



WILKINSON ASSOCIATES
Environmental Consultants

Feltwell Quarry, Norfolk

**PROPOSED EXTENSIONS ALLOCATION:
ECOLOGICAL ASSESSMENT**



Prepared for: PDE Consulting Ltd
On behalf of: Lyndon Pallett Group Ltd.
Report Date: December 2022
Author: Jan Wilkinson MCIEEM
Our Ref: A2203/Proposed extensions

FELTWELL QUARRY, NORFOLK

Proposed extensions allocation: Ecological Assessment

REPORT PREPARED FOR:

PDE Consulting Limited

ON BEHALF OF:

Lyndon Pallett Group

SITE LOCATION:

Feltwell Quarry, Lodge Road, Feltwell, Thetford IP26 4DR

REPORT AUTHOR AND CONTACT DETAILS:

Jan Wilkinson BSc (Hons), MCIEEM
Wilkinson Associates Environmental Consultants Ltd
Annie Potts Cottage
Great Sutton, Stanton Lacy
Ludlow
Shropshire
SY8 2AJ

Tel: 07764 677433

E-mail: jan@wilkinsonassociates.co.uk

Version control:

Date	Version	Comments
15.10.22	Version 1	
25.10.22	Version 2	
14.11.22	Version 3	
16.11.22	Version 4	
15.12.22	Version 5	

This report has been prepared in accordance with all relevant and current best practice guidance and advice, including the Chartered Institute of Ecology and Environmental Management's *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine, version 1.2* (CIEEM 2018) and the *Guidelines for Ecological Report Writing* (CIEEM 2017). It has also been prepared in accordance with CIEEM's *Code of Professional Conduct* (CIEEM 2022) and in compliance with *BS42020 Biodiversity – Code of Practice for Planning and Development*.

CONTENTS

	PAGE NO.
1 INTRODUCTION AND BACKGROUND	3
2 PLANNING POLICY CONTEXT	5
3 ECOLOGICAL SURVEYS	9
4 ECOLOGICAL EVALUATION	11
6 PRELIMINARY ASSESSMENT OF ECOLOGICAL IMPACTS	13
7 RESTORATION PROPOSALS	15
8 CONSIDERATION OF PROPOSED ALLOCATION	16
9 CONSIDERATION OF REASONS FOR REFUSAL	17

