Nottinghamshire County Council

Nottinghamshire Minerals Local Plan

Publication Version

Site selection methodology and assessment

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Introduction

Minerals are an important natural resource and are essential to maintain our way of life from building homes, offices and roads to providing electricity and heat. Nottinghamshire is rich in minerals and has a history of working a range of minerals from coal, sand and gravel, gypsum and oil. The new Nottinghamshire Minerals Local Plan needs to plan for a steady and adequate supply of minerals over the plan period to 2036 through the identification of site specific allocations where appropriate. These allocations are those that are in principle suitable for future minerals development and need to be deliverable, achievable and in the most sustainable and suitable locations, to support the strategic policies of the Local Plan

This report sets out the key stages that have been undertaken in identifying and assessing potential site allocations for inclusion in the Minerals Local Plan.

Stage 1: Identifying the level of provision for minerals over plan period
Stage 2: Issuing a call for sites
Stage 3: Testing the deliverability of sites
Stage 4: Strategic assessments
Stage 5: Ensuring a geographic spread of sites
Stage 6: Overall assessment and decision

Stages 1 to 5 set out a commentary of the evidence and issues presented in the assessment documents. This information is then drawn together to form analysis in Stage 6, in which the decision to identify site specific allocations (for inclusion in the Draft Minerals Local Plan) is made.

Site assessment methodology

Stage 1: Identifying Level of Provision	Stage 2: Call for Sites	Stage 3: Deliverability of Sites	Stage 4: Assessment Documents	Stage 5: Geographical Spread of Sites	Stage 6: Overall Analysis and Decision
Identify from national policy, current facilities and Local Aggregates Assessment the available minerals across the plan period and to assess where there may be a shortfall in provision.	Request sent to landowners/ minerals industry to submit potential quarries they wished to be considered for potential allocation in the MLP	Assess the sites put forward to ensure that they can be delivered over the plan period.	Individual issues specific assessment documents Sustainability Appraisal Strategic Flood Risk Assessment Strategic Transport Assessment Comments from key consultees	The distribution of sites across the County is detailed, to enable the assessment of adequate supply to relevant markets.	Taking into account stages 2-5, the sites which should be allocated in the Minerals Local Plan to help provide a steady and adequate supply over the plan period, (together with sites with planning permission)

Site assessment methodology

Stage 1 – Identifying the level of provision for minerals over the plan period

The Minerals Local Plan must ensure that a steady and adequate supply of minerals can be provided over the plan period. For Nottinghamshire the key focus is identifying adequate sand and gravel reserves to meet the expected shortfall over the plan period. However, provision will also need to be made for other minerals over the plan period including Sherwood Sandstone, clay and gypsum.

The MLP sets out expected demand based on the data included in the Nottinghamshire Local Aggregates Assessment, as required by paragraph 145 of the National Planning Policy Framework (NPPF), which is used to identify expected demand over the plan period. The most recent data available at the time work began on preparing this Minerals Plan, was the 10 year period 2007-2016 (inclusive), published in 2017.

Whilst a revised Local Aggregate Assessment has now been prepared and published (which shows lower annual average levels of supply during the 2008-2017 period) the Local Plan will continue to be based on the 2017 data.

Table 1 shows the expected future demand for aggregates over the plan period and sets out information on existing reserves and anticipated shortfalls for sand and gravel, Sherwood Sandstone and crushed rock. The level of provision needed for other minerals is considered in the text below. In accordance with NPPF paragraph 145 Nottinghamshire County Council, as the Minerals Planning Authority, is required to maintain a landbank of at least 7 years for sand and gravel and 10 years for crushed rock.

Table 1: Future demand for aggregates

	Total required over the plan period (million tonnes)	Existing permitted reserves (million tonnes)	Shortfall over the plan period (million tonnes)
Sand and gravel	32.3	17.5	14.8
Sherwood Sandstone	7.03	3.73	3.3
Crushed rock	0.095	3.34	Nil

Clay

There is no national demand forecast or local apportionment for brick clay, although the National Planning Policy framework does require a 25 year landbank of permitted brick clay reserves 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.

While at Kirton reserves of red-firing clay (which accounts for 90% of demand) is expected to be sufficient until 2044. Reserves of cream-firing clay are expected to be sufficient until at least 2030. At Dorket Head permitted reserves are expected to be sufficient until 2030, with a southern extension having been granted permission in June 2018, which provides an additional 3 years' worth clay supply.

Gypsum

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. Permitted reserves at the Marblaegis Mine are sufficient until at least 2026 and represent the full extent of the mine within Nottinghamshire. Permitted reserves at Bantycock Quarry are currently expected to be adequate until around 2023 at current rates of extraction.

When reserves have been utilised at the Marblaegis Mine, mining will move eastwards towards Wymeswold in Leciestershire. At Bantycock Quarry, an extension would be required in order for the development to continue over the plan period.

Silica Sand

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.

A silica sand quarry at Two Oaks Farm, to the south of Mansfield, has permitted reserves of approximately 12 million tonnes which is expected to be adequate for around 40 years. This satisfies the requirement set out in national policy.

Industrial Dolomite

There is no national demand forecast or local apportionment for industrial dolomite, though the NPPF states that Minerals Planning Authorities should plan for a steady and adequate supply of industrial minerals. 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.

Building Stone

National policy states that 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 to serve the local market and is the only such quarry in Nottinghamshire. If reopened this could provide building stone to serve the local market.

Stage 2 – Call for sites

In order to meet the identified shortfalls in minerals provision over the plan period, a 'Call for Sites' exercise was undertaken between December 2017 and January 2018. The minerals industry and other known landowners were contacted and asked to submit detailed information on any sites that they wished to be considered for allocation in the new minerals local plan. This included both potential extensions to existing sites and prospective new sites. Where necessary, additional dialogue was undertaken with individual mineral operators or land owners to request further information or clarify specific points.

A wide range of information was requested and covered areas such as:

- Location of the site,
- Amount and quality of the mineral,
- Length of time that the site would be operational,
- Expected markets for the extracted mineral,
- Details of land ownership,
- possible impacts on agricultural land quality, environmental and cultural designations, residential amenity and water resources and
- Proposed restoration and after-use.

The full site information request form (provided to those wishing to propose sites) can be found in Appendix 1. Summary documents setting out the information put forward by the mineral operators (as a result of the call for sites) have been prepared and these can be found at www.nottinghamshire.gov.uk/minerals

As a result of the call for sites 25 proposals were put forward, these are listed below.

Table 2a: Summary of the initial proposals put forward

Site name	Proposer	Type of mineral	Life of Quarry	Reserves
Bawtry Road	Misson Sand & Gravel Co. Ltd	Sand and Gravel	5-7 years	180,000 tonnes
Barnby Moor (Hanson Aggregates)	Hanson Aggregates	Sand and Gravel	5 years	250,000 tonnes
Barnby Moor/Torworth (Rotherham Sand & Gravel)	Rotherham Sand & Gravel	Sand and Gravel	25-30 years	1,000,000 tonnes
Botany Bay	Tarmac	Sand and Gravel	12 years	2,440,000 tonnes
Scrooby North	Rotherham Sand & Gravel	Sand and Gravel	20+ years	620,000 tonnes
Scrooby Thompson Land	Rotherham Sand & Gravel	Sand and Gravel	8-10 years	400,000 tonnes

Besthorpe East	Tarmac	Sand and Gravel	16 years	3,300,000 tonnes
Burridge Farm	Tarmac	Sand and Gravel	25 years	3,500,000 tonnes
Cromwell North	Cemex	Sand and Gravel	5-6 years	300,000 – 350,000 tonnes
Cromwell Triangle and Cromwell River Meadows	Cemex	Sand and Gravel	2-3 years	710,000 tonnes
Coddington	Hanson Aggregates	Sand and Gravel	20+ years	9,500,000 tonnes
Great North Road North	Tarmac	Sand and Gravel	16 years	4,000,000 tonnes
Great North Road South	Tarmac	Sand and Gravel	16 years	4,000,000 tonnes
Langford North	Tarmac	Sand and Gravel	18 years	8,000,000 tonnes
Langford South and West	Tarmac	Sand and Gravel	8 years	3,600,000 tonnes
Barton in Fabis west	Cemex	Sand and Gravel	8 years	2.000,000 tonnes
East Leake North	Cemex	Sand and Gravel	3-4 years	750,000 tonnes
Mill Hill (near Barton in Fabis)	London Rock	Sand and Gravel	12-15 years	3,400,000 tonnes
Redhill (Ratcliffe on Soar)	Redhill Marine Ltd	Sand and Gravel	6-7 years	700,000 tonnes
Shelford	Brett Aggregates	Sand and Gravel	14 years	6,500,000 tonnes
Bestwood II East	Tarmac	Sherwood Sandstone	11 years	1,440,000 tonnes
Bestwood II North	Tarmac	Sherwood Sandstone	6 years	750,000 tonnes
Scrooby Top North	Rotherham Sand and Gravel	Sherwood Sandstone	40 years	4,831,000 tonnes
Bantycock Quarry	British Gypsum Saint-Gobain	Gypsum	15-24 years	7,500,000 – 8,500,000 tonnes
Woodborough Lane	Ibstock Brick	Brick Clay	20-25 years	2,700,000 m^3 (approx. 4,320,000 tonnes)

Following preparation and publication of a Draft Plan

- Additional sites for Sand and Gravel were submitted for consideration at Flash Farm Averham and at Little Carlton

New sites

Site name	**Proposer**	**Type of mineral**	**Life of Quarry**	**Reserves**
Flash Farm	Mick George	Sand and Gravel	16-17 years	3,080,000 tonnes
Little Carlton	Aggregate Industries	Sand and Gravel	14 years	3,350,000 tonnes

- Amended information on the Sand and Gravel reserve at Scooby Thompson was received;

Amended site information

Site name	**Proposer**	**Type of mineral**	**Life of Quarry**	**Reserves**
Barnby Moor/ Torworth	Rotherham Sand & Gravel	Sand and Gravel		
Scrooby Thompson Land	Rotherham Sand & Gravel	Sand and Gravel	Two years	60,000 tonnes

- The Sand and Gravel extension proposal at East Leake North was **withdrawn** by the mineral operator, due to an additional assessment of reserves being undertaken. This assessment identified lower than expected reserves. It will not therefore be assessed for inclusion as a proposed site.

- The Brick Clay proposal at Woodborough Lane was **withdrawn** following liaison between the operator and landowner. It will not therefore be assessed for inclusion as a proposed site.

- Langford South and West and Bestwood II East extension sites have been **granted planning permission** and are now being included within schedules of permitted sites and do not therefore need to be assessed for inclusion as proposed sites in the Mineral Local Plan.

