 5.145. Borrow pits are typically located next to the construction site, and in the ideal situation are soon backfilled with waste materials, such as soft clay, that often have to be removed from the construction area – hence the material excavated is 'borrowed'. Normally, large quantities of material, mainly bulk fill, are required over a short time.

Policy DM15: Borrow Pits

Proposals for borrow pits will be supported where:

- a) They are adjacent to or close to the project/s they are intended to serve;
- b) They are time limited to the life of the project and material is to be used only for the specified project;
- c) They can be worked and reclaimed without any unacceptable environmental impacts;
- d) There are overriding environmental or other benefits compared to obtaining materials from alternative sources;
- e) Proposals provide for appropriate restoration measures which include full use of surplus spoil from the project.

Justification

- 5.146. With the exception of small borrow pits developed within the boundary of the construction sites including highways and railways, planning permission is required. Proposals for borrow pits will be treated in the same way as any other mineral extraction scheme. This means that borrow pits must be justified in terms of being the most suitable source of material to meet demand, and that appropriate environmental safeguards covering both working and restoration are included
- 5.147. Advance planning is essential to ensure that the borrow pit can be developed within the timescales required. For example, if archaeological remains are present these may require a full and lengthy investigation before any mineral can be extracted. Submitting proposals after contracts are let is unlikely to allow sufficient time to resolve such complications. Urgency of need cannot be an overriding factor in the treatment of archaeological remains and other similar environmental factors.

- 5.148. It is important to ensure that borrow pits only supply the construction project intended. Therefore in granting planning permission for borrow pits, the County Council will take appropriate measures to control access and routeing, and permission will be time limited to the life of the construction project.
- 5.149. In considering 'need', the quantities and specifications of materials required for the construction project will be assessed in the context of the level and location of existing permitted reserves. Minerals won from borrow pits contribute to the County's aggregate requirements and may help to avoid the use of better quality reserves from established quarries.
- 5.150. In general, it should usually be possible to meet requirements from local established quarries or from waste materials and the use of secondary aggregates. In such circumstances borrow pits can normally only be justified where they offer clear environmental gains over alternative sources of supply.
- 5.151. For example, where borrow pits are adjacent to construction sites the most obvious environmental benefits will be the avoidance of heavy traffic on public highways. There will also be significant economic and energy savings because of the reduced haulage costs.
- 5.152. These short term gains could be offset if the borrow pit is not properly reclaimed, or it is inappropriately located. For example, a water area adjacent to a major highway may have limited recreational potential because of access problems and/or traffic noise. Where possible infilling with waste material from the construction project will normally be the preferred option.

This policy helps meet the following strategic objectives:

SO1: Improving the sustainability of minerals development

SO2: Providing an adequate supply of minerals

Question 36

What do you think of the draft policy wording for DM16: Associated industrial development?

DM16: Associated industrial development

Introduction

- 5.153. The Town and Country Planning (General Permitted Development) (Amendment) (England) Order 2013 allows certain types of industrial development associated with minerals activities to be located within mineral workings, subject to the prior approval from the Minerals Planning Authority.

Policy DM16: Associated Industrial Development

Proposals for associated industrial development on or adjacent to mineral extraction sites will be required to demonstrate that they are clearly related to and linked to the life of the site.

Justification

- 5.154. Associated industrial development broadly comprises industrial processes which largely depend on the mineral worked from the related mine or quarry, such as ready mixed concrete plants associated with sand and gravel quarries. Various criteria relating to the height and appearance of buildings and structures and other restrictions may apply. All other industrial development associated with the mine and quarry will require planning permission in the normal way.
- 5.155. Proposals for industrial development that fall outside the scope of the General Permitted Development Order (GPDO) will only be permitted where it can be shown that there are clear overall environmental advantages in a close link between the industrial and extractive operations. Particular regard will be given to environmental and transport implications, and the likely duration of working.
- 5.156. The continued use of such industrial development following exhaustion of the mineral reserve means it will become dependent upon the import of raw materials. This usually involves significant movements of heavy goods vehicles and will therefore normally be resisted.
- 5.157. Any planning permission for associated industrial development will be time limited to expire on the cessation of working from the associated extraction area.

This policy helps meet the following strategic objectives:

SO1: Improving the sustainability of minerals development

Question 37

What do you think of the draft policy wording for DM17: Associated industrial development?

DM17: Mineral exploration

Introduction

- 5.158. Exploration is essential to prove the existence and extent of all types of mineral resources. Prior to development, it is necessary to ensure that a resource is economically viable and to determine how it can be worked. Mineral exploration is a temporary activity and certain types and scales of development of this nature are classed as 'permitted development' under the General Permitted Development Order (meaning that planning permission is not required). However, where the mineral exploration is not classed as 'permitted' and planning permission is sought, it is important for safeguards to be in place to minimise the environmental, amenity and long-term impacts of the development.

Policy DM17: Mineral Exploration

Proposals for mineral exploration will be permitted, subject to satisfactory environmental, amenity and restoration safeguards.

Justification

- 5.159. There are three main methods of mineral exploration; geophysical surveys, trial pits and boreholes:

Geophysical surveys

- 5.160. Seismic surveys are the most common type of geophysical survey, especially in the exploration of coal and oil. Whilst these surveys can provide useful information about the underlying geological structure, they do not prove the existence of mineral resources.
- 5.161. Most Seismic surveys have little environmental impact. However, noise and vibration can raise concerns when carried out in sensitive areas. This is especially the case when shot hole drilling is used and/or where surveys are carried out over a prolonged period. A particular concern is the interference to archaeological remains. Operators are encouraged to contact the County Council's archaeologists prior to undertaking surveys.

- 5.162. Most seismic surveys have permitted development rights but there are several exceptions relating to sensitive areas, proximity to buildings, size of the explosive charge and the duration of operations. In these cases, planning permission is required. In any event, operators are encouraged to notify local residents at an early stage, prior to surveys being carried out to allay concerns and unnecessary fears.

Trial pits and shallow boreholes

- 5.163. Trial pits and shallow boreholes are methods of surface mineral exploration which obtain data on the depth, extent and quality of the mineral, the make-up of overburden and hydrological data. After the information is recorded, the pits are backfilled and reinstated.
- 5.164. As with geophysical surveys, concerns are often raised regarding the impact that digging shallow pits may have on the archaeology, however, these pits can provide an ideal opportunity to evaluate the site's archaeology at an early stage and developers are encouraged to involve archaeologists during this exploration phase.
- 5.165. Due to the short duration of these operations, it is very rare that the Minerals Planning Authority will have to be notified, or planning permission be obtained. However, exceptions to this include operations in close proximity to buildings and operations in environmentally sensitive locations. There are also limits on the intensity of drilling, the use of explosives and the heights of rigs. Operations are encouraged to consult the County Council where there are doubts over the planning situation.

Deep boreholes

- 5.166. In Nottinghamshire deep boreholes, are used mainly in the exploration of coal, oil and gas.
- 5.167. A hard base, normally comprising crushed limestone, is required for the drilling rig and associated equipment. Supporting equipment includes mud pits, pipe racks, pumps and cabins. The environmental implications of deep borehole drilling are therefore much greater than those for the other exploration methods noted above.
- 5.168. The main considerations associated with deep boreholes include visual impact, noise, access, water pollution and directional drilling.

This policy helps meet the following strategic objectives:

SO1: Improving the sustainability of minerals development

SO2: Providing an adequate supply of minerals

Question 38

What do you think of the draft policy wording for DM17: Mineral exploration?

Glossary

Aftercare: Action necessary to bring restored land up to the required standard for an agreed after-use such as agriculture, forestry or amenity.

Air Quality Management Area (AQMA): A designation made by a local authority where an assessment of air quality results in the need to devise an action plan to improve quality of air.

Amenity: Something considered necessary to live comfortably.

Ancient Woodland: Woodland that is believed to have existed from at least medieval times.

Annual Monitoring Report: A report prepared by the County Council that monitors the progress of local plan preparation and the implementation of adopted policies.

Areas of Multiple Environmental Sensitivity study (AMES): A local study completed by Nottinghamshire County Council which sought to identify those areas of landscape considered to be of multiple environmental sensitivity relating to ecology, the historic environment and local attributes and thus establish the areas which might be considered most and least vulnerable or sensitive to development related impacts.

Best and most versatile agricultural land (BMV): The Agricultural Land Classification (ALC) provides a method for assessing the quality of farmland to enable informed choices to be made about its future use in the planning system. It helps underpin the principles of sustainable development. The ALC system classifies land into five grades, with Grade 3 subdivided into 3a and 3b. The best and most versatile land is defined as Grades 1, 2 and 3a by policy guidance. This is the land which is most flexible, productive and efficient in response to inputs and which can best deliver future crops for food and non-food uses such as biomass. Where significant development of agricultural land is unavoidable, poorer quality land should be used in preference to that of higher quality, except where this would be inconsistent with other sustainability considerations. Government policy is set out in the National Planning Policy Framework (NPPF).

Biodiversity Action Plan (BAP): A plan that identifies species and habitats that are a conservation priority to the locality and sets a series of targets for their protection and restoration/recreation.

Biodiversity Opportunity Mapping (BOM): A Nottinghamshire wide project led by the Nottinghamshire Biodiversity Action Group to increase understanding about the current distribution of biodiversity and to provide a spatial vision for the development of biodiversity in the long and medium term. It also looks at the most effective ways to re-create habitat networks at the landscape-scale. It is intended to help focus resources, deliver the local contribution to the England Biodiversity Strategy, inform spatial planning and inform other strategies and influence policy makers.

Bird strike: Risk of aircraft collision with birds, which are often attracted to open areas of water and landfill sites containing organic waste.

Climate change: The significant and lasting change in the distribution of weather patterns over periods ranging from decades to millions of years.

Conservation Areas: Designated areas of special architectural or historic interest, the character or appearance of which it is desirable to preserve or enhance.

Core Strategy: Under the previous planning system, local planning authorities produced a local development framework which comprised a portfolio of local development documents that together provided the framework for delivering a local authorities' planning strategy. This included a Core Strategy which set out the strategic overview for the plan area. Under changes to the planning system this has been replaced with the production of a single local plan.

Countryside: Areas that are not urbanised.

Cumulative impact: Impacts that accumulate over time, from one or more sources, and can result in the degradation of important resources.

Development Plan: The series of planning documents that form all of the planning policy for an area, it includes Local Plans (District and County) and neighbourhood plans. All documents forming the development plan have to be found 'sound' by a Government Inspector during a public independent examination before they can be adopted.

Environment Agency (EA): A public organisation with the responsibility for protecting and improving the environment in England and Wales. Its functions include the regulation of industrial processes, the maintenance of flood defences and water resources, water quality and the improvement of wildlife habitats.

Environmental Impact Assessment (EIA): Systematic investigation and assessment of the likely effects of a proposed development, to be taken into account in the decision-making process under the Town and Country Planning (Environment Impact Assessment) (England and Wales) Regulations 1999. The process is undertaken for a proposed development that would significantly affect the environment because of its siting, design, size or scale.

General Permitted Development Order (GPDO): Legislation which sets out the classes of development for which a granted of planning permission is automatically given, provided that no restrictive covenant is attached or that the development is exempt.

Green Belt: An area designated to provide permanent separation between urban areas. The main aim of Green Belt policy is to prevent urban sprawl by keeping land permanently open; the most important quality of Green Belts is their openness.

Green infrastructure: A network of multi-functional green space, both new and existing, both rural and urban, which supports the natural and ecological processes and is integral to the health and quality of life of sustainable communities.

Greenhouse gas: Gases resulting from various processes which, when emitted into the atmosphere, trap heat from the sun causing rises in global temperatures – a process often referred to as the greenhouse effect.

Groundwater Source Protection Zones: Geographical areas, defined by the Environment Agency, used to protect sources of groundwater abstraction.

Habitats Regulation Assessment (HRA): Statutory requirement for Planning Authorities to assess the potential effects of land-use plans on designated European Sites in Great Britain. The Habitats Regulations Assessment is intended to assess the potential effects of a development plan on one or more European Sites (collectively termed 'Natura 2000' sites). The Natura 2000 sites comprise Special Protection Areas (SPAs) and Special Areas of Conservation (SACs). SPAs are classified under the European Council Directive on the conservation of wild birds (79/409/EEC; Birds Directive) for the protection of wild birds and their habitats (including particularly rare and vulnerable species listed in Annex 1 of the Birds Directive, and migratory species).

Health and Safety Executive (HSE): The national independent watchdog for work-related health, safety and illness.

Health Impact Assessments (HIA): A practical and flexible framework by which the effects of policies, plans or projects on health and inequality can be identified. Such effects are examined in terms of their differential impact, their relative importance and the interaction between impacts. In doing so, HIAs can make recommendations to inform decision making, particularly in terms of minimising negative impacts and maximising opportunity to promote health and wellbeing.