Table 2b: Summary of the sites considered for allocation as proposed sites in the Minerals Local Plan

Ref	Site name	Proposer	Type of mineral	Life of Quarry	Reserves
1	Bawtry Road	Misson Sand & Gravel Co. Ltd	Sand and Gravel	5-7 years	180,000 tonnes
2	Barnby Moor (Hanson Aggregates)	Hanson Aggregates	Sand and Gravel	5 years	250,000 tonnes
3	Barnby Moor/Torworth (Rotherham Sand & Gravel)	Rotherham Sand & Gravel	Sand and Gravel	25-30 years	1,000,000 tonnes
4	Botany Bay	Tarmac	Sand and Gravel	12 years	2,440,000 tonnes
5	Scrooby North	Rotherham Sand & Gravel	Sand and Gravel	20+ years	620,000 tonnes
6	Scrooby Thompson Land	Rotherham Sand & Gravel	Sand and Gravel	Two years	60,000 tonnes
7	Besthorpe East	Tarmac	Sand and Gravel	16 years	3,300,000 tonnes
8	Burridge Farm	Tarmac	Sand and Gravel	25 years	3,500,000 tonnes
9	Cromwell North	Cemex	Sand and Gravel	5-6 years	300,000 – 350,000 tonnes
10	Cromwell Triangle and Cromwell River Meadows	Cemex	Sand and Gravel	2-3 years	710,000 tonnes
11	Coddington	Hanson Aggregates	Sand and Gravel	20+ years	9,500,000 tonnes
12	Flash Farm	Mick George	Sand and Gravel	16-17 years	3,080,000 tonnes
13	Great North Road North	Tarmac	Sand and Gravel	16 years	4,000,000 tonnes
14	Great North Road South	Tarmac	Sand and Gravel	16 years	4,000,000 tonnes
15	Langford North	Tarmac	Sand and Gravel	18 years	8,000,000 tonnes
16	Little Carlton	Aggregate Industries	Sand and Gravel	14 years	3,350,000 tonnes
17	Barton in Fabis west	Cemex	Sand and Gravel	8 years	2.000,000 tonnes

18	Mill Hill (near Barton in Fabis)	London Rock	Sand and Gravel	12-15 years	3,400,000 tonnes
19	Redhill (Ratcliffe on Soar)	Redhill Marine Ltd	Sand and Gravel	6-7 years	700,000 tonnes
20	Shelford	Brett Aggregates	Sand and Gravel	14 years	6,500,000 tonnes
21	Bestwood II North	Tarmac	Sherwood Sandstone	6 years	750,000 tonnes
22	Scrooby Top North	Rotherham Sand and Gravel	Sherwood Sandstone	40 years	4,831,000 tonnes
23	Bantycock Quarry	British Gypsum Saint-Gobain	Gypsum	15-24 years	7,500,000 – 8,500,000 tonnes

Stage 3 – Testing the Deliverability of Sites

Government guidance through the National Planning Policy Framework (NPPF) states that sites included in a Local Plan should be realistic, deliverable and achievable. It is therefore important to ensure that those sites that are not considered deliverable have been filtered out of the process at an early stage.

Reasons for sites to be considered undeliverable can include proposals that were put forward by landowners but that didn't have an operator in place to work the mineral or those put forward by the industry that would not be worked until after the end plan period (2036).

Comments were also sought from key internal and external consultees including the Highways Authority, Ecology, Archaeology, Environment Agency and Natural England on each of the sites to understand if any specific 'showstoppers' were identified that could render the proposals undeliverable. Examples could include the loss of a nationally important archaeological site (a Scheduled Monument) or risking disruption to a Nationally Significant Infrastructure Project. The comments from the key consultees were also used to help inform the Sustainability Appraisal.

How have sites been assessed at this stage?

Based on the information put forward by the mineral operators/landowners, a desk based assessment has been undertaken and sites have been assessed as to whether they are considered to have issues identified which would mean that the ability of an operator to extract minerals is somewhat in doubt and thus the deliverability of the site is in question.

Table 3: Deliverability Issues

Ref	Site name	Comments
1	Bawtry Road	No identified deliverability issues.
2	Barnby Moor (Hanson Aggregates)	No identified deliverability issues
3	Barnby Moor / Torworth (Rotherham Sand & Gravel)	No identified deliverability issues
4	Botany Bay	No identified deliverability issues.
5	Scrooby North	No identified deliverability issues.
6	Scrooby Thompson Land	No identified deliverability issues.
7	Besthorpe East	No identified deliverability issues.
8	Burridge Farm	No identified deliverability issues.
9	Cromwell North	No identified deliverability issues.
10	Cromwell Triangle and Cromwell River Meadows	No identified deliverability issues.
11	Coddington	No identified deliverability issues.
12	Flash Farm, Averham	No identified deliverability issues.
13	Great North Road North	No identified deliverability issues.
14	Great North Road South	This proposal is not expected to start until 2038 which is beyond the plan period.
15	Langford North	No identified deliverability issues.
16	Little Carlton	No identified deliverability issues.
17	Barton in Fabis west	No identified deliverability issues.
18	Mill Hill (near Barton in Fabis)	No identified deliverability issues.
19	Redhill (Ratcliffe on Soar)	This is not considered deliverable as a mineral operator is not signed up to the scheme.
20	Shelford	No identified deliverability issues.
21	Bestwood II North	No identified deliverability issues.
22	Scrooby Top North	No identified deliverability issues.
23	Bantycock Quarry	No identified deliverability issues.

Stage 4 – Assessment documents

A number of high level assessment documents have been prepared to identify the key issues for each of the proposals in order to enable a comparison to be undertaken as part of the site selection. These documents include a Sustainability Appraisal, Strategic Flood Risk Assessment, a Strategic Transport Assessment and a Landscape Character Assessment. The original assessment documents can be found at www.nottinghamshire.gov.uk/minerals

Detailed site specific assessment work would be required as part of any planning application.

Sustainability Appraisal

The proposals considered deliverable have been appraised through the Sustainability Appraisal (SA) process, which assesses the sites against a range of social, economic and environmental factors. The factors considered by the Sustainability Appraisal were determined through a scoping exercise on potential sustainability factors, which Nottinghamshire County Council conducted consultation on concurrently with the Issues and Options stage for the Minerals Local Plan (between December 2017 and January 2018). The SA utilises evidence that was gathered from the industry, key internal and external consultees and other assessment work undertaken (for example Strategic Transport Assessment).

How have proposals been assessed at this stage?

Each site has been assessed individually against the SA objectives using an appraisal matrix. The likely significant effects are recorded using a numerical assessment key ranging from +3, where the proposal is likely to have a very positive impact on an SA objective, to -3, where it is likely to have a very negative impact.

This numerical scoring is used to aid comparisons between sites but is not definitive.

A commentary is provided in each matrix explaining the reasoning behind each predicted effect, together with potential mitigation measures where negative effects are identified and these were referred to rather than looking at the scores in isolation.

Individual site summaries were produced along with a numerical value that identifies the impact of the sites in the short term (whilst the site is in operation) and long term (once the site is restored).

A summary of the key outcomes from the SA are set out below, however this list should not be referred to in isolation as the detailed commentary should be taken into account. Detailed information for each of the sites can be found in the full SA document.

Table 4: SA scores and key comments from the SA

Ref	Site name	SA Score (Operational Period)	SA Score (Long Term)	Key comments
1	Bawtry Road	-4	0	• This site scores slightly positively in terms of economic aspects. • Potential for slightly negative impact on biodiversity, landscape, quality of life and water quality.
2	Barnby Moor (Hanson Aggregates)	-13	-1	• This site scores slightly positively in terms of its contribution to the economic aspects of sustainability. • The impact on biodiversity would be negative during the operational period as there is an LWS in close proximity to the site and there are two SSSIs in the vicinity. In the long-term the nature conservation elements included in the restoration scheme would result in a slightly positive impact but would not maximise biodiversity gain. • The landscape assessment concluded that there would be a negative impact both during the operational period and in the long-term, but also identified some scope for mitigation measures. • The site scores very negatively with regard to impact and risk of flooding as part of it is within Flood Zone 3, however the precise nature of the impact would have to be ascertained through a flood risk assessment. • The loss of some high-quality agricultural land results in a negative impact in the short-term. • The number of HGV movements during the operational period could have a slightly negative impact on local air quality. • The impact on water quality could be negative, as the site lies in Source Protection Zone 3 and on a primary aquifer, which is of concern from a groundwater perspective, but there is scope for mitigation.

				• During the operational period there could be a negative effect on quality of life for local residents as surrounding settlements could be adversely affected by noise, dust and traffic and visual amenity would be adversely affected for some residents, but there is some scope for mitigation.
3	Barnby Moor / Torworth (Rotherham Sand & Gravel)	-10	-4	• This site scores positively in terms of its contribution to the economic aspects of sustainability. • The impact on biodiversity would be negative during the operational period as there is an LWS adjoining the site and there are two SSSIs in the vicinity. In the long-term the impact could be positive or negative depending on whether restoration is biodiversity-led or not. • The landscape assessment concluded that there would be a negative impact both during the operational period and in the long-term, but also identified some scope for mitigation measures. • The site scores very negatively with regard to impact and risk of flooding as part of it is within Flood Zone 3, however the precise nature of the impact would have to be ascertained through a flood risk assessment. • The loss of some high-quality agricultural land results in a negative impact in both the short- and long-term. • The impact on water quality could be negative, as the site lies in Source Protection Zone 3 and on a primary aquifer, which is of concern from a groundwater perspective, but there is scope for mitigation. • During the operational period there could be a negative effect on quality of life for local residents as surrounding settlements could be adversely affected by noise, dust and traffic and visual amenity would be adversely affected for some residents, but there is some scope for mitigation.
4	Botany Bay	-8	-1	• This site scores positively in terms of its contribution to economic aspects. • The impact on biodiversity, historic environment and (loss of) agricultural land would have a slightly negative impact. Regarding biodiversity, in the

				long-term the restoration scheme would result in a slightly positive impact. • The landscape assessment concluded that there would be a very negative impact during the operational period and negative effect in the long-term, but also identified some scope for mitigation measures. • The impact on water quality could be negative, but there is scope for mitigation. • During the operational period there could be a negative effect on quality of life.
5	Scrooby North	-7	-1	• This site scores slightly positively in terms of its contribution to economic aspects. • The impact on biodiversity would be slightly negative during the operational period. • The landscape assessment concluded that there would be a negative impact during the operational period and a slightly negative impact in the long-term, but also identified some scope for mitigation measures. • The loss of some high-quality agricultural land results in a negative impact in the short-term. • The impact on water quality could be negative, but there is scope for mitigation. • During the operational period there could be a slightly negative effect on quality of life for local residents.
6	Scrooby Thompson Land	-8	-1	• This site scores slightly positively in terms of its contribution to the economic aspects of sustainability. • The impact on biodiversity would be slightly negative during the operational period as there are several LWSs and an SSSI in close proximity to the site. In the long-term the nature conservation elements included in the restoration scheme would result in a slightly positive impact but would not maximise biodiversity gain.

				• The landscape assessment concluded that there would be a negative impact during the operational period and a slightly negative impact in the long-term, but also identified some scope for mitigation measures. • The loss of some high-quality agricultural land results in a negative impact in both the short- and long-term. • The impact on water quality could be negative, as the site lies on a primary aquifer, but there is scope for mitigation. • During the operational period there could be a negative effect on quality of life for local residents as surrounding settlements could be adversely affected by noise, dust and traffic and visual amenity would be adversely affected for some residents, but there is some scope for mitigation and potential for slightly positive benefits in the long-term through public access to recreational opportunities. .
7	Besthorpe East	-8	+2	• This site scores positively in terms of its contribution to economic aspects. • Slightly negative impact on biodiversity and agricultural land. Regarding biodiversity, it is likely that the proposed restoration would have a positive impact. • There is a negative impact on the historic environment during the operational period and the site has high archaeological potential. • The landscape assessment concluded that there would be a negative impact both during the operational period and in the long-term, but also identified some scope for mitigation measures. • The site scores very negatively with regard to impact and risk of flooding. • During the operational period there could be a negative effect on quality of life for local residents, but there is some scope for mitigation and potential for long-term benefits.
8	Burridge Farm	-8	+2	• This site scores positively in terms of its contribution to economic aspects.

				• Although there is a slightly negative impact on biodiversity during the operational period, it is likely that restoration would have a very positive impact. • The site scores positively in terms of sustainable patterns and modes of transport because the extracted mineral would be transported by barge. • There is a negative impact on the historic environment during the operational period. • The site scores very negatively with regard to impact and risk of flooding. • The loss of some high-quality agricultural land, which would not be restored, would have a negative effect both in the short- and long-term. • The landscape assessment concluded that there would be a negative impact during the operational period and a slightly negative effect in the long-term, but also identified some scope for mitigation measures. • During the operational period there could be a slightly negative effect on quality of life, but there is some scope for mitigation and potential for long-term benefits.
9	Cromwell North	-11	0	• This site scores positively in terms of its contribution to the economic aspects of sustainability. • There is a slightly negative impact on biodiversity during the operational period due to adjacent LWSs. In the long-term the nature conservation elements included in the restoration scheme would result in a slightly positive impact but would not maximise biodiversity gain. • There is a negative impact on the historic environment during the operational period as a scheduled monument adjoins the site boundaries. • The landscape assessment concluded that there would be a negative impact both during the operational period and in the long-term, but also identified scope for mitigation measures. • The site scores very negatively with regard to impact and risk of flooding as it is within Flood Zone 3, however the precise nature of the impact would have to be ascertained through a detailed flood risk assessment.

				• The loss of some high-quality agricultural land would have a slightly negative impact during the operational period and it is unclear at his stage whether this would be re-instated. • The high number of HGV movements during the operational period could have a negative impact on local air quality. • During the operational period there could be a negative effect on quality of life for local residents as surrounding settlements could be adversely affected by noise, dust and traffic and rights of way would be disrupted, but there is some scope for mitigation. In the long term enhanced public access opportunities could have a slightly positive impact.
10	Cromwell Triangle and Cromwell River Meadows	-13	-6	• This site scores slightly positively in terms of its contribution to economic aspects. • There is a slightly negative impact on biodiversity and agricultural land during the operational period. • There is a very negative impact on the historic environment both during the operational period and in the long-term. • The landscape assessment concluded that there would be a very negative impact both during the operational period and in the long-term, but also identified scope for mitigation measures. • The site scores very negatively with regard to impact and risk of flooding. • During the operational period there could be a negative effect on quality of life, but there is some scope for mitigation.
11	Coddington	-7	-2	• This site scores very positively in terms of its contribution to economic aspects. • There is a negative impact on biodiversity and agricultural land. In the long-term the restoration scheme may deliver at least modest biodiversity benefits. • There is a slightly negative impact on the historic environment and risk of flooding.

				• The landscape assessment concluded that there would be a negative impact both during the operational period and in the long-term, but also identified some scope for mitigation measures. • The high number of HGV movements during the operational period could have a negative impact on local air quality. • During the operational period there could be a negative effect on quality of life for local residents, but there is some scope for mitigation. In the long-term there is potential for a slightly positive impact.
12	Flash Farm	-13	+3	• This site scores positively in terms of its contribution to the economic aspects of sustainability. • Although there is a slightly negative impact on biodiversity during the operational period it is likely that the proposed restoration would have a positive impact. • The landscape assessment concluded that there would be a very negative impact during the operational period and a slightly negative impact in the long-term, but also identified some scope for mitigation measures. • The site scores very negatively with regard to impact and risk of flooding as a large part of the site is within Flood Zone 3, however the precise nature of the impact would have to be ascertained through a flood risk assessment. • The loss of high-quality agricultural land results in a negative impact during the operational period, however the restoration proposals allow for reinstatement of high-quality agricultural land. • The number of HGV movements during the operational period could have a very negative impact on local air quality. • During the operational period there could be a very negative effect on quality of life for local residents as surrounding settlements could be adversely affected by noise, dust and traffic; visual amenity would be adversely affected for some residents and a right of way would be disrupted, but there is some scope for mitigation.

13	Great North Road North	-13	0	• This site scores positively in terms of its contribution to economic aspects. • Although there is a slightly negative impact on biodiversity during the operational period, it is likely that the proposed restoration would deliver a positive impact. • There is a negative impact on the historic environment and agricultural land during the operational period. • The landscape assessment concluded that there would be a very negative impact during the operational period and negative effect in the long-term, but also identified some scope for mitigation measures. • The site scores very negatively with regard to impact and risk of flooding. • During the operational period there could be a very negative effect on quality of life for local residents, but there is some scope for mitigation.
14	Great North Road South	-12	0	• This site scores positively in terms of its contribution to economic aspects. • Although there is a slightly negative impact on biodiversity during the operational period, it is likely that the proposed restoration would have a positive impact. • There is a negative impact on quality of life (with some scope for mitigation), the historic environment and agricultural land during the operational period. • The landscape assessment concluded that there would be a very negative impact during the operational period and negative effect in the long-term, but also identified some scope for mitigation measures. • The site scores very negatively with regard to impact and risk of flooding.
15	Langford North	-9	+1	• This site scores very positively in terms of its contribution to economic aspects. • Although there is a negative impact on biodiversity during the operational period, it is likely that the proposed restoration for nature conservation would have a positive impact.

				• There is a negative impact on the historic environment during the operational period. • The landscape assessment concluded that there would be a negative impact both during the operational period and in the long-term, but also identified some scope for mitigation measures. • The site scores very negatively with regard to impact and risk of flooding. • The loss of some high-quality agricultural land would have a slightly negative effect both in the short- and long-term. • During the operational period there could be a very negative effect on quality of life, but there is some scope for mitigation and potential for long-term benefits.
16	Little Carlton	-13	-4	• This site scores positively in terms of its contribution to the economic aspects of sustainability. • There is a very negative impact on the historic environment, both in the short- and long-term, as the South Muskham archaeological resource area adjoins, and a small part is within, the site; there are scheduled monuments in close proximity and there is very high potential for non-designated archaeology. • The landscape assessment concluded that there would be a very negative impact during the operational period and a negative impact in the long-term, but also identified some scope for mitigation measures. • The loss of high-quality agricultural land results in a very negative impact and it is unclear whether adequate mitigation would be possible. • The number of HGV movements during the operational period could have a slightly negative impact on local air quality. • During the operational period there could be a very negative effect on quality of life for local residents as surrounding settlements could be adversely affected by noise, dust and traffic; visual amenity would be adversely affected for some residents and a right of way would be disrupted, but there is some scope for mitigation.

17	Barton in Fabis	-11	-2	• This site scores positively in terms of its contribution to economic aspects. • There is a slightly negative impact on biodiversity during the operational period as the site adjoins a LWS. • There is a negative impact on agricultural land (with long-term impact depends on details of restoration) and the historic environment during the operational period. • The landscape assessment concluded that there would be a very negative impact during the operational period and a negative effect in the long-term, but identified some scope for mitigation measures during the former. The site is also in the Green Belt. • The site scores very negatively with regard to impact and risk of flooding. • During the operational period there could be a negative effect on quality of life, but there is some scope for mitigation.
18	Mill Hill (near Barton in Fabis)	-13	-3	• This site scores positively in terms of its contribution to economic aspects. • There is a negative impact on biodiversity during the operational period with the impact in the long-term remaining slightly negative. • There is a negative impact on the historic environment during the operational period. • The landscape assessment concluded that there would be a very negative impact both during the operational period and in the long-term, but also identified some scope for mitigation measures. The site is also in the Green Belt. • The site scores very negatively with regard to impact and risk of flooding. • The loss of some high quality agricultural land would have a slightly negative impact during the operational period but restoration would include re-instatement of this. • The high number of HGV movements during the operational period could have a negative impact on local air quality.

				• During the operational period there could be a very negative effect on quality of life, but there is some scope for mitigation.
19	Redhill (Ratcliffe on Soar)	-11	-2	• This site scores slightly positively in terms of its contribution to economic aspects. • There is a negative impact on biodiversity during the operational period. In the long-term there may be a slightly positive effect. • There is a very negative impact on the historic environment during both the operational period and in the long-term as mineral extraction in this location would cause serious loss of significant, high importance archaeological remains. • The landscape assessment concluded that there would be a negative impact both during the operational period and in the long-term, with, in addition, a potential adverse impact on the openness of the Green Belt, but also identified some scope for mitigation measures. • The site scores very negatively with regard to impact and risk of flooding. • During the operational period there could be a slightly negative effect on quality of life, but there is some scope for mitigation. The potential to increase recreational opportunities in the long-term with the development of a marina results in a slightly positive effect.
20	Shelford	-10	-1	• This site scores very positively in terms of its contribution to economic aspects. • The site scores positively in terms of sustainable patterns and modes of transport because a significant proportion of the mineral will be transported from the site by barge and the remainder will be taken by conveyor to a direct access onto the A6097. • The site scores very negatively with regard to impact and risk of flooding. • There is a negative impact on the historic environment in the short and long-term with the site having high archaeological potential.

				• There is a slightly negative impact on biodiversity, however the impact would be positive in the long-term with the implementation of a biodiversity-led restoration scheme. • The landscape assessment concluded that there would be a very negative impact both during the operational period and in the long-term, but also identified some scope for mitigation measures. The site is also in the Green Belt. • The loss of some high quality agricultural land results in a negative impact both in the short and long-term. • The high number of HGV movements during the operational period could have a negative impact on local air quality. • During the operational period there could be a very negative effect on quality of life, but there is some scope for mitigation. In the long-term improvement to RoWs and flood defences could have a positive effect.
21	Bestwood II North	-9	-2	• This site scores slightly positively in terms of its contribution to the economic aspects of sustainability. • The impact on biodiversity would be very negative during the operational period because the site is entirely located within an LWS and lies between two parts of the Sherwood Forest Important Bird Area, upon which any future Special Protection Area (SPA) designation may be based. The impact in the long-term is uncertain as it is not clear whether restoration proposals will outweigh the existing nature conservation value of the site. • The landscape assessment concluded that there would be a negative impact both during the operational period and in the long-term, but also identified some scope for mitigation measures. The site is also in the Green Belt, which, together with the landscape score, results in a very negative impact during the operational period. • The number of HGV movements during the operational period could have a slightly negative impact on local air quality.

				• The impact on water quality could be negative, as the site lies in Source Protection Zone 3 and on a primary aquifer which could be a concern from a groundwater perspective, but there is scope for mitigation. • During the operational period there could be a negative effect on quality of life for local residents as surrounding settlements could be adversely affected by noise, dust and traffic, and there would be a detrimental impact on visual amenity for some residents, but there is some scope for mitigation.
22	Scrooby Top North	-5	0	• This site scores very positively in terms of its contribution to economic aspects. • The impact on biodiversity would be negative during the operational period. In the long-term the nature conservation element indicated in the restoration proposals would result in a slightly positive impact but would not maximise biodiversity gain. • There is a negative impact on the historic environment during the operational period. • The landscape assessment concluded that there would be a negative impact during the operational period and a slightly negative impact in the long-term, but also identified some scope for mitigation measures. • The loss of some high quality agricultural land results in a negative impact in the short-term. • The impact on water quality could be negative, as the site lies in Source Protection Zone 3 and on a primary aquifer which could be a concern from a groundwater perspective, but there is scope for mitigation. • During the operational period there could be a slightly negative effect on quality of life, but there is some scope for mitigation.

23	Bantycock Quarry	-7	-1	• This site scores very positively in terms of its contribution to economic aspects. • There would be a negative impact on biodiversity during the operational period. In the long-term there could be a slightly positive impact. • There is a slightly negative impact on the historic environment during the operational period. • The landscape assessment concluded that there would be a negative impact both during the operational period and in the long-term, but also identified some scope for mitigation measures. • The loss of some high quality agricultural land results in a negative impact in the short-term, with the long-term effect being uncertain. • The high number of HGV movements during the operational period could have a negative impact on local air quality. • The impact on water quality could be negative. • During the operational period there could be a negative effect on quality of life for local residents, but there is some scope for mitigation.

Strategic Flood Risk Assessment (SFRA)

A level 1 SFRA for Nottinghamshire was completed in 2018 and updated in 2019 to take account of revised site submissions . The assessment ensures that all sources of flooding are identified and reviewed against potential site allocations to allow them to be sequentially tested by the Council to ensure that the highest risk development is located in areas of lowest risk of flooding.