Heavy goods vehicles (HGV): A vehicle that is over 3,500kg unladen weight and used for carrying goods.

Highways Authority: The organisation responsible for the administration of public roads.

Highways England: A government company charged with driving forward England's motorways and major A roads. Including modernising and maintaining the highways, as well as running the network and keeping traffic moving.

Historic England: The public body that looks after England's historic environment. It champions historic places, helping people to understand, value and care for them.

Historic Environment Record (HER): A public record of all aspects of the historic environment of the County.

Landbank: A measure of the stock of planning permissions in an area, showing the amount of unexploited mineral with planning permission for extraction, and how long those supplied will last at the locally apportioned rate of supply.

Landscape character: A combination of factors such as topography, vegetation pattern, land use and cultural associations that combine to create a distinct, recognisable character.

Landscape Character Assessment (LCA): A technique used to identify what makes a place unique in landscape terms. Characterisation involves assessing the physical components of a landscape alongside cultural influences.

Listed Building: Buildings of special architectural or historic interest, the character or appearance of which it is desirable to preserve or enhance. Protected under the Planning (Listed Buildings and Conservation Areas) Act 1990.

Local Nature Reserves (LNR): A statutory designation made (by principal local authorities) under Section 21 of the National Parks and Access to the Countryside Act 1949. They are places of local, but not necessarily national, wildlife or geological importance and also often have good public access and facilities. Local Nature Reserves are almost always owned by local authorities, who often pass the management of the Local Nature Reserves onto County Wildlife trusts.

Local Transport Plan (LTP): A statutory plan detailing the future transport approach in a given area.

Material considerations: A material consideration in the UK is a process in Planning Law in which the decision maker, when assessing an application for development, must consider in deciding the outcome of an application.

Ministry of Defence (MoD): The Government department responsible for implementation of the government defence policy and the headquarters of UK armed forces.

Minerals Consultation Areas (MCA): An area identified to ensure consultation between the relevant District or Borough planning authority, the minerals industry and the Minerals and Waste Planning Authorities before certain non-mineral planning applications made within the area are determined. The Nottinghamshire Minerals Consultation Area covers the same areas as the Minerals Safeguarding Area. (with the exception of Colwick Wharf)

Minerals Safeguarding Areas (MSA): The MSA is defined by minerals and waste planning authorities. They include viable resources of minerals and are defined so that inferred resources of minerals are not sterilised by non-mineral development. The MSA does not provide a presumption for these resources to be worked. The Nottinghamshire Minerals Safeguarding Areas covers the same areas as the Mineral Consultation Areas.

National Nature Reserve (NNR): A nationally important biological or geological site declared by Natural England and managed through ownership, leasehold or a nature reserve agreement.

National Planning Policy Framework (NPPF): The national planning document setting out the Government's planning policies for England and how these are expected to be applied. It acts as guidance for local planning authorities and decision-takers in both drawing up plans and making decisions about planning applications.

Natura 2000 sites: Designated land including Special Protection Areas (SPAs) and Special Areas of Conservation (SACs) and Ramsar sites.

Natural England: The government's adviser for the natural environment in England, which helps to protect England's nature and landscape for people to enjoy and for the service they provide.

Permitted development rights: Permitted development rights grant automatic planning permission to proposals for development that is a physical operation, or a material change of use, or both.

Permitted reserves: Mineral resource with planning permission for extraction.

Policies Map: A map on an Ordnance Survey base showing spatial application of appropriate policies from the Local Plan. Also known as a proposals map.

Ramsar Sites: (Wetlands of International Importance): Sites of international importance for waterfowl protected under the Ramsar Convention of the Conservation of Wetlands of International Importance, ratified by the UK Government in 1976.

Recycled aggregates: Materials that have been used previously, including construction and demolition waste, asphalt road planings and used railway ballast.

Regionally Important Geological Sites (RIGS): Sites, designated by locally developed criteria, which are currently the most important sites for geology and geomorphology outside statutorily protected land, such as Sites of Special Scientific Interest (SSSI).

Register of Historic Parks and Gardens of Special Historic Interest: A register held by Historic England established in 1983 which identifies sites assessed to be of national importance. (also referred to as 'registered parks and gardens').

Renewable energy: Energy which comes from natural resources such as sunlight, wind, rain, tides and geothermal heat, which are naturally replenished.

Restoration: The process of returning a site to its former use, or delivering new conditions that will support an agreed after-use, such as recreation or the creation of wildlife habitats.

Rights of Way (RoW): Marked routes which the public have a legally protected right to use.

Scheduled Ancient Monument (SAM): Nationally important archaeological sites included in the Schedule of Ancient Monuments maintained by the Secretary of State under the Ancient Monuments and Archaeological Areas Act 1979.

Secondary aggregate: Materials that are by-products of other processes, including the production of primary aggregates. They do not meet primary aggregate specifications but can be used instead of them.

Section 106 agreement (S106): The Town and Country Planning Act 1990 allows a local planning authority (LPA) to enter into a legally-binding agreement or planning obligation with a landowner when granting planning permission. The obligation is termed a Section 106 Agreement. These agreements are a way of dealing with matters that are necessary to make a development acceptable in planning terms. They are increasingly used to support the provision of services and infrastructure, such as highways, recreational facilities, education, health and affordable housing.

Site of Special Scientific Interest (SSSI): A national designation for an area of special interest because of its flora, fauna, or geological or physiographical features, selected by Natural England and notified under Section 28 of the Wildlife and Countryside Act 1981.

Sites and Monuments Record (SMR): The National Trust Sites and Monuments Record (NTSMR) is a resource and repository of information about the archaeology and historic landscapes under National Trust care.

Special Area of Conservation (SAC): Areas which have been given special protection under the European Union's Habitats Directive. They provide increased protection to a variety of wild animals, plants and habitats and are a vital part of global efforts to conserve the world's biodiversity.

Special Protection Area (SPA): An area of importance for the habitats of certain rare or vulnerable categories of birds or for regularly occurring migratory bird species, required to be designated for protection by member states under the European Community Directive on the Conservation of Wild Birds (79/409/EC).

Statement of Community Involvement (SCI): A Local Development Document which sets out the standards the Planning Authority intend to achieve when involving the community in preparing Local Development Documents, or when making a significant development control decision. It also sets out how the Authority intends to achieve these standards. A consultation statement must be produced showing how the Authority has complied with its SCI.

Sterilisation: When a change of use, or the development, of land prevents possible mineral exploitation in the foreseeable future.

Strategic Flood Risk Assessment (SFRA): An assessment of the potential flood risk such as from groundwater and fluvial flood risk, undertaken at the appropriate level (County or district).

Strategic Transport Assessment: An assessment of the likely impact of planning policies (site allocations) on the highway network. The purpose of the Nottinghamshire Strategic Transport Assessment is to describe the HGV impacts upon the Highway network as a result of the proposed MLP sites whilst considering the goals and targets set out in the relevant local and national planning policy documents.

Sustainability Appraisal (SA): In United Kingdom planning law, an appraisal of the economic, environmental, and social effects of a plan from the outset of the preparation process, to allow decisions that are compatible with sustainable development. Since 2001, sustainability appraisals have had to conform to the EU directive on Strategic Environmental Assessment.

Sustainable Community Strategy: A document outlining the local community's wishes and priorities for their area, they can be used as a tool to ensure local government and other services work together to meet local needs.

Sustainable Development: Development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It encompasses five

guiding principles: living within the planet's environmental limits, ensuring a strong, healthy and just society, achieving a sustainable economy, promoting good governance and using sound science responsibly.

Sustainable Drainage Systems (SuDS): A sequence of water management practices and facilities designed to drain surface water in a more suitable way than the conventional practice of routing run off through a pipe to a watercourse.

Townscape: The appearance of a town or city; an urban scene.

Transport Assessment (TA) / Transport Statement (TS): The National Planning Policy Framework requires that all developments that are likely to generate significant amounts of transport movements should include a Transport Assessment or Transport Statement as part of a planning application. Both will examine the transport issues relating to the proposed development and identify measures needed to deal with the impacts, improve accessibility and safety for all modes of transport and promote measures to encourage sustainable transport. The reports are usually accompanied by a Travel Plan that includes measures to encourage use of sustainable transport that will be implemented as part of the development. A Strategic Transport Assessment will cover the same issues, but will look at a range of proposed allocations to assess the potential individual and cumulative impacts of the developments.

Trunk road network: The strategic network of roads used to move people and freight around the country. The Highways England is responsible for its construction and maintenance.

Urban Areas: An area characterised by higher population density and vast human features in comparison to areas surrounding it. Urban areas may be cities, towns or conurbations.

Water Framework Directive: A European directive which became part of UK law in December 2003. It provides an opportunity to plan and deliver a better water environment, focussing on ecology, which will be delivered through river basin management planning.

Appendix 1: Information required in support of planning applications

Sufficient information will be required to enable a balanced assessment of all relevant factors. The County Council's Guidance Note on the Validation of Planning Applications sets out in detailed the information required in support of planning applications. Information required includes:

Statutory national information requirements:

- Planning application form
- Application fee
- Ownership certificates
- Agricultural land declaration
- Location plan
- Site plan
- Other plans
- Updated and superseded plans
- Design and access statement

Local information requirements:

- Supporting planning statement
- Environmental statement
- Transport assessment
- Draft travel plans
- Planning obligations – draft heads of terms
- Flood risk assessment
- Land contamination survey
- Tree survey/arboriculture implications
- Heritage impact assessment
- Archaeological assessment
- Biodiversity and geodiversity assessment
- Noise assessment
- Air quality assessment
- Sunlight/daylighting/lighting assessment
- Statement of community involvement
- Sustainability appraisal
- Right of way
- Landscape and visual impact assessment
- Land stability/coal mining risk assessment

Appendix 2: Delivery Schedules

Sand and gravel delivery schedule

Assumptions/notes

- The figures contained in the delivery schedules should only be treated as an indicative illustration of the predicted output.
- Due to reasons of confidentiality, detailed annual sales data cannot be used on a site by site basis.
- Annual sales data for the existing permitted quarries is therefore gathered from a variety of sources. Where available, data provided by the relevant mineral operators has been used. Where this was not available, figures from the original planning applications has been used.
- Finningley: 2017 is showing zero as output will be in Doncaster.

Key: Existing sites (MP2a-j)

Extensions to existing sites (MP2k-q)

New quarries (MP2r-s)

Site (site code)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Idle Valley																			
Misson West (MP2a)	15																		
Newington South (MP2b)	100																		
Finningley (MP2c)	160																		
Sturton Le Steeple (MP2d)			50	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Botany Bay (MP2r)				150	150	200	200	200	200	200	200	200	200	200	200	50			
Bawtry Road (MP2e)	40	40	40	40	40	40	40	40											
Bawtry Road West (MP2l)									40	40	40	40	40	40					
Scrooby (MP2k)	40	40	40	40	40														
Scrooby Thompson Land (MP2m)		40	40	40	40	40	40	40	40	40	40								
Scrooby North (MP2n)						15	15	15	15	15	15	15	15	15	15	15	15	15	15
Newark																			
Cromwell (MP2f)	200	200	200	200	200														
Besthorpe (MP2g)	150	150	200																
Girton (MP2h)	0	50	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	200	
Langford Lowfields (MP2i)	250																		
Langford South and west (MP2o)	200	450	450	450	450	450	450	450	200										

Langford North (MP2p)									200	450	450	450	450	450	450	450	450	450	450
	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Nottingham																			
Mill Hill near Barton in Fabis (MP2s)		280	280	280	280	280	280	280	280	280	280	280	280	280	280	208			
East Leake (MP2j)	180	180	180	180	180	180	180	180	180										
East Leake north (MP2q)										180	180	180	180						

Sherwood Sandstone Delivery Schedule

Assumptions/notes

- The figures contained in the delivery schedules should only be treated as an indicative illustration of the predicted output.
- Due to reasons of confidentiality, detailed annual sales data cannot be used on a site by site basis.
- Annual sales data for the existing permitted quarries is therefore gathered from a variety of sources. Where available, data provided by the relevant mineral operators has been used. Where this was not available, figures from the original planning applications has been used.

Key: Existing sites (MP3a-d) Extensions to existing sites (MP3e-g)

Site (site code)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
Burntstump (MP3a)	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Bestwood 2 (MP3b)	90	40																	
Bestwood 2 east (MP3e)	50	100	140	140	140	140	140	140	140	140	140								
Bestwood 2 north (MP3f)												140	140	140	140	140	140	140	
Carlton Forest (MP3c)	30	30																	
Scrooby Top (MP3d)	120	120	120	120	120														
Scrooby Top north (MP3g)						120	120	120	120	120	120	120	120	120	120	120	120	120	120

Appendix 3: Site Allocation Development Briefs

The purpose of the site development briefs is to identify the key site specific issues that will need to be addressed as part of the detailed planning application process for each of the allocated quarries. The options for biodiversity led restoration have been identified through the development of a biodiversity opportunity mapping project which seeks to identify opportunities for the enhancement, expansion, creation and re-linking of wildlife habitats across the county.

MP2I – Bawtry Road west

Grid reference: 467589, 395160

District: Bassetlaw District Council

Parish: Misson Parish Council

Total mineral resource: 694,000 tonnes

Quarry restoration

All proposals for restoration schemes should be in line with the County Council's approach to Biodiversity-Led Restoration contained within Policy SP3.

Target restoration will depend on landform, hydrology and substrate characteristics. However, priority habitats could include:

- Lowland Dry Acid Grassland
- Lowland Heathland
- Floodplain Grazing Marsh
- Lowland Fens
- Marsh and Swamp
- Reedbed
- Ponds
- Wet Woodland
- Oak-birch Woodland

Restoration should seek to maximise the extent of target habitat(s) and avoid habitat packing, where small areas of lots of habitats are packed into the site. Priority should be given to wetland/open habitats rather than woodland although it should be noted that the site is adjacent to a former quarry area known as Rugged Butts (SINC/LWS 2/969), which is now a significant area of acid grassland. It may therefore be appropriate to seek to expand this area by creating similar habitats within the restoration at Bawtry Road North. There is also potential for flood risk improvements as part of the restoration.

Location

- South west of Mission and north east of Newington
- See Policies Map Inset 2

Environmental and cultural designations

- Indirect impact on the setting of the designated heritage assets at Austerfield and Misson and on the nearby valuable cluster of LWSs and SSSIs around Newington and Misson should be considered
- Woodland area along disused railway line should be retained
- Hedge planting along northern boundary and eastern edge of the site
- Consideration of Landscape Character Assessment, Policy Zone recommendation: 'Conserve and Restore' - actions should encourage the conservation of distinctive features in good condition, whilst restoring elements or areas in poorer condition and removing or mitigating detracting features.
- High potential for the site to contain non-designated archaeology.

Access and transport

- Access on to public highway as per existing site (MP2e - Bawtry Road)
- Lorry routing and signage agreements to avoid the village of Misson to be retained

Amenity

- Misson Byway No.2 (Byrons Lane), which follows the northern boundary of the site should be protected.

Water and flooding

- Potential indirect hydrological links to the Hatfield Moor SAC.

A Flood Risk Assessment should address:

- Surface and ground water flooding
- Overland flow paths
- Potential impact on the groundwater resource as the site is within a Source Protection Zone 3 and underlain by a Principal Aquifer.

MP2n – Scrooby North

Grid reference: 465400, 389809

District: Bassetlaw District Council

Parish: Scrooby Parish Council

Total mineral resource: 390,000 tonnes available during the plan period.

Quarry restoration

All proposals for restoration schemes should be in line with the County Council's approach to Biodiversity-Led Restoration contained within Policy SP3.

Restoration of the site should be primarily biodiversity-led, however the higher quality agricultural soils should be taken into account in the final restoration proposal reflecting policy DM3; Agricultural land and soil quality. Target restoration will depend on landform, hydrology and substrate characteristics. However, priority habitats could include:

- Lowland Dry Acid Grassland
- Lowland Heathland
- Floodplain Grazing Marsh
- Lowland Fens
- Marsh and Swamp
- Reedbed
- Ponds
- Wet Woodland
- Oak-birch Woodland

Restoration should seek to maximise the extent of target habitat(s) and avoid habitat packing, where small areas of lots of habitats are packed into the site. Priority should be given to wetland/open habitats rather than woodland.

Location

- North west of Ranskill
- See Policies Map Inset 3

Environmental and cultural designations

- Working should avoid impacts on designated sites in the local area including Scrooby sand pits.
- Gap up hedgerow to north boundary and plant new hedgerow to eastern and southern boundaries
- Consideration of Landscape Character Assessment, Policy Zone recommendation: 'Conserve and Reinforce' – actions should conserve distinctive features and features in good condition, and strengthen and reinforce those features that may be vulnerable.
- Site is within an area with historical records of nightjar and woodlark.
- Potential indirect links to the Birklands and Bilhaugh SAC and Sherwood Forest p SPA.

Access and transport

- Access on to public highway as per existing site (MP3d – Scrooby Top)
- Strategic Transport Assessment advises segregated HGV right-turn into site

- Access through existing areas must not bring about unacceptable restoration delays

Amenity

- Restoration could create a new access from Green Lane (Scrooby Bridleway 4) to Scrooby Bridleway 1

Water and flooding

- Two licensed abstractions lie within the site. If dewatering occurs there is the potential that levels in the lagoon could be lowered, restricting abstraction
- Site lies within Ranskill Brook WFD water body which is currently undergoing a hydrological investigation to ascertain reasons for low flows

A Flood Risk Assessment should address:

- Surface and ground water flooding
- Overland flow paths
- Potential impact on the groundwater resource as the site is within a Source Protection Zone 3 and underlain by a Principal Aquifer.

MP2m – Scrooby Thompson Land

Grid reference: 465749, 388835

District: Bassetlaw District Council

Parish: Scrooby Parish Council

Total mineral resource: 400,000 tonnes

Quarry restoration

All proposals for restoration schemes should be in line with the County Council's approach to Biodiversity-Led Restoration contained within Policy SP3.

Restoration of the site should be primarily biodiversity-led, however the higher quality agricultural soils should be taken into account in the final restoration proposal reflecting policy DM3; Agricultural land and soil quality. Target restoration will depend on landform, hydrology and substrate characteristics. However, priority habitats could include:

- Lowland Dry Acid Grassland
- Lowland Heathland
- Floodplain Grazing Marsh
- Lowland Fens
- Marsh and Swamp
- Reedbed
- Ponds
- Wet Woodland
- Oak-birch Woodland

Restoration should seek to maximise the extent of target habitat(s) and avoid habitat packing, where small areas of lots of habitats are packed into the site. Priority should be given to wetland/open habitats rather than woodland.

Location

- North west of Ranskill
- See Policies Map Inset 3

Environmental and cultural designations

- Working should avoid impacts on designated sites in the local area including Scrooby sand pits.
- Consideration of Landscape Character Assessment, Policy Zone recommendation: 'Conserve and Reinforce' – actions should conserve distinctive features and features in good condition, and strengthen and reinforce those features that may be vulnerable
- Site is within an area with historical records of nightjar and woodlark.
- High potential for the site to contain non-designated archaeology.
- Potential impacts on the setting of listed buildings at Scrooby Top Farmhouse and Cottages.
- Potential indirect links to the Birklands and Bilhaugh SAC and Sherwood Forest p SPA.

Access and transport

- Access on to public highway as per existing site (MP3d – Scrooby Top)
- Strategic Transport Assessment advises segregated HGV right-turn into site
- Access through existing areas must not bring about unacceptable restoration delays

Amenity

- Potential for creation of permissive or definitive access to restored areas
- Screening should be provided from residential properties to the north west of the site.

Water and flooding

A Flood Risk Assessment should address:

- Surface and ground water flooding
- Overland flow paths
- Potential impact on the groundwater resource as the site is within a Source Protection Zone 3 and underlain by a Principal Aquifer.

MP2r – Botany Bay

Grid reference: 467375, 383389

District: Bassetlaw District Council

Parish: Barnby Moor, Sutton and Babworth Parish Councils

Total mineral resource: 2.44 million tonnes

Quarry restoration

All proposals for restoration schemes should be in line with the County Council's approach to Biodiversity-Led Restoration contained within Policy SP3.

Restoration of the site should be primarily biodiversity-led, however the high quality agricultural soils should be taken into account in the final restoration proposal reflecting policy DM3; Agricultural land and soil quality. Target restoration will depend on landform, hydrology and substrate characteristics. However, priority habitats could include:

- Lowland Dry Acid Grassland
- Lowland Heathland
- Floodplain Grazing Marsh
- Lowland Fens
- Marsh and Swamp
- Reedbed
- Ponds
- Wet Woodland
- Oak-birch Woodland

Restoration should seek to maximise the extent of target habitat(s) and avoid habitat packing, where small areas of lots of habitats are packed into the site. Priority should be given to wetland/open habitats rather than woodland, and should complement existing habitats present at the nearby Daneshill Lakes LNR and Idle Valley Nature Reserve.

Location

- South east of Barnby Moor and north west of Retford
- See Policies Map Inset 5

Environmental and cultural designations

- Potential indirect impacts to the Birklands and Bilhaugh SAC and Sherwood Forest p SPA.
- Protection of nearby Chesterfield Canal, Ranby Hall and Babworth Park and indirect impact on the nearby cluster of LWSs and SSSIs around Sutton and Lound and Daneshill must be considered
- Create stand off to protect vegetation along the canal
- Consideration of Landscape Character Assessment, Policy Zone recommendation: majority of the site is 'Conserve and Reinforce' – actions should conserve distinctive features and features in good condition, and strengthen and reinforce those features that may be vulnerable, with the remainder (one field to the north west) 'Conserve and Create' – actions should conserve distinctive

features and features in good condition, whilst creating new features or areas where they have been lost or are in poor condition.

- There is potential for the site to contain non-designated archaeology

Access and transport

- Access on to public highway to north of the site on to the A638

Amenity

- Restoration provides opportunity to link the Chesterfield Canal (Cuckoo Way Long Distance footpath) to Barnby Moor and Sutton cum Lound
- Provide adequate screening to all sides of the processing plant and along the length of the Chesterfield Canal.
- Create stand off to protect vegetation along A638 and Sutton Lane which are important screening features

Water and flooding

- Low groundwater levels may affect ability to provide wetland features
- Ensure that 9m stand off from watercourse that crosses the site would be adequate to withstand any ingress of water into the quarry.

A Flood Risk Assessment should address:

- Surface and ground water flooding
- Overland flow paths
- Potential impact on the groundwater resource as the site is within a Source Protection Zone 3 and underlain by a Principal Aquifer.

Other

Take account of the high pressure gas line running across the site in the design and restoration of the site.

MP2o – Langford Lowfields South and west

Grid reference: 481150, 359663

District: Newark and Sherwood District Council

Parish: Holme Parish Council

Total mineral resource: 3.6 million tonnes

Quarry restoration

All proposals for restoration schemes should be in line with the County Council's approach to Biodiversity-Led Restoration contained within Policy SP3.

Restoration of this site should be biodiversity-led as it has the potential to provide new areas of wetland to increase the overall resource and in doing so contribute to aspirations for this habitat over a 50 year time frame, as per the Trent Valley Biodiversity Opportunity Mapping Project. Target restoration will depend on landform, hydrology and substrate characteristics. However, priority habitats could include:

- Lowland Neutral Grassland
- Floodplain Grazing Marsh
- Marsh and Swamp
- Reedbed
- Ponds
- Wet Woodland

Restoration of this site has the potential to provide significant new areas of wetland habitats to increase the overall resource and in doing so contribute to aspirations for these habitats over a 50 year time frame, as per the Trent Valley Biodiversity Opportunity Mapping Project. The approach to restoration across this site and the other sites in the Collingham and Besthorpe area should ideally be co-ordinated through a Master-planning process, or similar, to ensure that opportunities are maximised.

Restoration should seek to maximise the extent of target habitat(s) and avoid habitat packing, where small areas of lots of habitats are packed into the site. Priority should be given to wetland/open habitats rather than woodland. Given the proximity of the site to Langford Lowfields, Besthorpe and Cromwell quarries, the restoration plan should aim to complement existing and proposed restoration schemes as well as existing habitats to maximise biodiversity gain in the area.

As the site lies within an area of very high multiple environmental sensitivity for ecology, heritage and landscape, the biodiversity-led restoration outlined above should be sensitive to these elements. The site also covers a multiple environmental sensitivity hotspot for heritage (as per the Trent Valley Areas of Multiple Environmental Sensitivity Project).