The assessment uses Environment Agency (EA) Flood Zones, which are used to describe the level of risk of flooding for an area. Due to their relevance to specific features and specific areas of land, it is possible for several parts of a site to be within one or more flood zones, or (for example) the majority of a site to be within Flood Zone 1 and a small area to be within Zone 2 or 3. Flood Zones, as detailed by the EA are:

- Flood Zone 1 (low probability): Land having a less than 1 in 1,000 annual probability of river or sea flooding.
- Flood Zone 2 (medium probability): Land having between a 1 in 100 and 1 in 1,000 annual probability of river flooding; or land having between a 1 in 200 and 1 in 1,000 annual probability of sea flooding.
- Flood Zone 3a (high probability): Land having a 1 in 100 or greater annual probability of river flooding; or Land having a 1 in 200 or greater annual probability of sea flooding.
- Flood Zone 3b (the functional floodplain): This zone comprises land where water has to flow or be stored in times of flood.

Due to it being possible that sites are within multiple flood zones, the table below displays shaded boxes for every flood zone relevant to each site, along with additional considerations (climate change and flood risk management measures).

The Level 1 Minerals SFRA was conducted to provide a high level assessment of flood risk. This document has a strategic scope and therefore site-specific flood risk assessments would be developed for individual development proposals and that where appropriate, suitable mitigation measures are incorporated.

In regard to applying the Sequential Test to potential minerals sites put forward as part of the call for sites, sand and gravel extraction is classed as water compatible land use and therefore its extraction within flood zones is not precluded by its location in EA Flood Zone areas. Other minerals extraction operations are classed as ‘less vulnerable’. As acknowledged in the SFRA, the Exception Test is not usually applicable to minerals development sites due to their vulnerability classification. Irrespective of this, a Level 2 SFRA would be required to provide the detail, at application stage, required to apply the Exception Test in instances where it may be required.

On the basis of the findings of the SFRA alone no sites have been removed at this stage. The information within the SFRA document, along with the categorisation of sites in EA flood zones (summarised in the table below), will be considered as a

factor in the overall assessment and analysis of sites in Stage 6 of this site selection methodology.

Table 5: Flood Risk by Environment Agency Flood Zone Category

	Site name	EA flood zone 1	EA flood zone 2	EA flood zone 3	EA flood zone 3b	EA flood zone 3+cc*	Areas benefitting from flood defences**
1	Bawtry Road						
2	Barnby Moor (Hanson)						
3	Barnby Moor/ Torworth						
4	Botany Bay						
5	Scrooby North						
6	Scrooby Thompson Land						
7	Besthorpe East						
8	Burridge Farm						
9	Cromwell North						
10	Cromwell Triangle & R. Meadows						
11	Coddington						
12	Flash Farm						
13	Great North Road North						
14	Great North Road South						
15	Langford North						
16	Little Carlton						
17	Barton in Fabis west						
18	Mill Hill (Barton in Fabis)						
19	Redhill (Ratcliffe on Soar)						
20	Shelford						
21	Bestwood II North						
22	Scrooby Top North						
23	Bantycock Quarry						

*Flood Zone 3+cc covers flooding from climate change as a further consideration.

**Flood risk management measures (in this case flood defences are included as a further consideration.

Strategic Transport Assessment (STA)

AECOM was commissioned by the Planning Policy Team to undertake a Strategic Transport Assessment (STA) on the sites that were put forward as part of the call for sites and subsequently to cover additional sites submitted

The STA examined the potential sites against transport related criteria to ensure that there were no unacceptable impacts on the existing highway network.

Notwithstanding the findings of the TA, it is important to note that a detailed traffic impact assessment of each mineral extraction site, in the form of a suitable Transport Assessment (TA), will be required at the planning application stage.

The STA concluded that none of the sites put forward were unacceptable in principle and therefore none of the sites were removed at this stage. As part of the assessment, the sites were ranked in relation the type of development (Extension to existing quarry or new site) and category of road the site would access (A- road / B road). All proposed sites will be subject to a detailed site-specific Transport Assessment as part of the planning application process.

Table 6: Highways Issues Summary (from Strategic Transport Assessment)

Ref	Site name	Access to the highway standard categories	Comments
1	Bawtry Road	Existing Sites connecting to B & Minor Road	This increase in HGVs would trigger the *Guidelines for the Environmental Assessment of Road Traffic* (GEART) threshold. However, as this is an extension, the above figures may already include HGVs associated with the site (although it is not known how much volume is currently being produced). As such, further work may be required to determine if this site would generate air quality and traffic noise impacts. HGVs would route via nearby settlements such as Bawtry.
2	Barnby Moor (Hanson)	New Sites connecting to Local A Road	Due to increase in HGVs on the A638, the thresholds given within GEART would be triggered and would require further assessment (in terms of noise and air quality analysis) on nearby sensitive receptors). HGVs would route via nearby settlements such as Ranskill.
3	Barnby Moor (Rotherham S&G)	New Sites connecting to Local A Road	Due to increase in HGVs on the A638, the thresholds given within GEART would be triggered and would require further assessment (in terms of noise and air quality analysis) on nearby sensitive receptors). HGVs would route via nearby settlements such as Ranskill.
4	Botany Bay	New Sites connecting to Local A Road	The increase in HGVs on the A638, at the point of the site access, would be 22.1%. The total increase in general traffic would be less than 1%. As such, the thresholds given within GEART would not be triggered. HGV route would pass sensitive receptors (villages)
5	Scrooby North	New Sites connecting to Local A Road	An extension to the Scrooby South Quarry, releasing 620,000 tonnes of material, to be worked at a rate of 15,000 - 30,000 tonnes a year over 20 years. This would be exported by HGV and equates to 5 HGV arrivals and 5 HGV departures per average working day. GEART thresholds would not be triggered. HGVs likely to route through settlements along A-roads
6	Scrooby Thompson Land	New Sites connecting to Local A Road	Material would be exported by HGV and equates to 9 HGV arrivals and 9 HGV departures per average working day, the GEART thresholds would not be triggered. HGVs likely to route through settlements along A-roads

7	Besthorpe East	Existing Sites connecting to Local A Road	The increase in HGVs on the A1133 at the point of the site access would be 16.0%. Increase in total traffic volumes would be 1.4%. As such, the thresholds given within GEART would not be triggered. Because of the S106 agreement affecting this development, no HGV traffic will route south of the site access, to avoid travelling through Collingham village.
8	Burridge Farm	Existing Sites connecting to the Trunk road network (or via short connector route), assuming use of existing Cromwell Quarry access)	Percentage changes in traffic at the site access would be high, but this is mainly a result of this route being bypassed by the A1 leaving only low residual traffic flows. The increase in HGV's along the A1 would therefore be 0.66% with increases in general traffic of 0.11%. HGV route passes sensitive receptors in Cromwell.
9	Cromwell North	New Sites connecting to the Trunk road network (or via short connector route)	Percentage changes in traffic on Main Street would be high, but this is mainly a result of this route being bypassed by the A1 leaving only low residual traffic flows. The increase in HGV's along the A1 would therefore be 1.38% with increases in general traffic of 0.23%. Likely northbound HGV route passes near sensitive receptors
10	Cromwell Triangle & R. Meadows	New Sites connecting to the Trunk road network (or via short connector route)	As the site is proposed as a possible future extension to the Cromwell North site, little information is available with regards to annual output or trip generation. The site is being promoted as a possible future extension to the Cromwell North site if implemented, in which case the access for the Cromwell North site would be used by this extension. Routeing would be the same as for Cromwell North and northbound HGV route passes near sensitive receptors
11	Coddington	New Sites connecting to Local A Road	The increase in HGVs on the A17, at the point of the site access, would be 7.5%. The increase in general traffic would be 1.8%. As such, the thresholds given within GEART would not be triggered. No settlements between the site and the A1 (if routeing northbound). Sensitive receptors if routeing southbound. There are four collision clusters identified around the site within the study area, which HGV routes would pass through.

12	Flash Farm		The increase in HGVs on the A617, at the point of the site access, would be 6.6%. The total increase in traffic would be less than 1%. As such, the thresholds given within GEART would not be triggered. Main HGV route does not pass through an existing collision cluster, although collisions involving HGVs are noted in the vicinity; A proportion of HGVs will route through Kelham and across Kelham bridge.
13	Great North Road North	New Sites connecting to Local A Road	The increase in HGVs on the A616, at the point of the site access, would therefore be 8.3%. The total increase in traffic would be less than 1%. As such, the thresholds given within GEART would not be triggered. Collision clustering within the study area for the site at the A46/A616/A617 junction, which HGVs would likely route through. Few sensitive receptors near to the site.
14	Great North Road South	New Sites connecting to Local A Road	The increase in HGVs on the A616, at the point of the site access, would therefore be 8.3%. The total increase in traffic would be less than 1%. As such, the thresholds given within GEART would not be triggered. Collision clustering within the study area for the site at the A46/A616/A617 junction, which HGVs would likely route through. Few sensitive receptors near to the site.
15	Langford North	Existing Sites connecting to Local A Road	The increase in HGVs on the A1133, at the point of the site access, would be 34.2%. The increase in general traffic would be 2.2%. Total increases in HGVs would likely be above the relevant GEART trigger if considered against the baseline data in Table 3.15. However, as this is an extension, the above figures may already include HGVs associated with the site. Further work may be required to determine if this site would generate air quality and traffic noise impacts. HGV route passes through a collision cluster at A46/A1133 junction. HGV route passes few sensitive receptors along the A1133
16	Little Carlton		The increase in HGVs on the A616, at the point of the site access, would be 34.3%. The total increase in traffic would be 1.4%. As such, the thresholds given within GEART would not be triggered Of the collisions, 0 involved HGVs (>7.5T) and 1 involved pedestrians / pedal cycles

			3.27.8 Three collisions have been recorded (2 classified as 'Slight' and 1 as 'Serious') at the A616 / B6325 junction. No fatal collisions have occurred within the study area over the past 5 years of data. Site in close proximity to A616; Main HGV route does not pass through an existing collision cluster; and HGVs route passed Little Carlton and South Muskham on route to A1 / A46.
17	Barton in Fabis west	New Sites connecting to B & Minor Road	A new access would be required onto Barton Lane / Green Street. Once onto Green Street the route to the A453 is short. Percentage changes in traffic on Green Street would be high, but this is mainly a result of this route being bypassed by the A453 leaving only low residual traffic flows. The increase in HGV's along the A453 would be 3.20% and the increase in general traffic would be 0.28%. Given the lack of sensitive receptors, there is unlikely to be any environmental impacts of the proposed traffic generation. No sensitive receptors between site and A453.
18	Mill Hill (near Barton in Fabis)	New Sites connecting to the Trunk road network (or via short connector route)	Percentage changes in traffic on Green Street would be high, but this is mainly a result of this route being bypassed by the A453 leaving only low residual traffic flows. The increase in HGV's along the A453 would be 3.63% and the increase in general traffic would be 0.32%. As such, the thresholds given in GEART would not be triggered. Given the lack of sensitive receptors, there is unlikely to be any environmental impacts of the proposed traffic generation. No road safety issues have been identified and the HGV route avoids Green Street, south of the site access and villages of Barton in Fabis and Thrumpton.
19	Redhill (Ratcliffe on Soar)	New Sites connecting to the Trunk road network (or via short connector route)	The data available for this study does not include the A453 (managed by Highways England). Furthermore, historic collision statistics would not be representative of current / future conditions in this area, given the recent upgrade of highway infrastructure. No road safety issues have been identified and few sensitive receptors near the site.