Location

- South west of Colingham and north east of Holme
- See Policies Map Inset 11

Environmental and cultural designations

- Impact on nearby Scheduled Ancient Monument and listed buildings and their settings, including Church of St Bartholomew, Langford Old Hall, Langford Crossing Gate House must be considered
- High archaeological potential to be managed through appropriate survey methods
- Consideration of Landscape Character Assessment, Policy Zone recommendation: 'Create and Reinforce' – actions should strengthen or reinforce distinctive features and patterns in the landscape, whilst creating new features or areas where they have been lost or are in poor condition

Access and transport

- Access on to public highway as per existing site (MP2i – Langford Lowfields)
- Existing HGV routing agreement to be maintained

Amenity

- Consideration of impact on Langford footpath 3 and 7, which runs between this extension and the existing site; protection (and stability issues) or rerouting need to be considered
- Restoration provides an opportunity to link Langford footpath 3 with the minor road from Holme East to Langford Church
- Screening from eastern edge of Holme and from Langford Crossing Cottage, to be provided by offsite management of intervening hedgerows

Water and flooding

- No excavation within 45m of the two flood defences or the River Trent
- Ensure the 9m easements from watercourses that form the western, northern and eastern boundaries of the site are suitable to withstand ingress of water into the quarry.
- Site must be designed and constructed to remain operational and safe for users in times of flood, result in no net loss of floodplain storage, not impede water flows and not increase flood risk elsewhere

A Flood Risk Assessment should address:

- Surface and ground water flooding
- Overland flow paths
- Potential impact on the groundwater resource as the site is underlain by a Secondary Aquifer
- Mitigation of potential flooding as part of site lies in Flood Zone 3
- The impact of existing flood defences failing

MP2p – Langford Lowfields North

Grid reference: 481811, 361325

District: Newark and Sherwood District Council

Parish: Collingham Parish Council

Total mineral resource: 4.7 million tonnes available during the plan period

Quarry restoration

All proposals for restoration schemes should be in line with the County Council's approach to Biodiversity-Led Restoration contained within Policy SP3.

Restoration of this site should be biodiversity-led as it has the potential to provide new areas of wetland to increase the overall resource and in doing so contribute to aspirations for this habitat over a 5-10 year time frame, as per the Trent Valley Biodiversity Opportunity Mapping Project. Target restoration will depend on landform, hydrology and substrate characteristics. However, priority habitats could include:

- Lowland Neutral Grassland
- Floodplain Grazing Marsh
- Marsh and Swamp
- Reedbed
- Ponds
- Wet Woodland

Restoration of this site has the potential to provide significant new areas of wetland habitats to increase the overall resource and in doing so contribute to aspirations for these habitats over a 50 year time frame, as per the Trent Valley Biodiversity Opportunity Mapping Project. The approach to restoration across this site and the other sites in the Collingham and Besthorpe area should ideally be co-ordinated through a Master-planning process, or similar, to ensure that opportunities are maximised.

Restoration should seek to maximise the extent of target habitat(s) and avoid habitat packing, where small areas of lots of habitats are packed into the site. Priority should be given to wetland/open habitats rather than woodland. Given the proximity of the site to Langford Lowfields, Besthorpe and Cromwell quarries, the restoration plan should aim to complement existing and proposed restoration schemes as well as existing habitats to maximise biodiversity gain in the area.

As the site lies within an area of very high multiple environmental sensitivity for ecology, heritage and landscape, the biodiversity-led restoration outlined above should be sensitive to these elements. This is particularly important to the eastern edge where the site is bounded by a multiple environmental sensitivity hotspot for ecology, heritage and landscape (as per the Trent Valley Areas of Multiple Environmental Sensitivity Project).

Location

- South west of Collingham and north east of Holme
- See Policies Map Inset 11

Environmental and cultural designations

- Protection of the nearby Conservation Area of Collingham and its listed buildings. Reference should also be made to the Collingham Conservation Area Character Appraisal (CACA)
- Protection of Horse Pool LWS and Besthorpe Meadow SSSI must be considered
- High archaeological potential to be managed through appropriate survey methods
- Retain existing strong mixed species hedgerows and incorporate into restoration design as far as possible
- Consideration of Landscape Character Assessment, Policy Zone recommendation: 'Create and Reinforce' – actions should strengthen or reinforce distinctive features and patterns in the landscape, whilst creating new features or areas where they have been lost or are in poor condition
- High potential for the site to contain non-designated archaeology

Access and transport

- Access on to public highway as per existing site (MP2i – Langford Lowfields)
- Existing HGV routing agreement to be maintained

Amenity

- Protection or suitable management of South Collingham footpath 1, Langford footpaths 9 and 10 and footpath 21
- Opportunity through restoration phase to resolve the anomaly of South Clifton footpath 2, which is currently dead-ended
- Provide screening of site from Westfield Farm

Water and flooding

- Ensure the 9m easement from the watercourse along the southern boundary is suitable to withstand ingress of water into the quarry.
- Site must be designed and constructed to remain operational and safe for users in times of flood, result in no net loss of floodplain storage, not impede water flows and not increase flood risk elsewhere

A Flood Risk Assessment should address:

- Surface and ground water flooding
- Overland flow paths
- Mitigation of potential flooding as site lies in Flood Zone 3
- Potential impact on the groundwater resource as the site is underlain by a Secondary Aquifer
- The impact of existing flood defences failing

Other

- The site is crossed by a National Grid high voltage overhead electricity transmission line (4VK route)

MP2s - Mill Hill near Barton in Fabis

Grid reference: 453142, 333775

District: Rushcliffe Parish Council

Parish: Barton in Fabis Parish Council

Total mineral resource: 3.4 million tonnes

Quarry restoration

Restoration should be biodiversity-led, and precise details will be dependent upon landform and substrate characteristics. However, restoration should target the creation of:

- Wet Grassland (Floodplain Grazing Marsh)
- Reedbed
- Marsh and Swamp
- Ponds

Other habitats that may be appropriate for creation include:

- Lowland Neutral Grassland
- Wet Woodland
- Mixed Ash-dominated Woodland (Lowland Mixed Deciduous Woodland)

Restoration should seek to maximise the extent of target habitat(s) and avoid habitat packing, where small areas of lots of habitats are packed into the site. Priority should be given to wetland/open habitats rather than woodland (although there may be limited opportunities for the latter along the bluff on the eastern side of the site), and should complement existing wetland habitat in the vicinity. Opportunities for created habitats to have multi-functional benefits (flood storage) should be explored, and taken where possible.

Location

- North east of Barton in Fabis village and west/south west of Clifton
- See Policies Map Inset 18

Environmental and cultural designations

- Direct and indirect impact on SINC's within and near the site and indirect impacts on Holme Pit SSSI must be considered
- High archaeological potential to be managed, including use of metal detector on conveyor belt
- Consideration of Landscape Character Assessment, Policy Zone recommendation: 'Enhance' - emphasis should be to improve existing features which may not be currently well- managed or where existing features are of good quality but could be of greater benefit if improved.

Access and transport

- Access on to the public highway to east of the site on to the old A453

Amenity

- Protection or suitable management of Barton in Fabis footpaths FP2, FP69 and BW1

Water and flooding

- Mitigation of potential flooding should be considered through a Flood Risk Assessment as site lies in Flood Zone 3. No excavation within 45m of the toe of any flood defence or the River Trent itself

MP2q – East Leake North

Grid reference: 456767, 325464

District: Rushcliffe Borough Council

Parish: Costock Parish Council

Total mineral resource: Approximately 750,000 tonnes

Quarry restoration

All proposals for restoration schemes should be in line with the County Council's approach to Biodiversity-Led Restoration contained within Policy SP3.

Restoration of the site should be primarily biodiversity-led, however the higher quality agricultural soils should be taken into account in the final restoration proposal reflecting policy DM3; Agricultural land and soil quality. Target restoration will depend on landform, hydrology and substrate characteristics. However, priority habitats could include:

- Lowland Neutral Grassland
- Floodplain Grazing Marsh
- Marsh and Swamp
- Reedbed
- Ponds
- Wet Woodland
- Mixed Ash-dominated Woodland

Restoration should seek to maximise the extent of target habitat(s) and avoid habitat packing, where small areas of lots of habitats are packed into the site. Priority should be given to wetland/open habitats rather than woodland.

Location

- South east of East Leake, south west of Costock and north west of Rempstone
- See Policies Map Inset 20

Environmental and cultural designations

- High archaeology potential to be managed through appropriate survey methods
- Retain internal hedgerows and hedgerow trees as far as possible
- Consideration of Landscape Character Assessment, Policy Zone recommendation: 'Conserve and Enhance' - actions should protect or safeguard key features and characteristics and improve existing features which may not be currently well-managed or where existing features are of good quality but could be of greater benefit if improved.
- Potential impact on the site of Old St Peters Church, the settings of conservation areas (Costock & East Leake) and listed buildings (Grade II listed Rempstone Hall and Grade II* Stanford Hall).

Access and transport

- Possible continued use of existing access (from MP2j – East Leake) on to public highway

Amenity

- Protection of East Leake footpath 1, an important route adjoining a section of the southern boundary of the site
- Provide screening from site to property to the north, west and north-west.

Water and flooding

- Flooding issues downstream require strict control of water discharge from this site.

A Flood Risk Assessment should address:

- Surface and ground water flooding
- Overland flow paths

Potential impact on the groundwater resource as the site is underlain by a Secondary Aquifer.

MP3e – Bestwood 2 East & MP3f - Bestwood 2 North

Grid reference: 457333, 352598

District: Gedling Borough Council

Parish: Ravenshead Parish Council

Total mineral resource: 2.2 million tonnes

Quarry restoration

All proposals for restoration schemes should be in line with the County Council's approach to Biodiversity-Led Restoration contained within Policy SP3.

Target restoration will depend on landform, and substrate characteristics. However, priority habitats could include:

- Lowland Dry Acid Grassland
- Lowland Heathland
- Marsh and Swamp
- Ponds
- Oak-birch Woodland

Restoration should seek to maximise the extent of target habitat(s) and avoid habitat packing, where small areas of lots of habitats are packed into the site. Priority should be given to wetland/open habitats rather than woodland. Heathland/ Acid Grassland habitats should be priorities for creation; however, Oak-birch Woodland creation may be required to mitigate against the loss of exiting woodland from within Longdale Plantation (SINC/LWS 2/363).

Location

- South of Ravenshead
- See Policies Map Inset 14

Environmental and cultural designations

- The restoration scheme would have to demonstrate that the loss of the LWS could be outweighed by the greater than County need for the development and that high quality habitat, at least equal to that which would be lost, could be established and maintained in the long term
- Indirect impact on the setting of various Scheduled Ancient Monuments, registered parks and gardens, conservation areas and listed buildings (associated with Papplewick Pumping Station, Newstead Abbey and Papplewick Hall) must be considered
- Consideration of Landscape Character Assessment, Policy Zone recommendation: 'Conserve and Reinforce' – actions should conserve distinctive features and features in good condition, and strengthen and reinforce those features that may be vulnerable

Access and transport

- Access on to public highway as per existing site (MP3b – Bestwood 2)

Amenity

- Potential to create right of way links through restoration

Water and flooding

- Mitigation of potential flooding should be considered through a Flood Risk Assessment.
- Assess potential Impact on groundwater and surface water quality through environmental assessment (including impact on Source Protection Zone 3 and the Principal Aquifer).

MP3g – Scrooby Top North

Grid reference: 464999, 389528

District: Bassetlaw District Council

Parish: Scrooby Parish Council

Total mineral resource: 1.68 million tonnes available over the plan period

Quarry restoration

All proposals for restoration schemes should be in line with the County Council's approach to Biodiversity-Led Restoration contained within Policy SP3.

Restoration should include agricultural and biodiversity-led elements. Target restoration will depend on landform, and substrate characteristics. However, priority habitats could include:

- Lowland Dry Acid Grassland
- Lowland Heathland
- Marsh and Swamp
- Reedbed
- Ponds
- Wet Woodland
- Oak-birch Woodland

Restoration should seek to maximise the extent of target habitat(s) and avoid habitat packing, where small areas of lots of habitats are packed into the site. Priority should be given to wetland/open habitats rather than woodland.

Location

- North west of Ranskill
- See Policies Map Inset 3

Environmental and cultural designations

- Impacts on ecological interest of Scrooby Sand Pits must be considered
- High archaeological potential to be managed through appropriate survey methods
- Protect and retain character of existing Green Land (Scrooby BW4) to north and north west of the site.
- Retain existing woodland strips to western edge of site which provide screening from A638 and plant additional mixed species hedgerow to north, east and southern boundaries of the site
- Consideration of Landscape Character Assessment, Policy Zone recommendation: 'Conserve and Reinforce' – actions should conserve distinctive features and features in good condition, and strengthen and reinforce those features that may be vulnerable
- Consideration of historic records of nightjar and woodlark on the site, which are protected under the Birds Directive and the Conservation Regulations 2010.

Access and transport

- Access on to public highway as per existing site (MP3d – Scrooby Top)

Water and flooding

- Assess potential Impact on groundwater and surface water quality through environmental assessment (including impact on Source Protection Zone 3 and the Principal Aquifer).

A Flood Risk Assessment should address:

- Surface and groundwater water flooding
- Mitigation of potential flooding

MP6c Woodborough Lane

Grid reference: 460676, 347019

District: Gedling Borough Council

Parish: Lambley Parish Council, Woodborough Parish Council

Total mineral resource: 2.7 million cubic metres

Quarry restoration

All proposals for restoration schemes should be in line with the County Council's approach to Biodiversity-Led Restoration contained within Policy SP3.

Target restoration will depend on landform, hydrology and substrate characteristics. However, priority habitats could include:

- Species-rich neutral grassland (meadows)
- Lowland mixed deciduous woodland
- Ponds
- Hedgerows
- Marsh and swamp
- Reedbed

Restoration should seek to maximise the biodiversity value of the site, the extent of target habitat(s) and avoid habitat packing, where small areas of lots of habitats are packed into the site. Priority should be given to wetland/open habitats rather than woodland, although efforts should be made to retain as many of the mature trees as possible.

Location

- North-east of Arnold, to the south of Calverton.
- See Policies Map Inset 16

Environmental and cultural designations

- None within close proximity to the site. Non-designated heritage assets associated with Arnold Lodge Farm are adjacent to the site's north-west boundary.

Access and transport

- The proposed northern extension will not require haulage along the road network and is proposed to include a crossing point between the northern site and the existing quarry to the south generally in the area indicated circled red on the above. Further details of this crossing point would be needed for further assessment.
- Existing restrictions on HGV movements at the brick works would be carried forward.

Amenity

- Woodborough Footpath No. 9 and Arnold Footpath No. 7, do not fall within the site area, but may be impacted by mineral transport to the Dorket Head site south of the B684 and the brickworks.
- Arnold Lodge Farm is adjacent to the site and Lambley House and Barn Farm, and north-eastern areas of Arnold are within the wider area. Aside from Arnold Lodge Farm these are all at a distance whereby environmental impacts would be unlikely, but should still be investigated and appropriate mitigation proposed where necessary.

Water and flooding

- The proposed site is situated in flood zone 1, with no concern expressed in respect of water protection or flood risk.

MP7c – Bantycock quarry south

Grid reference: 481165, 348611

District: Newark and Sherwood District Council

Parish: Fernwood Parish Council

Total mineral resource: 7.5-8.5 million tonnes

Quarry restoration

All proposals for restoration schemes should be in line with the County Council's approach to Biodiversity-Led Restoration contained within Policy SP3.

Target restoration will depend on landform, and substrate characteristics. However, priority habitats could include:

- Calcareous grassland (on drier areas)
- Floodplain grazing marsh/seasonally wet grassland (on lower areas)
- Marsh and swamp
- Reedbed
- Lowland mixed deciduous woodland
- Wet woodland
- Hedgerows
- Ditches
- Ponds

Restoration should seek to maximise the extent of target habitat(s) and avoid habitat packing, where small areas of lots of habitats are packed into the site. Priority should be given to wetland/open habitats rather than woodland. Restoration involving the return of land to agriculture and nature conservation corridors should complement the approved restoration scheme for the existing quarry to the north, and the Staple Land Quarry landfill to the west.

Any proposed habitats should be appropriate for the Trent and Belvoir Vales National Character Area. Effort should be made to retain as many existing habitat features as possible, especially given the potential loss of Cowtham House Arable LWS and at least partial loss of Shire Dyke, Balderton South LWS.

Location

- South of Newark on Trent, to the south-west of Fernwood.
- See Policies Map Inset 17

Environmental and cultural designations

- The restoration scheme would have to demonstrate that the loss of the LWSs (Cowtham House Arable LWS and Shire Dyke Balderton South LWS are within the site area) could be outweighed by the greater than County need for the development and that high quality habitat, at least equal to that which would be lost, could be established and maintained in the long term.

Access and transport

- Access on to public highway as per existing site to the north (Bantymock Quarry).
- Over time access arrangements will be affected by the Newark Southern Link Road which is currently only partially built.

Amenity

- Potential to create right of way links through restoration, extending those proposed for northern extraction areas and linking into Cotham FP7.

Water and flooding

- Mitigation of potential flooding should be considered through a Flood Risk Assessment.


Appendix 4: Policies Map

Nottinghamshire Minerals Local Plan Emerging Draft Plan Policies Map


July 2018

LEGEND



Features

 County Boundary (Plan Area)

Transport Network


 Railways
 Core Road Network
Waterways
 Navigable
 Other

Environmental Designations

 Special Area of Conservation (SAC)
 National Nature Reserve (NNR)

 Greenbelt

Hydrocarbons




 PEDL Licence Areas

Policies

Mineral Safeguarding and Consultation Areas (DM13)

 Sand and Gravel
 Sherwood Sandstone
 Alluvial Sand and Gravel
 Limestone
 Brick Clay
 Gypsum
 Surface Coal



Sites

 Permitted Sites (MP2-4, 6-8 and 10)
 New Sites and Extensions (MP2,3,6 and 7)
 Archaeological Resource Area (DM6)

Site Codes

SG = Sand and Gravel
SS = Sherwood Sandstone
LS = Limestone
BC = Brick Clay
GY = Gypsum
SL = Silica Sand
BS = Building Stone

Airfield Safeguarding (DM12)



 Airfields
 Safeguarding Areas

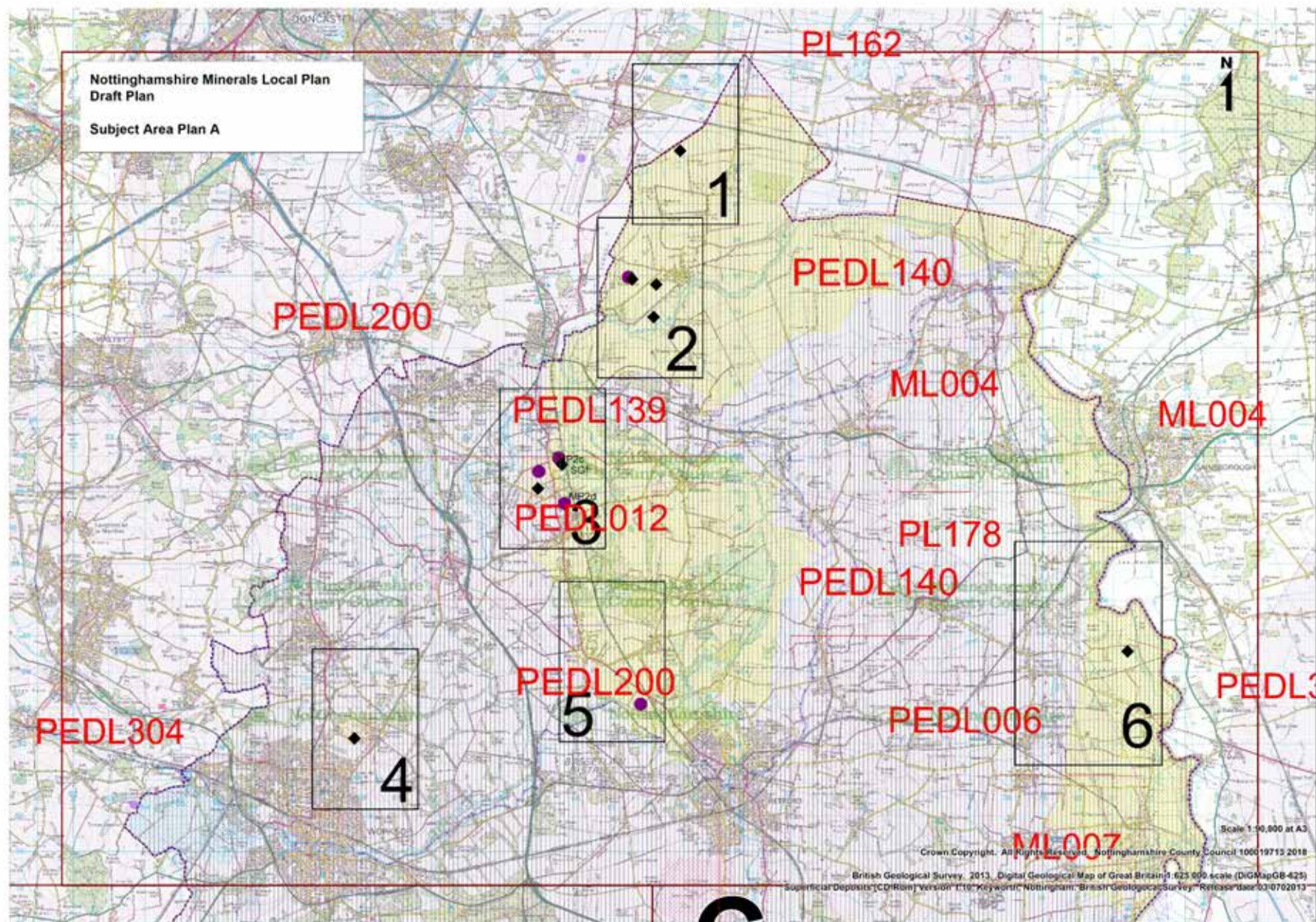
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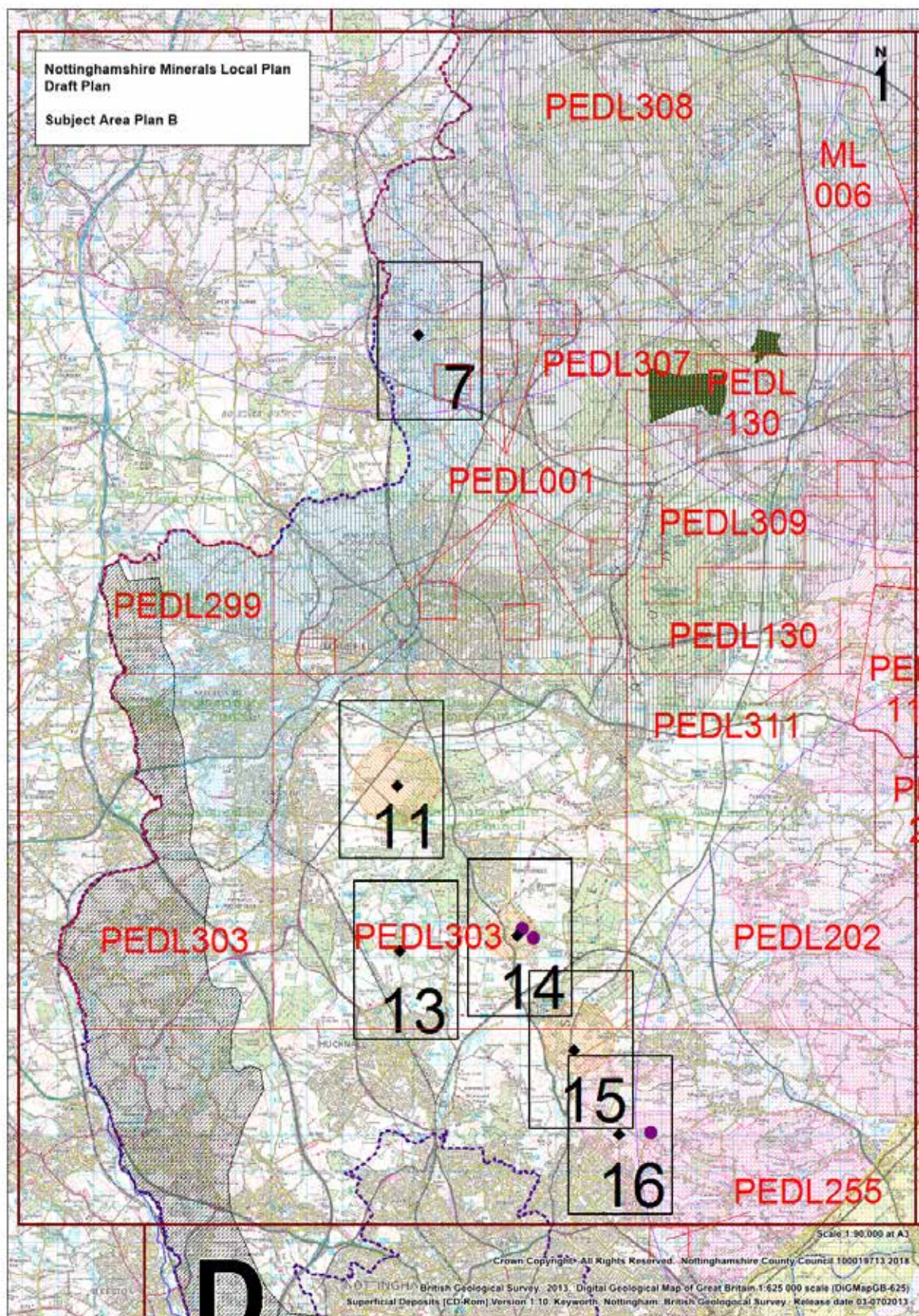
 New Sites and Extensions (MP2,3,6 and 7)