20	Shelford	New sites that use Sustainable Export Modes or New Sites connecting to Local A Road (depending on the quantity of material that could be exported via sustainable transport modes)	Assuming the worst case scenario, the increase in HGVs on the A6097 at the point of the site access would therefore be 18.3% and the increase in general traffic would be 1.1%. As such, the thresholds given within GEART would not be triggered. Main HGV route passes through an existing collision cluster and few sensitive receptors between site and A46.
21	Bestwood II North	Existing Sites connecting to Local A Road	The increase in HGVs on the A60, at the point of the site access's, would therefore be 12.0%. The increase in general traffic would be less than 1%. As such, the thresholds given within GEART would not be triggered. Proposed route would pass through an existing collision cluster, some sensitive receptors south of the site and HGVs likely to route through Ravenshead via A60.
22	Scrooby Top North	Existing Sites connecting to Local A Road	22 HGV arrivals and 22 HGV departures per average working day, the GEART thresholds would not be triggered. No road safety issues have been identified; and HGVs likely to route through settlements along A-roads
23	Bantycock Quarry	Existing Sites connecting to Local A Road	Total increases in HGVs would likely be above the relevant GEART trigger if considered against the baseline data in Table 3.34. However, as this is an extension, the above figures may already include HGVs associated with the site (although it is not known how much volume is currently being produced). As such, further work may be required to determine if this site would generate air quality and traffic noise impacts. HGV route passes through a collision cluster; and HGV route passes a few sensitive receptors in Balderton and Fernwood.

Landscape Character Assessment

The Landscape Character Assessment (LCA) was submitted as a series of matrices providing combined scoring for both the operational phase and post restoration phase of all sites. The scoring, across 4 criteria, took account of the following:

- Landscape Value
- Landscape Susceptibility
- Visual Value
- Visual Susceptibility

Scores were totalled as a value out of 100, whereby scores closer to 100 represented the higher possible combined susceptibility of a landscape. As the document's purpose was to display the character and sensitivity of the landscape, along with suggested mitigation measures, no sites were eliminated at this stage, rather the LCA would be taken into consideration as a factor in Stage 6 of the site selection process. Table 7 below summarises scoring and comments from the LCA. It should be viewed in the context of the full information contained within the Landscape Character Assessment and the information in Table 7 should not be used as an assessment tool in insolation.

Table 7: Landscape Character Summary (from Landscape Character Assessment)

Ref	Site name	Operational Score	Long Term Score	Comments
1	Bawtry Road	47/100	42/100	Landscape Sensitivity: This is a remote and tranquil site, only accessible on foot, or by 4x4. The site is an extension of an existing sand and gravel quarry, and the development will have a minor adverse landscape impact on the surrounding landscape. Visual Sensitivity: The site is enclosed by the restored quarry to the north, there are open, long distance views to the south west, south and south east from Bryans Close Lane (Bridleway), from which there are also open views of the site. Travellers have intermittent views from the adjacent road, and there are limited residential views which are also partially screened.
2	Barnby Moor (Hanson)	60/100	50/100	Landscape Sensitivity: The site has a moderate sense of place with low/medium hedgerows, isolated trees and linear woodlands in good condition. The site is set against the backdrop of a wooded valley with rising ground to the east. Detractors include traffic noise from the busy A638 Great North Road. Restoration is proposed to agriculture and water-based habitats with a focus on biodiversity, which is in keeping with the existing agricultural landscape and restored mineral workings of Daneshill Lakes. Restoration to existing levels would be beneficial and reduce the long-term impact on the Landscape Character Loss of landscape with characteristic features of IL 10 including hedgerows and isolated trees. Visual Sensitivity: The main visual impact will be on vehicular users of A638 and on the ECML. There will be no impact on any adjacent PRoWs. There will also be an impact on a group of residential properties to the east and west of the A638 around Trinity College Farm and College Farm. There will also be views from

				properties on the northern edge of Barnby Moor. Distant views are screened by rising landform and intervening vegetation. The main visual impact will be on vehicular users of A638 and on the ECML. A small group of properties off A638, including Torworth café will have open views of the site to the rear. There will be no impact on any adjacent PROWs. Distant views are screened by rising landform and intervening vegetation.
3	Barnby Moor/ Torworth (Rotherham S&G)	60/100	50/100	Landscape Sensitivity: The site has a moderate sense of place with low/medium hedgerows, and isolated trees in good condition. The site is set against the backdrop of a wooded valley with rising ground to the east. Detractors include traffic noise from the busy A638 Great North Road. Restoration is proposed to water based habitats with a focus on biodiversity with some commercial use, which is in keeping with the existing restored mineral workings of Daneshill Lakes. Restoration to existing levels would be beneficial and reduce the long-term impact on the Landscape Character Loss of landscape with characteristic features of IL 10, including hedgerows and isolated trees Visual Sensitivity: The main visual impact will be on vehicular users of the A638, and on the ECML. There will be no impact on adjacent PRoWs. There will also be an impact on a group of residential properties to the east and west of the A638 around Trinity College Farm and College Farm. There will be distant views from properties to the south of Torworth, around Torworth Grange; and to the south of the proposed site on the northern edge of Barnby Moor. Distant views are screened by rising landform and intervening vegetation. The main visual impact will be on vehicular users of A638, and on ECML. A small group of properties on the eastern side of A638 will have open views, generally from the rear. There will be no impact on adjacent PROWs. Distant views are screened by rising landform and intervening vegetation.

4	Botany Bay	82/100	60/100	Landscape Sensitivity: The main landscape impact is the loss of 114 hectares of landscape with characteristic features of IL 10, including hedge lines with isolated mature trees. This is a large site with an adjacent ecological designation for the Chesterfield Canal, and an associated long-distance footpath which will attract recreational visitors to the area. Visual Sensitivity: The site is at a level of between 15 and 30 metres, and is bounded by the well vegetation boundary to the A638, agricultural land to the north west, Barnby Covert plantation and hedgerow along Chesterfield Canal to the south, and well vegetated Sutton Lane to the east. There are bands of vegetation between the site and the outskirts of Retford. The site is overlooked by higher land to the south which rises to 35 metres. The key visual impacts are to traveller and recreational receptors, and to a limited number of residential receptors.
5	Scrooby North	51/100	47/100	Landscape Sensitivity: The main landscape impact will be the loss of landscape with characteristic features of IL 10, including hedgerows with isolated mature trees. Visual Sensitivity: Serlby Park woodland to the west and the ridgeline to the north east help to screen views of the site from distant points. There are no close residential receptors, and views from Scrooby are unlikely due to intervening vegetation. The main visual impact is on travellers on the adjacent A638 and ECML
6	Scrooby Thompson Land	66/100	48/100	Landscape Sensitivity: The main landscape impact will be the loss of characteristic features of IL 10, including hedgerow removal with isolated mature trees. Visual Sensitivity: Serlby Park woodland to the west and ridgeline to the north east help to screen views of the site from distant views. The main visual impacts are open views from the rear of residential properties, and impact on travellers on A638 and ECML.

7	Besthorpe East	58/100	62/100	Landscape Sensitivity: A flat intensively farmed landscape with a working quarry and processing plant within the centre of the site and restored areas of open water to the west. The Fleet runs along the eastern boundary, a small water course lined with poplar trees. Several single-track green lanes cut across the site from the A1133 west towards the Trent providing access to the River. Visual Sensitivity: Fields visible from sections of the Public Right of Way that runs through the centre of the site. Isolated farms may get medium to long distance views into the site during the winter months. Besthorpe Nature Reserve lies along the northern boundary and may have some direct views into the site.
8	Burridge Farm	67/100	48/100	Landscape Sensitivity: This forms part of a low-lying flat landscape following meanders of the Trent. Although a well-managed arable landscape, the character is impacted by adjacent A1, and poor-quality landscape to south of North Muskham. Mineral working would adjoin restored mineral sites immediately to south west. Visual Sensitivity: The site is visible and relatively prominent for users of A1, and overlooked from popular local nature reserve over the river. However, post restoration, the magnitude of effect would be much reduced.
9	Cromwell North	72/100	63/100	Landscape Sensitivity: Large scale but attractive low-lying arable site, comprising two 'arms', one of which forms a peninsular bordered by the river meander, the other bordered by river bank. Most significant site feature deep drainage ditch with associated hedge and some intermittent trees. Visual Sensitivity: Crossed by Right of Way and visible RoW on far side of river. Overlooked by 3 properties at Carlton Ferry to east although views filtered by riparian tree growth. Visible from A1.
10	Cromwell Triangle & R. Meadows	48/100 (Cromwell Triangle)	44/100 (Cromwell Triangle)	Cromwell Triangle and Carlton River Meadows have received separate landscape assessments and therefore two scores. Comments below have been left divided between the two sites. Cromwell Triangle:

		92/100 (River Meadows)	79/100 (River Meadows)	Landscape Sensitivity: Relatively small, low lying arable site, already somewhat compromised by proximity A1 and adjacent mineral workings. Visual Sensitivity: Highly visible from A1, but could be screened with boundary bund and/or vegetation. Carlton River Meadows: Landscape Sensitivity: Historic, well maintained river meadowland, adjacent to historic setting of Carlton on Trent. Visual Sensitivity: Highly visible to sensitive receptors. Difficult to screen workings without introducing elements at odds with landscape policy zone actions
11	Coddington	71/100	60/100	Landscape Sensitivity: Arable landscape typical of wider policy zone, adjacent to highly popular woodland which is a valued outdoor landscape. Development would add incongruous element on restoration, which could however achieve some policy zone actions. Visual Sensitivity: A valued landscape, which is however partially screened by woodland. Could be screened by inclusion of further woodland belts which are typical of wider landscape.
12	Flash Farm	76/100	24/100	Landscape Sensitivity: A flat, intensively managed landscape. The site lacks internal hedgerows but is set against the backdrop of wooded hills to the west. Pylons cross the site and noise from the busy road to the south are detracting features. The proposal to import inert material and restore the site to agricultural land/grassland and reinstate hedgerows would be beneficial. This would be more in keeping with the landscape character than restoration to open water and would be in line with policies for this area.

				Visual Sensitivity: During operation the main visual impact would be on residents nearby (at Flash Farm, Mickleborough Hill Farm, Micklebarrow House to the west; there would be filtered views from properties on the edge of Kelham to the north east and properties on the edge of Averham to the south east). There would be a visual impact on users of the public rights of way through the site/adjacent to the site and also on users of the A617 and laybys along the southern boundary of the site. Following restoration and reinstatement of the hedgerows to field boundaries, there would be a beneficial impact on views of the site.
13	Great North Road North	77/100	64/100	Landscape Sensitivity: Flat open landscape, bounded by river and close to civil war earthwork. Northern part of site would abut former workings near South Muskham and existing industrialising element of sugar beet factory, but development of more southern part of site would be more incongruous and impact on Kelham Hall. Visual Sensitivity: Site is overlooked by road users and users of Trent Valley Way and forms approach to Newark from the north. Openness and extent would hinder screening, without introducing bunding.
14	Great North Road South	85/100	72/100	Landscape Sensitivity: This forms part of a low lying flat landscape following meanders of the Trent. It contains a SINC Old Trent Dyke and adjacent remnant grassland. Given the open nature of landscape and lack vertical elements, hard to screen workings without introducing incongruous elements. Existing character is impacted negatively to some extent by proximity of power station and sugar beet factory. Visual Sensitivity: The site impacts on the setting of adjacent ancient monuments, and Kelham Hall. It is crossed by 1 promoted right of way and forms part of the approach to historic core of Newark from the west.
15	Langford North	71/100	71/100	Landscape Sensitivity: A large scale intensively managed agricultural landscape primarily in arable use. The River Trent meanders around the north western site boundary. The site is flat apart from a low flood bund that follows the river.