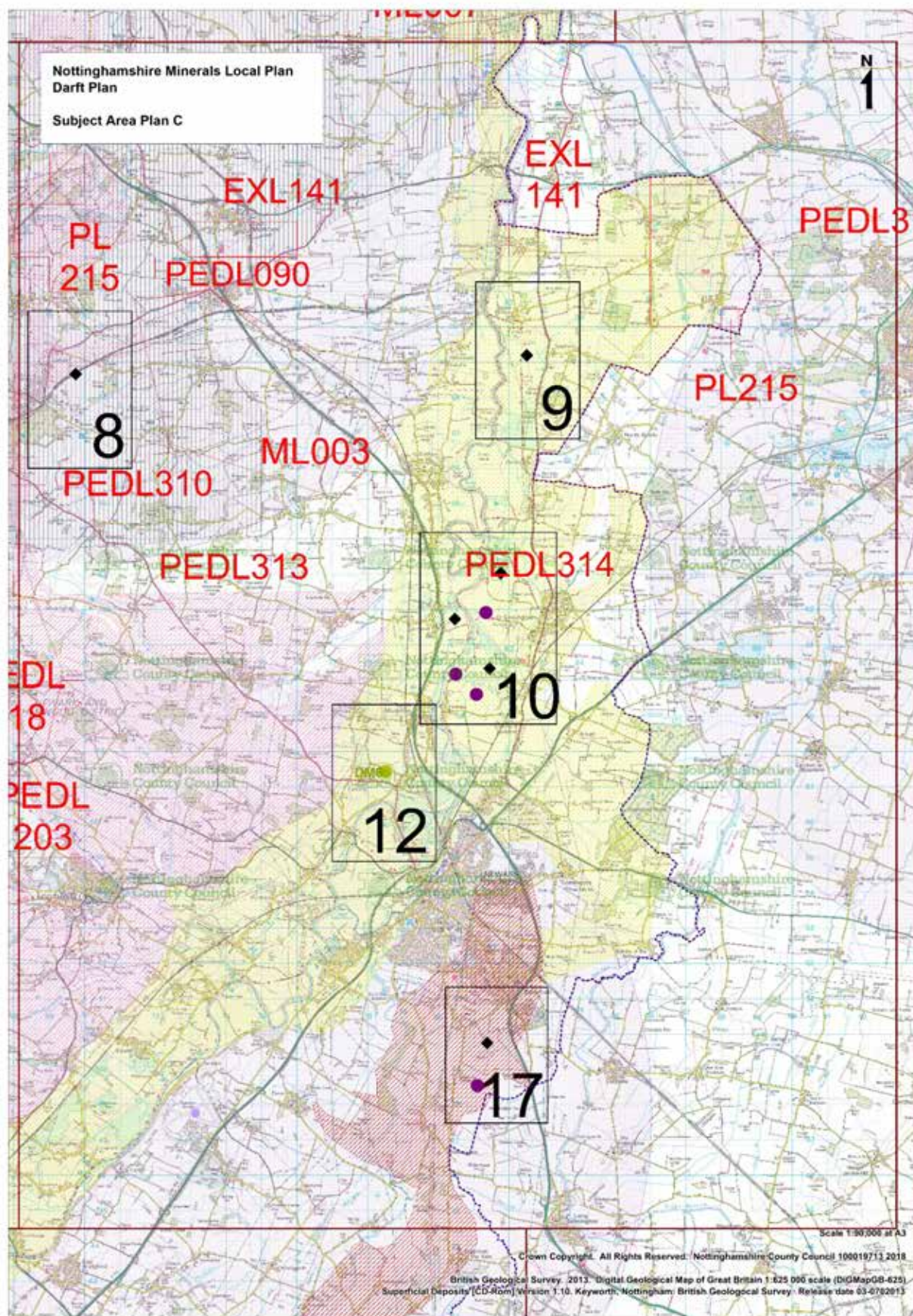
 Archaeological Resource Area (DM6)

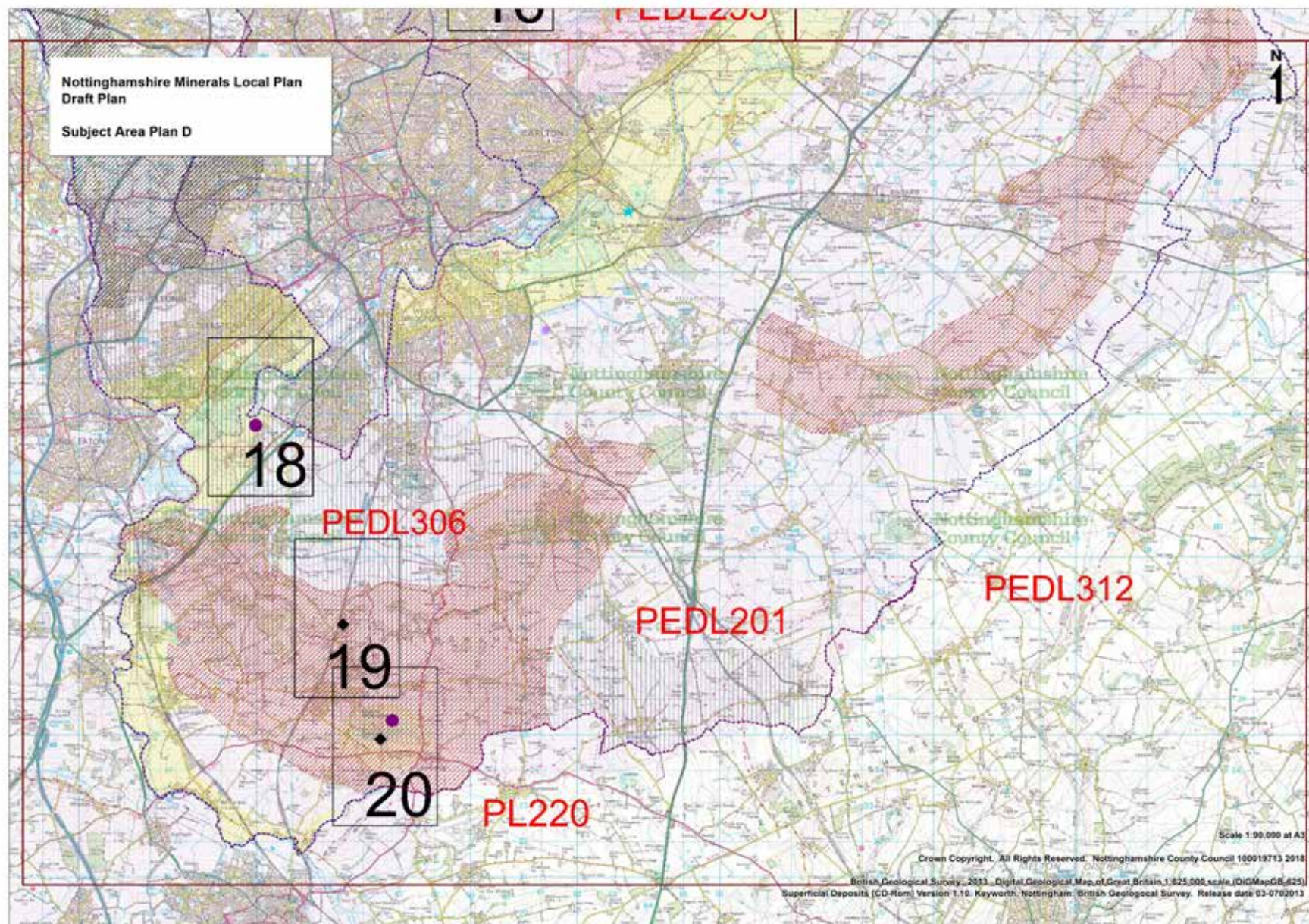
Environmental Designations

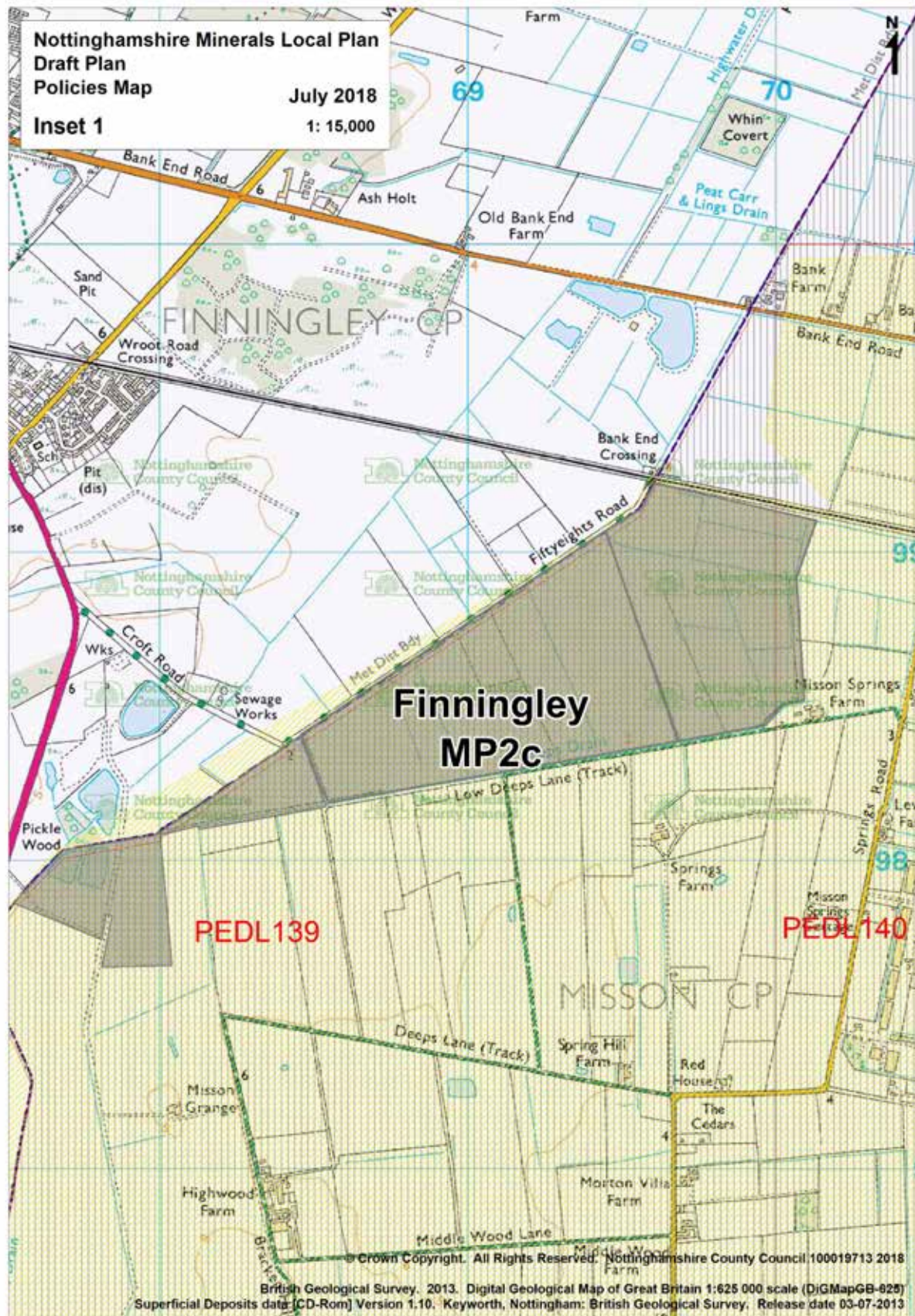
 Site of Special Scientific Interest (SSSI)
 LWS Geo
 LWS Bio