				Langford Lowfields a former sand and gravel site restored to wetlands, reed beds, water channels and pools lies to the south-west. A working quarry Besthorpe Quarry lies to the north east of the site. This landscape is physically remote being away from Collingham and the main roads. Low level noise from A1 and working quarries is apparent. Visual Sensitivity: Several Public Rights of Way pass through this site from which there are close direct views. There are distant views from a few adjacent properties including Wharf Cottage. Where hedgerows contain trees and where they are tall/outgrown, such as along the footpath on the south western boundary, views north are largely screened.
16	Little Carlton	84/100	64/100	Landscape Sensitivity: The site has a moderate sense of place with low trimmed hedgerows which are generally in good condition. Smaller scale hedged fields to the western hills provide the setting. Detracting factors include the noise from the A616 to the south, the pylons crossing the site and the large-scale agricultural sheds etc at Manor Farm. There would be an adverse impact on the setting of the medieval village and the Listed buildings to the east. Restoration would be to agriculture – either low level or to original ground levels using imported inert fill. Retention and enhancement of the existing hedgerows and restoration to existing levels would be beneficial and would reduce the long-term impact on the landscape character. Visual Sensitivity: There would be a substantial adverse visual impact on residents of properties to the eastern site boundary - particularly if the existing access road is used for quarry traffic. The house at Manor Farm on the eastern boundary has windows facing the site. There would be more distant but elevated views from properties to the west and filtered views from properties to the western edge of Little Carlton and properties to the south of Bathley. There would also be a substantial adverse visual impact on users of the public footpath through the site during construction.

17	Barton in Fabis west	77/100	61/100	Landscape Sensitivity: The site itself does not have a very strong character or sense of place but lies within the Trent river valley which is relatively tranquil. The site lies within the greenbelt. Thrumpton Hall and Garden and SINC designation lie to the west. Thrumpton Conservation area lies to the southern corner. The power station is a prominent feature to the south. Visual Sensitivity: The main visual impact would be on residents to the southern edge of Barton in Fabis and on users of the Trent Valley Way to the north of the site. There would be more distant views from residential properties on the northern edge of Thumpton.
18	Mill Hill (near Barton in Fabis)	96/100	96/100	Landscape Sensitivity: The floodplain pasture enclosed by the steep wooded escarpment to the east forms a distinctive, relatively undisturbed landscape. The site lies within the green belt and there are several ecological designations within the site and adjacent to it. Clifton Hall Registered Park and Garden lies to the north east and there are several Listed buildings in Barton in Fabis. Visual Sensitivity: Main visual impact would be on residents to the northern edge of Barton in Fabis with windows facing the site; rights of way across and adjacent to the site are well used and have historic associations with Clifton Hall. Attenborough Nature Reserve is a popular destination and there would be views of the development from the Trent Valley Way.
19	Redhill (Ratcliffe on Soar)	56/100	61/100	Landscape Sensitivity: A low lying large scale improved grassland landscape with meanders of River Soar forming the site's western boundary. The river corridor is a local wildlife site and along its eastern bank are moored boats that are accessed by a tracks along the flood bund from Redhill Marina directly north of the site. Riparian trees and scrub edges are scattered along the River Bank and a field pond lies within the southern area of the site. Visual Sensitivity: Site is visually contained by large cooling towers of Ratcliffe Power station to the east of the site. Infrastructure dominates the eastern and southern boundaries with the A453 and East Midlands Parkway Station and park and ride as well as access road overlooking these. Views from public footpaths

				both east and west of the site. Redhill Farm and Middlegate cottage also overlook parts of the site.
20	Shelford	89/100	89/100	Landscape Sensitivity: The site has a strong sense of place, particularly to the east where small fields of pasture provide the setting for the church. Arable land lies further away from Shelford and on the site off the A6097. The access track/conveyor belt would have a negative impact on the setting of Shelford Manor to the north. Visual Sensitivity: The main visual impact would be on residents of Stoke Bardolph to the west and on residents of Shelford to the east. There would also be a negative impact on users of the Trent Valley Way and the public footpath to the north of the river.
21	Bestwood II North	72/100	72/100	Landscape Sensitivity: The site is currently part of Longdale Plantation which is a mature deciduous woodland located on a high point in the landscape. It is designated as a SINC and identified as requiring action in the UK Biodiversity Action Plan. Although there is an existing quarry to the south west, the loss of additional woodland would be detrimental to the landscape character of the area. Visual Sensitivity: The main visual impact would be on residents of properties along Longdale Lane to the north west of the site and users of the Robin Hood Way to the north.
22	Scrooby Top North	62/100	48/100	Landscape Sensitivity: The main landscape impact will be the loss of landscape with characteristic features of IL10, such as hedgerows with isolated mature trees, and potentially the mature hedgerow to Green Lane (bridleway). Visual Sensitivity: Serlby Park woodland to the west and ridgeline to the north east help to screen views of the site from distant views, there are no close residential properties, views from Scrooby unlikely due to intervening vegetation. The main visual impacts will be on traveller receptors on the A638 and ECML, as well as the Bridleway to the north.

23	Bantycock Quarry	73/100	56/100	Landscape Sensitivity: Open rolling arable landscape which would undergo significant change if developed as active quarry. Post restoration impact would be dependent on restoration proposals, but loss of continuity and maturity would nonetheless remain. Visual Sensitivity: Site includes 2 farms and is overlooked by road users on A1 and Grange Lane, both of which immediately abut. Introduction of vertical elements in form of boundary bunding would result in significant change to views during operation.

Stage 5 - Geographical spread of sites

Minerals can only be worked where they are found which makes them different to many other forms of development.

Nottinghamshire is rich in a range of minerals however the extraction of sand and gravel is an important focus for the plan. Sand and gravel is predominately found in the Trent and Idle Valleys but due to its high quality, it supplies a number of different market areas. Due to the cost of transporting this bulky and relatively low cost mineral, transport distances are limited by economic considerations and as a result three main areas in Nottinghamshire have traditionally been worked. – The Idle Valley, the Trent Valley near Newark and the Trent Valley near Nottingham.

The issues and options document asked whether a geographic spread of sand and gravel quarries should be maintained in the three broad areas detailed. Overall it was considered that this was a suitable approach and is therefore a key strategic objective of the new MLP.

A geographical spread is not considered necessary for Sherwood Sandstone, clay or gypsum as the choice of potential sites put forward by the industry is limited.

Of the 11 permitted sand and gravel quarries (as of December 2017) in Nottinghamshire, one is currently not being worked (Girton), with another yet to commence extraction (at Sturton Le Steeple). Across the three areas traditionally worked for sand and gravel, six permitted extraction areas are located in the Idle Valley area (including Sturton Le Steeple), with permitted reserves at Finningley, Misson West and Newington South expected to be worked by 2020. In the Newark area four quarries hold permitted reserves, with one of these not being worked (Girton). In the Nottingham area, only East Leake Quarry has permitted reserves remaining to be worked, expected to last until the end of 2026.

Resources in the Idle Valley are positioned to be able to provide a source of sand and gravel to supply North Nottinghamshire and South Yorkshire (Rotherham and Doncaster) markets. Though longer term output may fall due to areas of workable mineral being exhausted, extensions and new sites in this area would secure the maintenance of supply for this market across the plan period.

With population and housing growth forecast for the Nottinghamshire area, and the potential for extraction to continue which can also meet demand from North Nottinghamshire (as output from the Idle Valley falls as the remaining resources are exhausted), maintenance of supply from extraction areas in the Newark area would serve to a wide geographic area , serving markets accessible along the A1 and A46.

Historically, there has been a more balanced distribution between the Idle Valley, Newark and Nottingham areas in respect of sand and gravel extraction. At present only East Leake Quarry serves the Greater Nottingham area. The existing permitted East Leake Quarry is expected to be worked by 2026. Based on information within the 2018 Nottinghamshire and Nottingham Local Aggregates Assessment, with infrastructure projects such as HS2 and likely increased demand for materials for residential development in the Nottingham area (based on expected increases in population in both city and county areas and planned increase in house building rates in District & Borough Local Plans), demand for sand and gravel in the Nottingham area is likely to be at least sustained over the plan period. Therefore, the allocation of new extraction areas in the Nottingham area would serve to redress current imbalances in the distribution of sand and gravel extraction across the County while also serving a potential market and minimising distances materials are transported.

How have proposals been assessed against at this stage?

Given the limited distance sand and gravel can be transported, it is unlikely that potential resources in the Idle Valley could economically be transported to supply markets such as Nottingham in the south of the county and vice versa. As a result, the site selection methodology needs to ensure that the mix of sites identified will provide a geographical spread across the county to meet expected demand.

In the Newark area extensions to existing permitted quarries are likely to be adequate to maintain supplies in this area and therefore new sites may not be required. However new quarries will be needed near Nottingham as extensions to existing quarries are not possible.

All the sites put forward are located in the three main extraction areas, however not all are considered necessary in order to meet future demand. Table 8 displays all sites put forward as part of the call for sites, to display their distribution across the County, along with their contribution to meeting demand (based on information in the 2017 Local Aggregates Assessment and Stage 1 of this site selection methodology). Geographic spread will be considered as a factor in the overall assessment and analysis in Stage 6 of this site selection methodology.

Table 8: Geographical Spread of proposed Sand and Gravel Sites

Ref	Site	Extension / New	Output, tonnes per annum (tpa)	Estimated life of quarry	Comments
	North Nottinghamshire				
1	Bawtry Road	Extension	25,000 – 36,000 tpa	5-7 years (from 2018/2019)	Would supply markets in north Nottinghamshire and South Yorkshire and would contribute to meeting demand as a replacement to current workings.
2	Barnby Moor (Hanson)	New	250,000 tpa	5 years (from 2018)	Would supply markets in north Nottinghamshire and South Yorkshire and would contribute a portion of the forecast average production figure. Would meet potential demand in combination with other extraction operations.
3	Barnby Moor (Rotherham S&G)	New	35,000 tpa	25-30 years (from 2029)	Would supply markets in north Nottinghamshire and South Yorkshire and would contribute to meeting demand as a replacement to current workings. It is not expected to come online until late in the plan period with a low annual output. Given the low annual output additional quarries would need to be allocated in additional to this proposal to meet expect demand over the plan period.
4	Botany Bay	New	200,000 tpa	12 years (from 2020/2021)	Would supply nearby markets in north Nottinghamshire and south Yorkshire and would contribute a portion of the expected demand forecast. Would meet potential demand in combination with other extraction operations.
5	Scrooby North	Extension	15,000 – 30,000 tpa	20+ years (from 2023)	Would supply nearby markets in north Nottinghamshire and South Yorkshire and would contribute to meeting demand as a replacement to current workings.
6	Scrooby Thompson Land	Extension	20-40,000 tpa	2 years (from 2019)	Would supply nearby markets in north Nottinghamshire and south Yorkshire and would contribute to meeting demand as a replacement to current workings.
	Trent Valley near Newark				

7	Besthorpe East	Extension	200,000 tpa	16 years (from 2020-2021)	Given the highway routeing agreements already in place at the permitted quarry, which prevent HGV traffic travelling south, it is likely that this extension would supply the north Nottinghamshire markets and contribute to meeting demand as a replacement to current workings.
8	Burridge Farm	New	125,000 – 150,000 tpa	25 years (from 2022)	Would supply the wider Nottinghamshire area and nearby markets and contribute a portion of the forecast average production figure. May lead to an over-supply in combination with extensions to existing sites in the Newark area.
9	Cromwell North	New	300,000 – 350,000 tpa	5-6 years (from 2022)	Would supply the wider Nottinghamshire area and contribute a portion of the forecast average production figure. May lead to over-supply in combination with extensions to existing sites in the Newark area.
10	Cromwell Triangle & R. Meadows	New	350,000 tpa	2-3 years (from 2028)	Would supply the wider Nottinghamshire area and contribute a portion of the forecast average production figure. May lead to over-supply in combination with extensions to existing sites in the area. Only planned to contribute later in the plan period.
11	Coddington	New	250,000 – 500,000 tpa	20+ years (from 2028)	Would supply the wider Nottinghamshire area and contribute a portion of the forecast average production figure. May lead to over-supply in combination with extensions to existing sites. Only planned to contribute later in the plan period.
12	Flash Farm	New	200,000 tpa	16-17 years	Would supply the wider Nottinghamshire area and contribute a portion of the forecast average production figure. May lead to over-supply in combination with extensions to existing sites in the Newark area.
13	Great North Road North	New	250,000 tpa	16 years (from 2022)	Would supply the wider Nottinghamshire area and contribute a portion of the forecast average production figure. May lead to over-supply in combination with extensions to existing sites in the area.
14	Great North Road South	New	250,000 tpa	16 years (from 2038)	Would supply the wider Nottinghamshire area and contribute a portion of the forecast average production figure. May lead to over-supply in combination with extensions to existing sites in the area.
15	Langford North	Extension	450,000 tpa	18 years (from 2026)	Would supply the wider Nottinghamshire area and contribute to meeting demand as a longer-term replacement to current workings.
16	Little Carlton	New	250,000 tpa	14	Would supply the wider Nottinghamshire area and contribute a portion of the forecast average production figure. May lead to over-supply in combination with extensions to existing sites in the Newark area.

	Trent Valley near Nottingham				
17	Barton in Fabis west	New	250,000 tpa	8 years (from early in plan period)	Would supply the Greater Nottingham conurbation and contribute a portion of the forecast average production figure. Would meet potential demand early in the plan period in combination with other extraction operations.
18	Mill Hill (near Barton in Fabis)	New	280,000 tpa	12-15 years (from 2018)	Would supply the Greater Nottingham conurbation and contribute a portion of the forecast average production figure. Would meet potential demand early in the plan period in combination with other extraction operations.
19	Redhill (Ratcliffe on Soar)	New	100,000 – 120,000 tpa	6-7 years (from 2018)	Would supply the Greater Nottingham conurbation and contribute a smaller portion of the forecast average production figure. May fall short of meeting required amounts of mineral to meet demand.
20	Shelford	New	500,000 tpa	14 years (from 2019/2020)	Would supply the Greater Nottingham conurbation and contribute a large portion of the forecast average production figure. Has the potential to focus output at one quarry and in one area impacting on the geographical spread of sites across the county.

Stage 6 – Overall analysis and decision

The final stage in the site selection methodology consists of an overall analysis of the results of the earlier stages for each site and makes an overall judgement in respect of whether the site should be proposed for allocation in the Minerals Plan.

The following table presents a summary analysis for each site taking into account the findings of the earlier stages and whether it is proposed the site should be allocation or not with the reasons for this.

The sites are grouped into geographical areas - North Nottinghamshire, Newark and Nottingham and then listed alphabetically.

Table 9: Analysis of Key Issues and Assessment

Ref	Site	New/ extension	Location	Analysis
1	Bawtry Road	Extension	North Nottinghamshire	This small extension is considered deliverable as it would maintain output from an existing permitted quarry and is proposed by the existing operator. The site assessment work undertaken identifies the transport and landscape impacts of being relatively low. When considered against sustainability appraisal (SA) objectives, slightly negative scores during the operational period and in the long term are reported. The quarry is in the north of Nottinghamshire and can supply demand from the local area and South Yorkshire. In comparison with other sites, it has lower environmental impacts than other sites, given its small-scale extension to existing workings. As a result of the above analysis, it is **proposed to allocate** this site in the Minerals Plan.
2	Barnby Moor (Hanson aggregates)	New	North Nottinghamshire	This relatively small new site has been promoted by a mineral operator. The site assessment work undertaken identifies the site to be suitable in transport terms and has relatively low landscape impact. When considered against sustainability objectives, the site has a very negative score for the operational period but only slightly negative score in the long term. The quarry is in the north of Nottinghamshire and can supply expected demand from the local area and south Yorkshire, however other larger potential sites have been submitted in this area that would supply over a longer period. In comparison with other sites, this is a new site for mineral working which would have larger impacts when assessed against sustainability appraisal objectives and landscape impact than other sites forming extensions to existing working. It is considered that there are alternative sites which comprise extensions to existing working which have a lower impact and can also serve the North Nottinghamshire and South Yorkshire market. As a result of the above analysis, it is **not proposed to allocate** this site in the Minerals Plan.

3	Barnby Moor / Torworth (Rotherham Sand and Gravel)	New	North Nottinghamshire	This medium sized site has been promoted by a mineral operator. In overall assessment the site is considered acceptable in transport terms and has low to moderate landscape impacts. When considered against sustainability objectives, the site has very negative score during the operational period and slightly negative in the long term. The quarry is well located in the north of Nottinghamshire to be able to meet expected demand from the local area and south Yorkshire, however the annual output from quarry is expected to be very low and is not expected to be worked until late in the plan period reducing its potential contribution to overall demand. In comparison with other sites, this is a new site for mineral working which would have larger impacts when assessed against sustainability appraisal objectives and landscape impact than other sites forming extensions to existing working. It is considered that there are alternative sites which comprise extensions to existing working which have a lower impact and can also serve the North Nottinghamshire and South Yorkshire market. As a result of the above analysis, it is **not proposed to allocate** this site in the Minerals Plan.
4	Botany Bay	New	North Nottinghamshire	This medium sized site is considered deliverable as it has been promoted by a mineral operator. In overall assessment, there are no transport issues and landscape impacts are relatively moderate to high. When considered against sustainability appraisal objectives, the proposal has a moderately negative score in the operational period and a slightly negative long-term score. The quarry is well located in north Nottinghamshire and would be able to meet expected demand from the local market and South Yorkshire over a large part of the plan period. In comparison with other sites capable of serving north Nottinghamshire and South Yorkshire this site has however relatively higher landscape impacts than other sites of similar size and forms a new greenfield mineral site. There are other sites of similar size able to serve the North of Nottinghamshire, but these form extensions and have consequently lower landscape impact. As a result of the above analysis, it is **not proposed to allocate** this site in the Minerals Plan.

5	Scrooby North	Extension	North Nottinghamshire	This small extension is considered deliverable as it would maintain output from an existing permitted quarry. Overall, the assessment work undertaken identifies the transport impacts being appropriate and landscape impacts being relatively low. The appraisal against sustainability objectives reports only moderate negative score when the quarry is operational and a slightly negative score in the long term. The quarry is well located in the north of Nottinghamshire to be able to provide mineral to meet expected demand from the local area and South Yorkshire. In comparison with other sites, this small extension has a relatively lower impact when considered against sustainability objectives and lower landscape impacts. As a result of the above analysis, it is **proposed to allocate** this site in the Minerals Plan.
6	Scrooby Thompson Land	Extension	North Nottinghamshire	This small extension is considered deliverable as it would maintain output from an existing permitted quarry and is being promoted by the existing operator. Overall, the assessment work undertaken identifies the landscape impacts as being relatively low and the transport assessment considers this site appropriate. When appraised against sustainability objectives there is a moderate negative score when the quarry is operational and a slightly negative score in the long term. The quarry is well located in the north of Nottinghamshire to be able to provide mineral to meet expected demand from the local area and South Yorkshire. In comparison with other sites, landscape impacts are relatively low as are impacts against sustainability criteria, in light of the very small site area. As a result of the above analysis, it is **proposed to allocate** this site in the Minerals Plan.
7	Besthorpe East	Extension	Newark	This large extension is considered deliverable as it would maintain output from an existing permitted quarry and is promoted by the existing operator. Overall the assessment work concludes that there are no significant transport issues but there are relatively moderate landscape impacts. When appraised against sustainability objectives, there is a moderately negative score when the quarry is operational and a positive score in the long term. Although located in the Newark area, existing routeing agreements require HGV's to travel north to

				avoid the village of Collingham. As a result, the proposed site would only be able serve the North Nottinghamshire and South Yorkshire market. In comparison with other sites serving north Nottinghamshire the site would have a positive sustainability score in the long term and when considered against sites of similar size, a relatively lower landscape impact as it forms an extension to existing working. As a result of the above assessment and analysis, it is **proposed to allocate** this site in the Minerals Plan.
8	Burridge Farm	New	Newark	This large new proposed quarry is considered deliverable as it is promoted by an operator but would necessitate barging material on the river to a separate processing site. Overall the site assessment work concludes that there are few transport impacts and relatively moderate landscape impacts. When appraised against sustainability objectives, the site scores moderately negative when the quarry is operational and a positive score in the long term. The site is one of a number of proposals made in the Newark area and in order to provide a geographical spread of sites across Nottinghamshire, only a limited number of sites are considered necessary. In comparison with other sites in the Newark area whilst impacts in terms of sustainability appraisal and landscape are similar, the site would form a new greenfield site and would impact on some minor roads in the Cromwell village area in order to access the A1, rather than having direct access to a major route. There are other opportunities for extensions to existing workings in the Newark area which provide a larger mineral resource. As a result of the above analysis, it is **not proposed to allocate** this site in the Minerals Plan.
9	Cromwell North	New	Newark	This medium sized new quarry proposal is considered deliverable as it is promoted by an existing operator in the area. Overall the site assessment work concludes that there are no significant transport issues but there are relatively moderate to high landscape impacts. When appraised against sustainability objectives there is a very negative score when the quarry is operational and a slightly negative score in the long term. The site is located in the Newark area and one of a number of sites submitted in the area. To ensure a geographical spread of

				sites across Nottinghamshire, only a limited number of sites are considered necessary within the Newark area. In comparison with other sites, the proposal is a new greenfield site rather than an extension, performs relatively worse when examined against sustainability objectives and would impact on some minor roads in the Cromwell village area in order to access the A1, rather than having direct access to a major route. There are other opportunities for extensions to existing workings in the Newark area which provide a larger mineral resource. As a result of the above analysis, it is **not proposed to allocate** this site in the Minerals Plan.
10	Cromwell Triangle and Cromwell River Meadows	New	Newark	This medium sized site is considered deliverable as it is promoted by an operator to help replace their existing quarry to the south. Overall the site assessment work concludes that there are no significant transport issues but there are relatively high landscape impacts. When appraised against sustainability objectives there are considered to be very negative score when the quarry is operational and moderately negative score in the long term. The site is located in the Newark area and is one of several sites submitted in the area. In light of the need to maintain a geographical spread of sites across the County only a limited number of sites in the Newark area are considered necessary. In comparison with other sites, the proposal is a new greenfield site rather than an extension, performs relatively significantly worse when examined against sustainability objectives and landscape. It would require use some minor roads in the Cromwell village area in order to access the A1 north, rather than having direct access to a major route. There are other opportunities for extensions to existing workings in the Newark area which provide a larger mineral resource but with lower environmental impacts. As a result of the above analysis, it is **not proposed to allocate** this site in the Minerals Plan.
11	Coddington	New	Newark	This new large site is considered deliverable as it is promoted by an operator. . Overall the site assessment work concludes that there are no significant transport issues but there are moderate landscape impacts. When appraised against sustainability appraisal objectives the site scores moderately negative when operational and slightly negative in the long term. The site is one of several sites submitted for consideration in the Newark area. The site is very large in terms of the potential tonnage of material. In light of the need to maintain a geographical spread of sites across the County only a limited number of sites in the Newark area are considered necessary and potentially only one site of this size.

				In comparison with other sites, the proposal is a new greenfield site rather than an extension and performs relatively worse when examined against sustainability objectives in terms of long-term impact. Whilst accessing an A road, there appears to be more evidence of collisions involving HGV traffic in this area then for other sites. There are other opportunities for extensions to existing workings in the Newark area which provide a large mineral resource of this nature but with overall lower sustainability / environmental impacts in the longer term. As a result of the above analysis it is **not proposed to allocate** this site in the Minerals Plan.
12	Flash Farm	New	Newark	This is a new greenfield moderately to large site and is considered deliverable as it is promoted by an operator. Overall the site assessment work concludes that there are no significant transport issues , although the impacts of HGV movement at Kelham bridge on the A617 is noted. There are moderate landscape impacts. When appraised against sustainability appraisal objectives the site scores very negatively when operational but positively in the long term. The site is one of several sites submitted for consideration in the Newark area. In light of the need to maintain a geographical spread of sites across the County only a limited number of sites in the Newark area are considered necessary and potentially only one site of this size. In comparison with other sites, the proposal is a new greenfield site rather than an extension and performs relatively worse when examined against sustainability objectives in terms of operational impact. There are other opportunities for extensions to existing workings in the Newark area which provide levels of mineral resource beyond the size of this site but with overall lower sustainability / environmental impacts. As a result of the above analysis it is **not proposed to allocate** this site in the Minerals Plan.