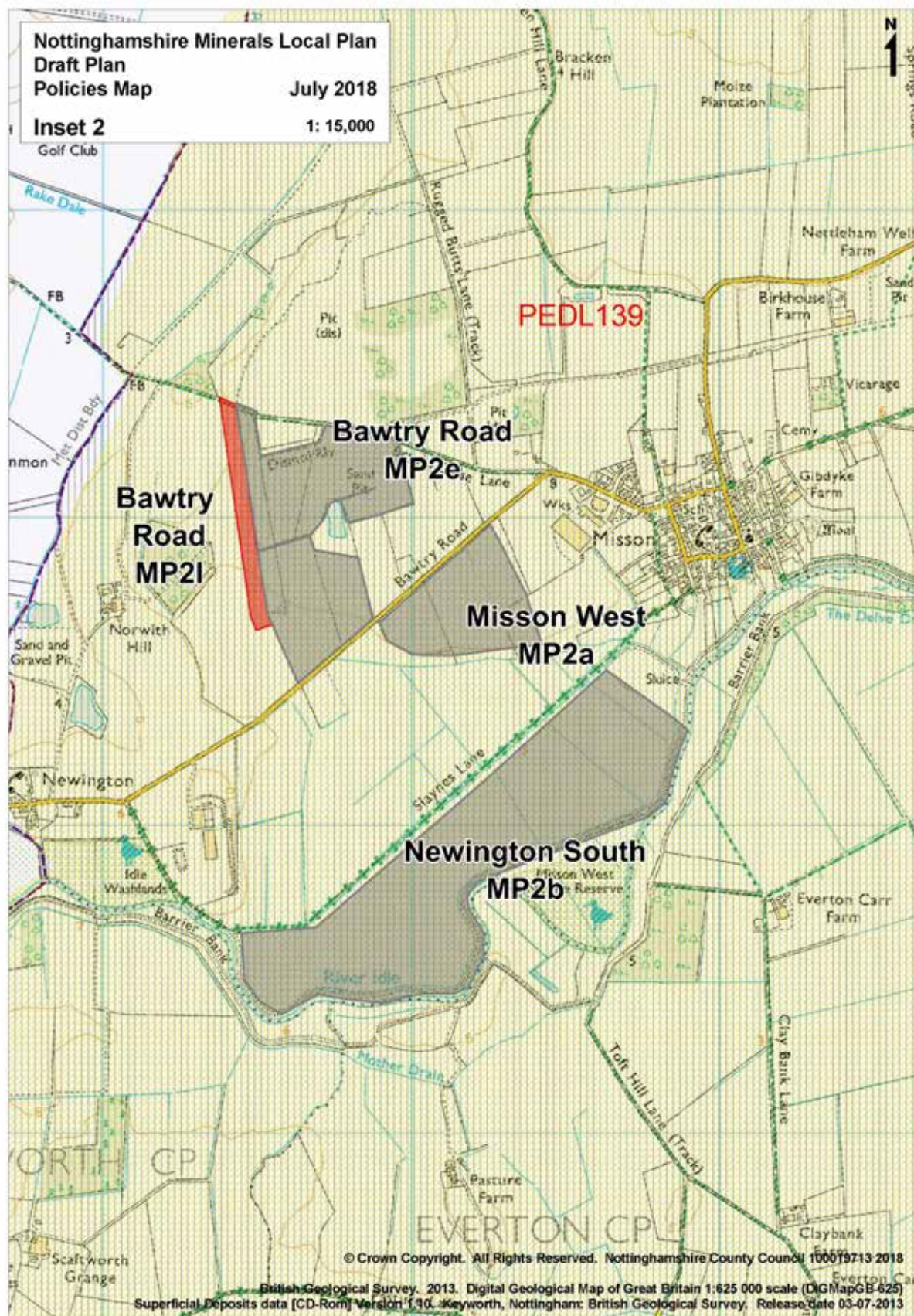


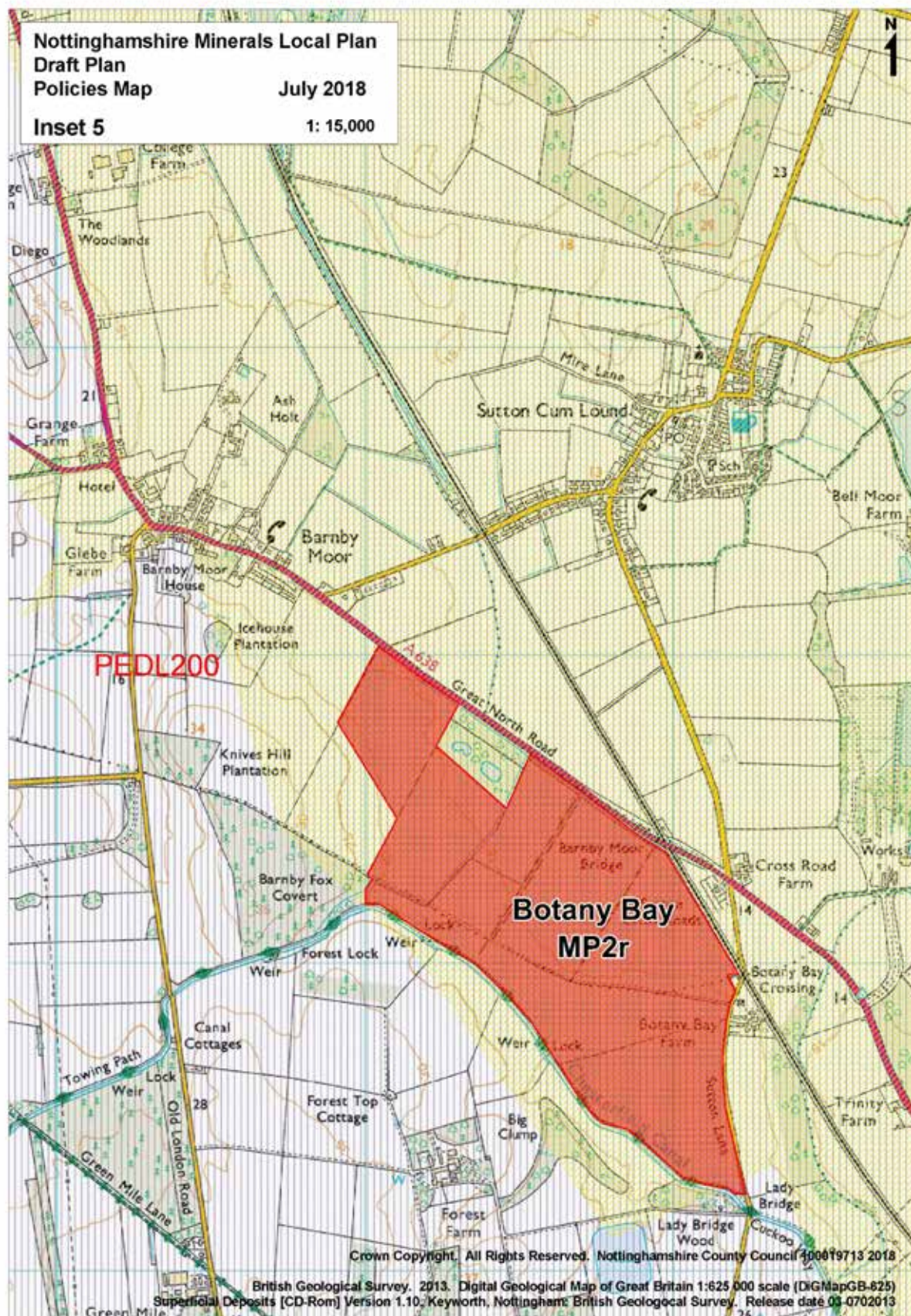


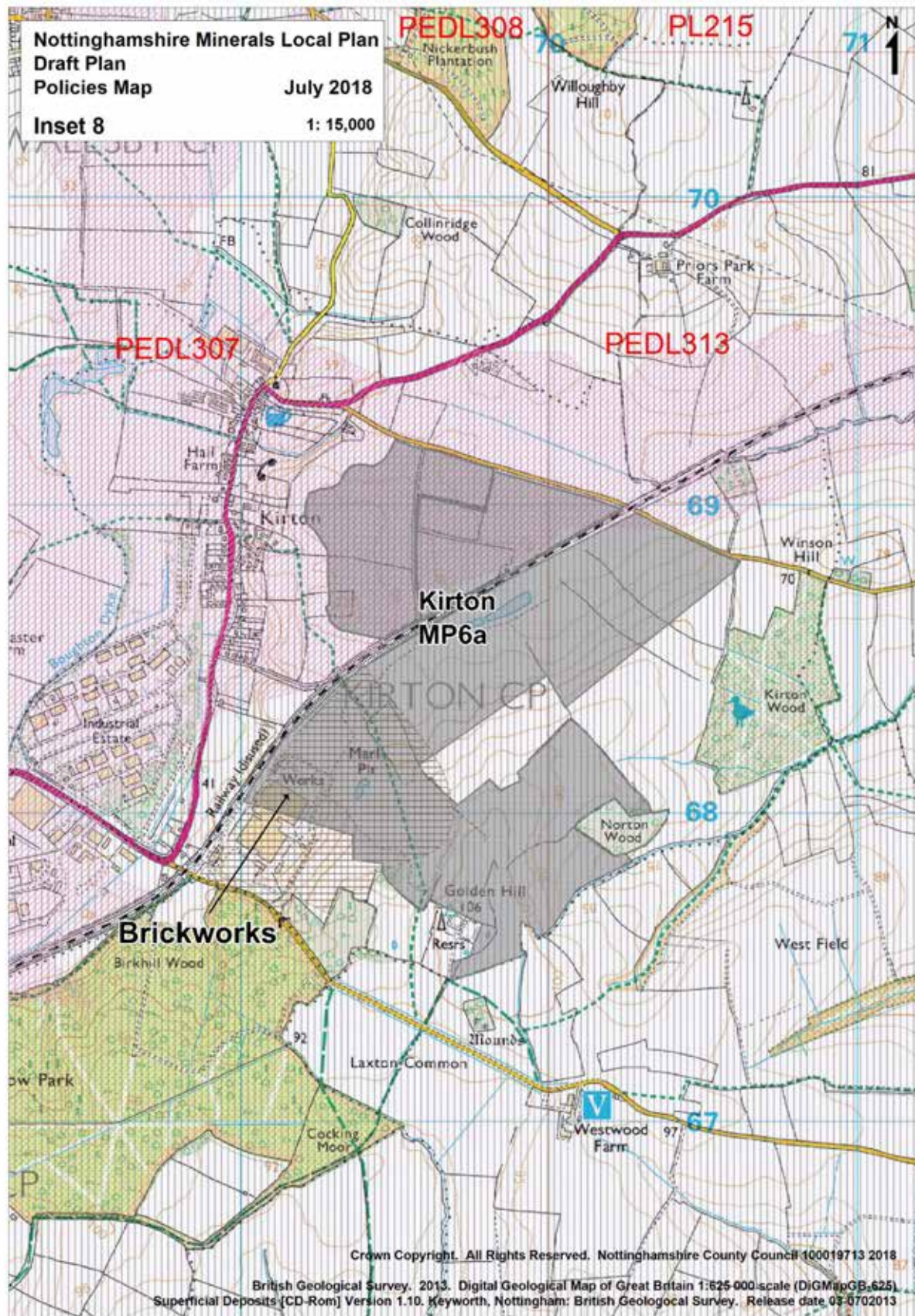


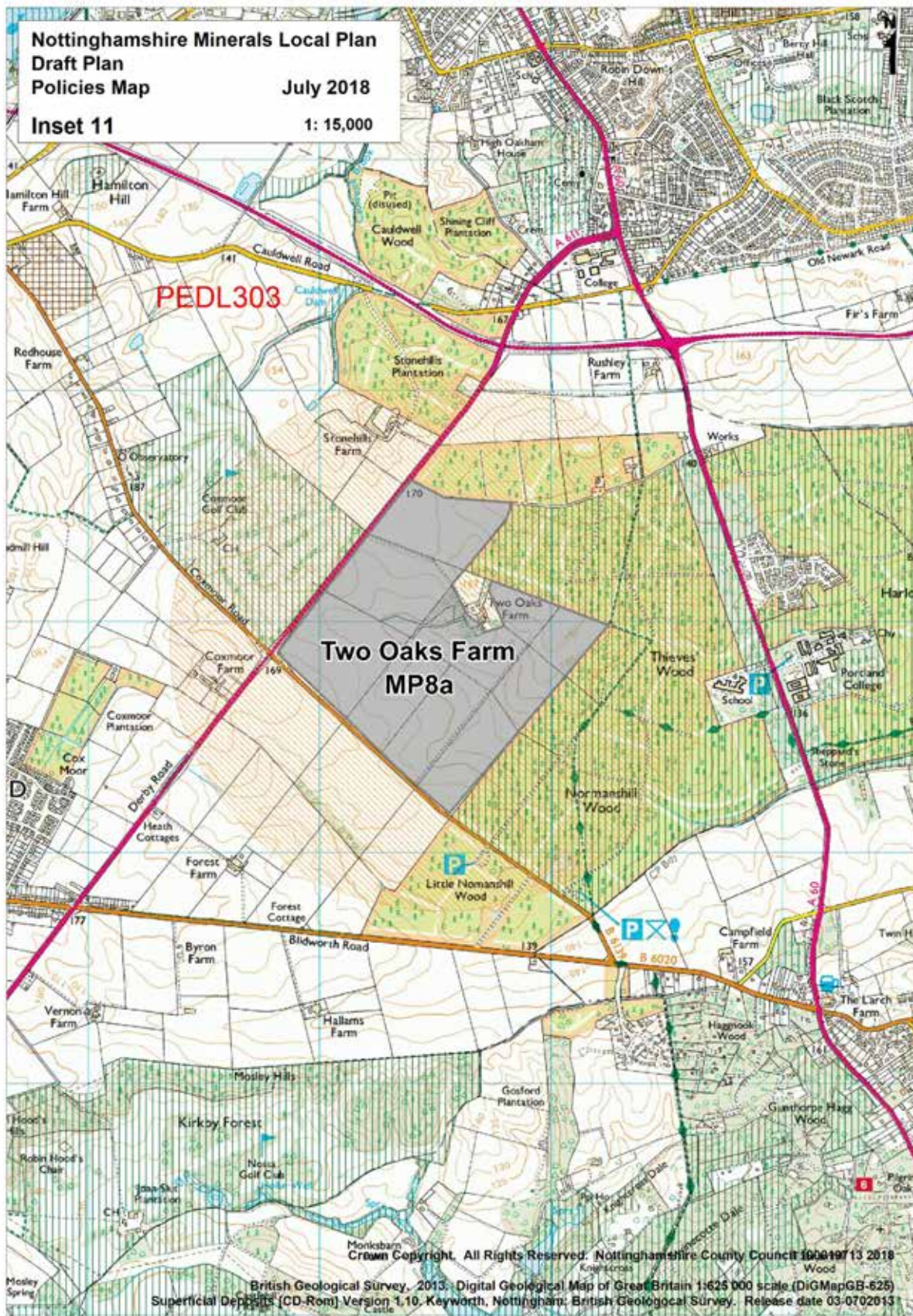










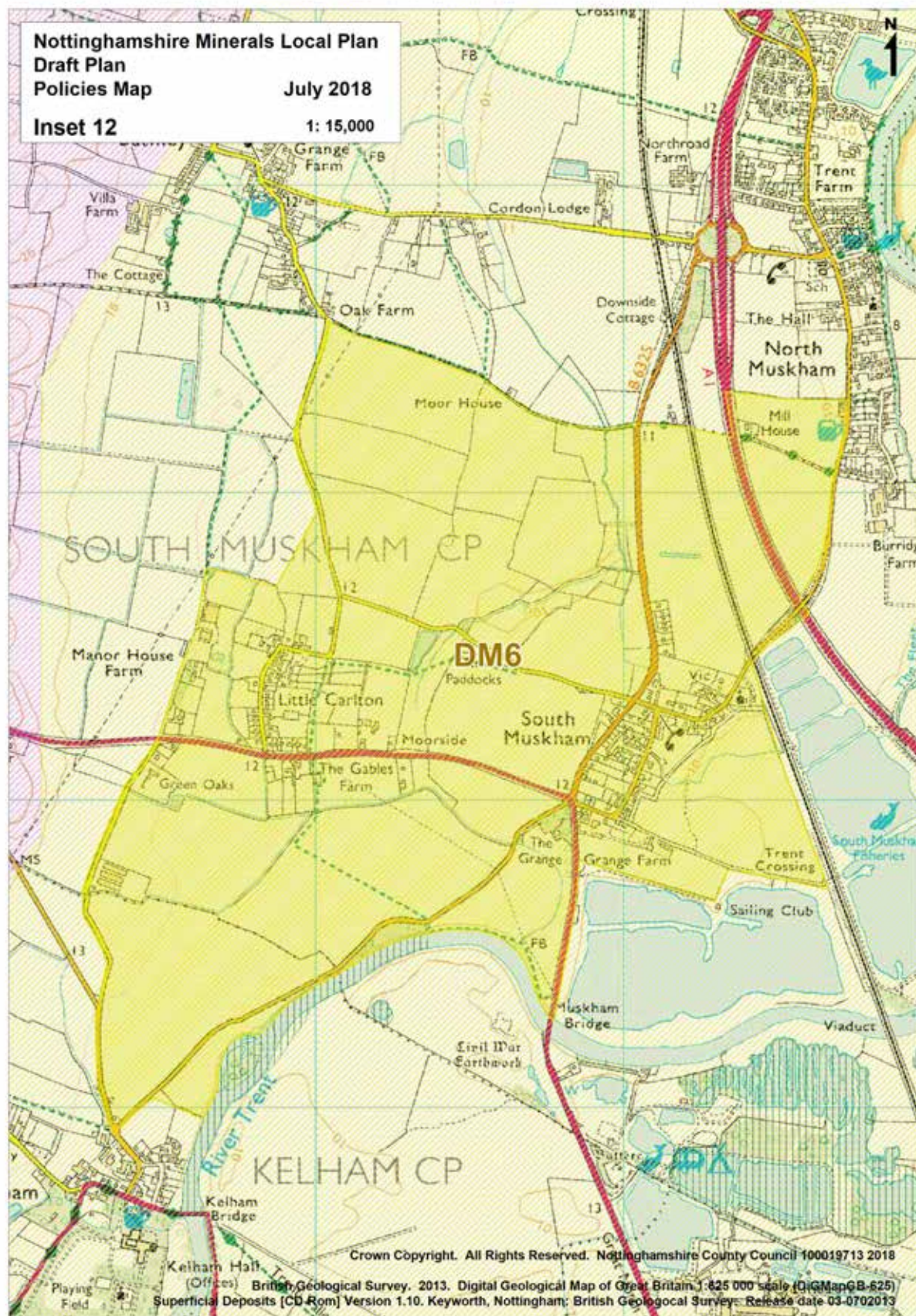