13	Great North Road North	New	Newark	This large new site is considered deliverable since it has been promoted by a mineral operator. In overall site assessment terms there are no significant transport issues but there are high landscape impacts. When appraised against sustainability appraisal objectives there is a very negative score when the quarry is operational and a neutral score in the long term. The site is one of number of proposals submitted in the Newark area and in light the need to maintain a geographical spread of sites across the County only a limited number of sites in the Newark area are considered necessary. In comparison with other sites, the proposal is a new greenfield site rather than an extension and performs relatively worse when examined against sustainability objectives and landscape impact in terms of operation of the site. There are other opportunities for extensions to existing workings in the Newark area which provide levels of mineral resource beyond the size of this site but with overall lower sustainability / environmental impacts. As a result of the above it is **not proposed to allocate** this site in the Minerals Plan.
14	Great North Road South	New	Newark	This large new site is not considered deliverable in terms of contributing to provision in the Plan since it has been promoted on the basis of not starting until 2038. In overall site assessment terms there are no significant transport issues, relatively higher landscape impacts and in assessment against SA objectives the site scores very negatively in operational term, and a neutral score in the long term. Whilst the site is located in the Newark area only a limited number of sites in the Newark area are considered necessary. As a result of the above assessment, particularly taking the deliverability aspect into account, it is **not proposed to allocate** this site in the Minerals Plan
15	Langford North	Extension	Newark	This is a large extension to an existing site which is considered deliverable as it is being promoted by a mineral operator with existing operations nearby. In overall site assessment terms there are no significant transport issues and there are relatively moderate to higher landscape impacts compared with other sites, In assessment against sustainability appraisal objectives, the site scores moderately negatively in the operational period but shows a positive score in the long term and is only one of two such sites showing this in the assessment. The site one of several submissions made in the Newark area,

				In light of the need to maintain a geographical spread of sites across the County only a limited number of sites in the Newark area are considered necessary and only one of this size. In comparison with other sites, the proposal is the largest extension to an existing site put forward through the Plan process and will provide a contribution to mineral supply extending beyond the period to 2036 in terms of current estimates of extraction rates with the potential to increase rates of supply should demand increase. It is one of the best performing sites in terms of long-term sustainability objectives since it provides opportunity to extend the already award achieving Langford Lowfields wetland conservation area. It has relatively moderate landscape impacts. As a result of the above analysis it is **proposed to allocate** this site in the Minerals Plan.
16	Little Carlton	New	Newark	This site is considered deliverable as it is promoted by an operator. Overall the site assessment work concludes that there are no significant transport issues but there are relatively high landscape impacts particularly in the operational phase. When appraised against sustainability appraisal objectives the site scores negatively when operational and negatively in the long term. The site is one of several sites submitted for consideration in the Newark area. In light of the need to maintain a geographical spread of sites across the County only a limited number of sites in the Newark area are considered necessary and potentially only one site of this size. In comparison with other sites, the proposal is a new greenfield site rather than an extension and performs relatively worse than others in the Newark area when examined against sustainability objectives and landscape impact in terms of operation of the site. There are other opportunities for extensions to existing workings in the Newark area which provide levels of mineral resource beyond the size of this site but with generally lower sustainability / environmental impacts. As a result of the above analysis it is **not proposed to allocate** this site in the Minerals Plan.

17	Barton in Fabis West	New	Nottingham	This medium sized new site is considered deliverable since it has been promoted by a mineral operator. In overall site assessment terms there are no significant transport issues but relatively moderate to high landscape impacts. In assessment against sustainability appraisal objectives, the site scores very negatively in operational period and slightly negative in the long term. The site is located in the Nottingham area, although in light of the number of sites submitted in the Nottingham area and the need to maintain a geographical spread of sites across the County only a limited number of sites in the area are considered necessary, with one large site or equivalent. In comparison with three potentially deliverable sites in the Nottingham area this is a new greenfield proposal but is not as large as the other options in terms of its contribution to mineral supply in the Nottingham area. In terms of its score against sustainability objectives it scores similarly to the three deliverable sites proposed in the Nottingham area but is marginally better than one other . he site has a relatively lower level of contribution to mineral supply in comparison with other options whilst it has similar sustainability appraisal scoring. Its landscape impacts are relatively lower than the two other sites. HGVs would access onto a minor road before accessing the new route of the A453 unlike the other options where access to the primary road network is more direct. As a result of the above analysis, it is **not proposed to allocate** this site in the Minerals Plan
18	Mill Hill nr Barton in Fabis	New	Nottingham	This large new site is considered deliverable since it has been promoted by a mineral operator. In overall site assessment terms there are no significant transport impacts and there are relatively high landscape impacts. In assessment against sustainability appraisal objectives, the site scores very negatively during the operational phase and slightly negatively in the long term. .The site is one of several sites submitted in the Nottingham area although in light of the need to maintain a geographical spread of sites across the County at least one of these will be necessary to contribute to future supply in the Nottingham area. In comparison with three potentially deliverable sites in the Nottingham area this is also a new greenfield proposal and ranks second in terms of total reserves which can contribute to mineral supply in the Nottingham area. When tested against sustainability objectives, it has a higher negative impact than the other sites but whilst the sustainability appraisal reports very negative impacts in the operational phase, these become slight negative impacts in the long term. In terms of landscape impact the site scores higher than other Nottingham related

				sites. In terms of transport comparison, this site would (apart from a short link) be accessed directly from the A453 which has been improved and links Nottingham directly with the M1. All three deliverable sites in the Nottingham area have relatively high landscape impacts and for all sites the sustainability appraisal reports very negative impacts in the operational phase. It is considered however that there is still a requirement for a site to be located in close proximity to the Nottingham market given the growth anticipated in this area over the Plan period. In comparison with other sites, the Mill Hill site would provide an important contribution to mineral supply in the County but not as large a level of extraction as one other Nottingham related site, which would absorb a significant element of the entire County need. As a result of the above analysis , it is **proposed to allocate** this site in the Minerals Plan
19	Redhill	New	Nottingham	This small sized new site is not considered deliverable since it has been promoted by a landowner without any named operator. In overall site assessment terms there are no significant transport issues and there are relatively moderate landscape impacts. In assessment against sustainability appraisal objectives, the site scores very negatively during the operational phase but moves to a slightly negative score in the long term. . The site is located in the Nottingham area, although in light of the number of sites submitted in the Nottingham area and the need to maintain a geographical spread of sites across the County only a limited number of sites in the area are considered necessary. As a result of the above analysis, especially in light of the uncertainties regarding deliverability of the site, it is **not proposed to allocate** this site in the Minerals Plan
20	Shelford	New	Nottingham	This large new site is considered deliverable since it has been promoted by a mineral operator. In overall site assessment terms there are no significant transport impacts and the submission has included the proposal that some material is moved by barge to an urban processing plant. There are relatively high landscape impacts and in assessment against sustainability appraisal objectives, the site scores moderately negatively during the operational phase and a slightly negative score in the long term. The site is located in the Nottingham area and in light of the need to maintain a geographical spread of provision across the County, there will be a need for at least one site to be allocated . In comparison with three potentially deliverable sites in the Nottingham area this is also a new greenfield proposal and ranks highest in terms of total reserves which can contribute to mineral supply in the Nottingham area. When tested against sustainability objectives, it has

				a lower negative impact than the other sites in the operational phase which become slight negative impacts in the long term. In terms of landscape impact the site scores high, but not the highest of Nottingham related sites. In terms of transport comparison, this site is less well connected to the Nottingham conurbation than other Nottingham related sites being accessed from the A6097 at Gunthorpe to the east of Nottingham. It has the potential to transfer mineral by barge to remote processing on an urban site All three deliverable sites in the Nottingham area have relatively high landscape impacts and for all sites the sustainability appraisal reports very negative impacts in the operational phase. It is considered however that there is still a requirement for a site to be located in close proximity to the Nottingham market given the growth anticipated in this area over the Plan period. In comparison with other sites, the Shelford site would provide a significant proportion of the entire County need and if it were allocated, provision would be limited in other parts of the County. This would not comply with the objective of maintaining a geographical spread of mineral sites across the County. As a result of the above it is **not proposed to allocate** this site in the Minerals Plan
21	Bestwood II North	Extension		This small extension to an existing site is considered deliverable since it has been promoted by the existing operator. In overall site assessment terms there are no significant transport or issues but there are relatively high landscape impacts. In assessment against sustainability appraisal objectives, the site scores moderately negatively during the operational phase and slightly negative in the long term. The site would be worked for Sherwood Sandstone and there are limited options for future supply of this resource. As a result of the above analysis, given the size of the site and the need for future supplies of this resource, it is **proposed to allocate** this site in the Minerals Plan
22	Scrooby Top North	Extension		This extension to an existing site is considered deliverable since it has been promoted by the existing operator to be worked over a long term period. In overall site assessment terms there are no significant transport issues and there are relatively low landscape impacts. In assessment against sustainability appraisal objectives, the site scores moderately negatively during the operational phase and neutral in the long term. The site would be worked for Sherwood Sandstone and there are limited options for future supply of this resource in Nottinghamshire.

				As a result of the above analysis, given the need for future supplies of this resource and the overall site assessment, it is it is **proposed to allocate** this site in the Minerals Plan.
23	Bantycock Quarry	Extension		This large extension to an existing site is considered deliverable since it has been promoted by the existing operator. In overall site assessment terms there are no significant transport issues and relatively moderate to high landscape impacts. In assessment against sustainability appraisal objectives, the site scores moderately negatively during the operational phase and slightly negative in the long term. The site would be worked for Gypsum and there are no other new proposals for future supply of this resource in Nottinghamshire. As a result of the above, given the need to maintain supplies of Gypsum and the overall site assessment, it is **proposed to allocate** this site in the Minerals Plan

Appendix 1 – Call for sites request

Call for Sites Information – Nottinghamshire Minerals Local Plan November 2017

1. Location
1.1. Proposed boundary of the site
1.2. The extent of excavations
1.3. Proposed access to the site, including a map of key routes from the site to the nearest major roads
1.4. Possible location(s) of processing plant
1.5. Phasing
1.6. An OS map of the site
1.7. Estimated number of HGV movements per day/month/year

2. Reserve Data (with supporting evidence)
2.1. Quality and quantity of recoverable reserves
2.2. Estimated output per annum
2.3. estimated lifespan of the mineral working (years)
2.4. When will the site be ready to be worked?

3. Role of site/markets
3.1. Is the site a new Greenfield site or an extension?
3.2. If a Greenfield site, is it replacing an existing mineral working within or outside the County?
3.3. What is your planned market area?
3.4. Is the location of the site optimum in terms of serving the market?

4. Availability of Mineral
4.1. Do you have the legal rights to work all of the mineral including access to a public highway or any other transport route?

5. Landowner Consent
5.1. Who is the legal owner of the site?
5.2. Is the legal owner of the site also a minerals operator?
5.3. Has the legal owner made a formal agreement with any mineral operator for minerals exploration and/or minerals extraction?

6. Agricultural land quality
6.1. Agricultural land classifications found within the site

7. Sensitive Receptors
7.1. Is the site located within 250m of any sensitive receptors? (Schools, residential dwellings, workplaces, healthcare facilities)

8. Reclamation
8.1. Proposed reclamation schemes – what opportunities for environmental benefits do you see arising from the scheme?
8.2. Does the reclamation of the site depend on importing fill? If so, please indicate type of waste, main sources and timescales