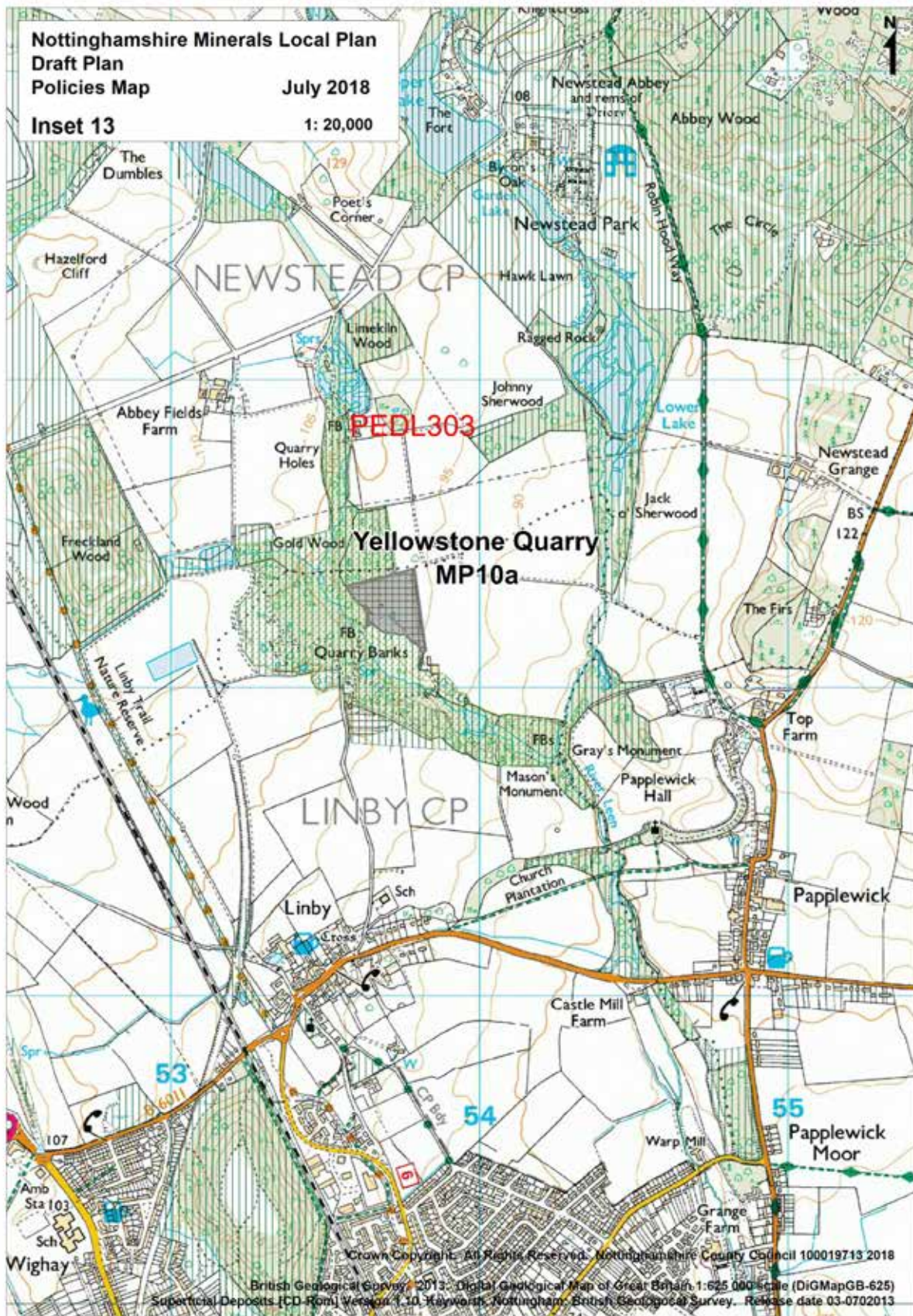
**Nottinghamshire Minerals Local Plan
Draft Plan
Policies Map**

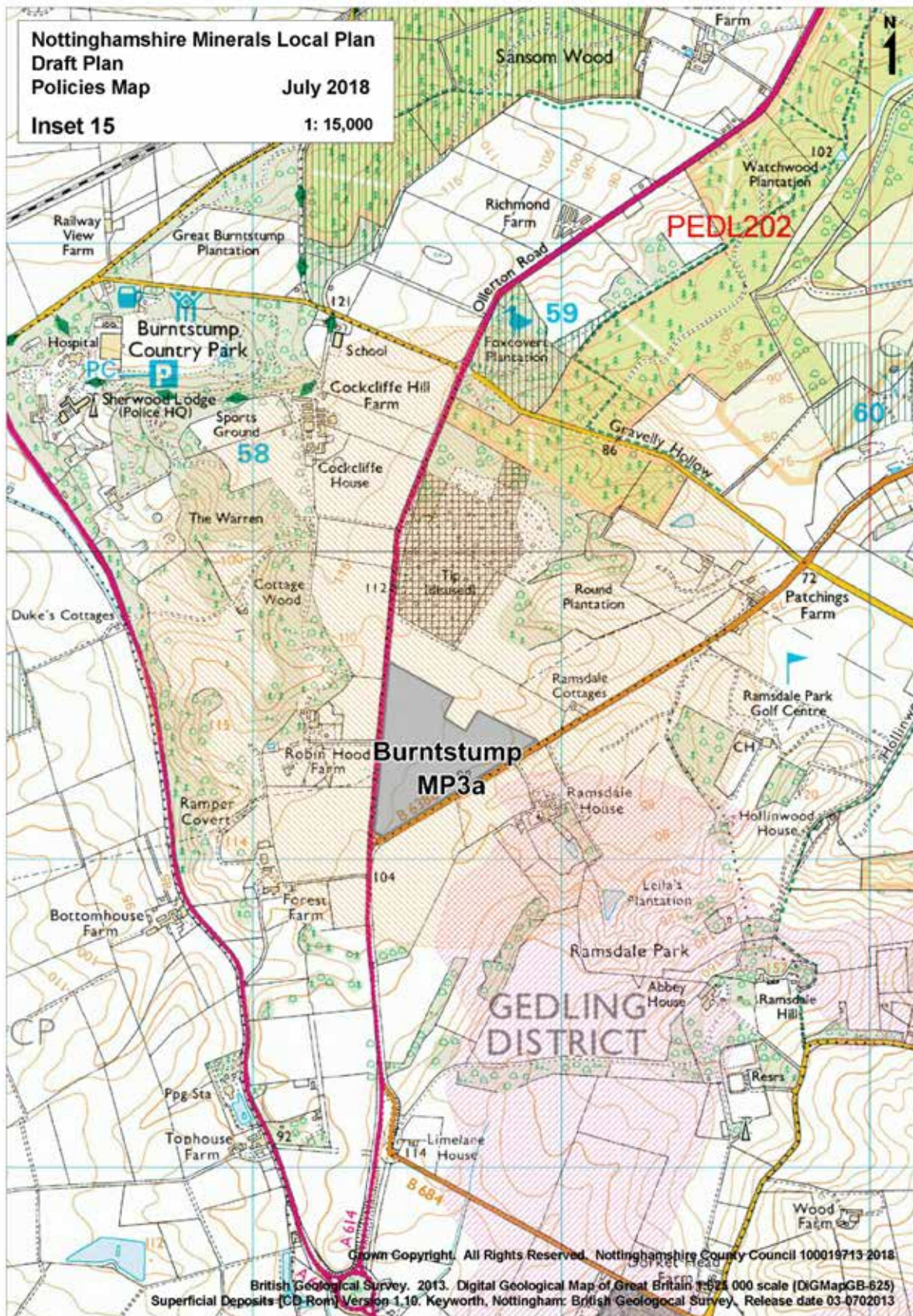
July 2018

Inset 12

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