TABLES

Table 1 Consultation document comments and responses

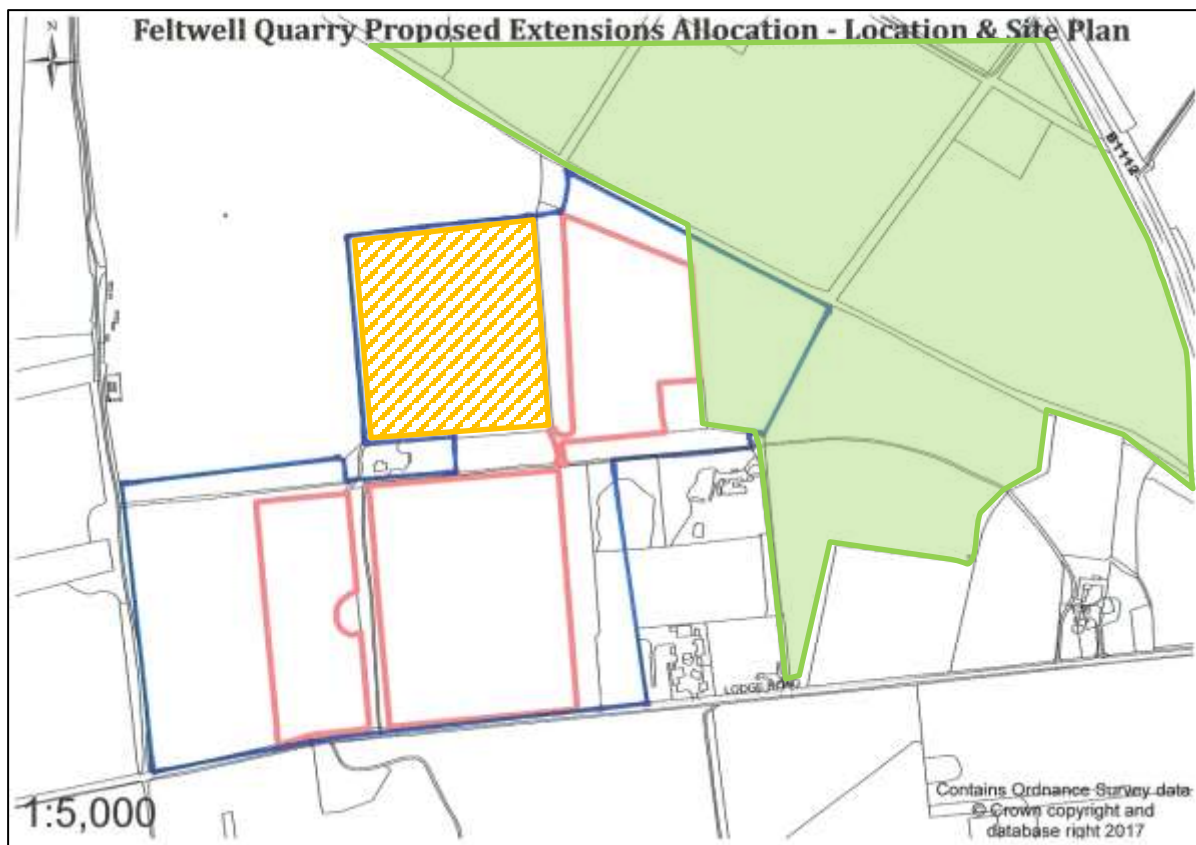
APPENDICES

Appendix 1 Initial consultation responses for site MIN 204
Appendix 2 Extract from Initial Consultation Feedback Report (July 2019)

1 INTRODUCTION AND BACKGROUND

- 1.1 This report has been prepared in connection with a submission to allocate two extension areas adjacent to the existing Feltwell Quarry as part of the Norfolk Minerals and Waste Local Plan Review.
- 1.2 A proposal to allocate three areas of agricultural land totalling 13.84 hectares was originally submitted in 2017. The areas included within that proposal are shown outlined red in Figure 1 below. The existing quarry is shown hatched orange and the blue outline shows other land within the control of The Lyndon Pallett Group Ltd (L P Group Ltd). The areas shaded green are included within Breckland Forest Site of Special Scientific Interest (SSSI) and Breckland Special Protection Area (SPA).

Figure 1 – 2017 proposed extension areas



- 1.3 Figure 1 shows that the originally proposed extension areas included one immediately to the east of the existing quarry, a second to the south and a third to the south west.
- 1.4 Following this submission, the initial consultation responses (Appendix 1) included specific comments from Natural England in relation to the proximity of the Site to Breckland Forest SSSI and Breckland SPA, the boundary of which lie to the east and north of the eastern extension area. Natural England objected to the screening in of this site, and Norfolk County Council (NCC) concluded that the site was considered to be unsuitable to allocate because of its proximity to the Breckland Forest SSSI (part of the Breckland SAC).

-
- 1.5 Subsequently, the Preferred Options Consultation Document (see Appendix 2 and also Table 1 in Section 9 of this report) included a summary of the issues associated with the proposed allocation of the three extension areas at Feltwell Quarry. Natural England, as statutory consultee, did not agree that the Site should be 'screened in as suitable' under the Habitats Regulations citing at that time the recent (April 2018) Court of Justice of the European Union case of *People over Wind v Coilte Teoranta*. That case had just been determined and held that mitigation measures should not be factored in at the screening stage to determine whether an appropriate assessment is needed under the Conservation of Habitats and Species Regulations 2017 (as amended). NCC therefore excluded the site for this reason, on the following basis:
- *Due to the proximity of the site to the Breckland Forest SSSI (part of the Breckland SPA), and the location of the site within the Protection Zone for Stone Curlews, there is the potential for unacceptable adverse effects on the SSSI from the proposed mineral extraction.*
 - *Whilst it may be possible to design and operate a site where there would not be any adverse effects on the SSSI or SAC, this uncertainty is a significant constraint to the development of the site and therefore the site is considered to be less deliverable than other sites that have been proposed for extraction.*
- 1.6 Subsequent to the initial consultation the representation was amended to remove the eastern extension area, which is closest to the Breckland Forest SSSI and Breckland SPA. This reduced the total area to 10.4 hectares with an estimated workable deposit of 575,000 tonnes. However, the two remaining proposed extension areas are not currently included within the draft Norfolk Minerals and Waste Local Plan, and Lyndon Pallett Group is proposing that they should be allocated.
- 1.7 This report has been prepared to address the reasons for refusal from the original minerals and waste plan representation. Specifically, it addresses potential impacts on Breckland Forest SSSI, Breckland SPA and stone-curlew and shows how the proposed extension areas can be worked without impacting the designated sites or the species for which they are notified. It includes the findings of two ecological walkover surveys carried out in May and July 2022.
- 1.8 This report has been prepared by Jan Wilkinson BSc (Hons) MCIEEM, an ecologist with more than 20 years' experience of undertaking ecological assessments and writing EclA reports for mineral extraction proposals. Jan has specific experience of assessing the impacts of mineral proposals on stone curlew populations in the Breckland area, having been the project ecologist for several other minerals applications within Breckland SPA.

2 PLANNING POLICY CONTEXT

2.1 Norfolk Minerals and Waste Local Plan – Publication Version 2022 (NM&WLP) provides the planning policy framework for the allocation of minerals sites.

The Minerals and Waste Local Plan process

2.2 Section 2 of the Plan describes the process of identifying proposed mineral extraction sites. In terms of ecology (paragraph 2.5), the basis for the site assessments is as follows:

- Details of any designated nature conservation sites nearby;
- Whether the proposed site or area could affect any designated sites, including the drainage of those sites;
- Whether a suitable restoration scheme could be proposed; and
- Whether there is any potential to create any target habitats (e.g. heathland).

2.3 Paragraph 2.6 states that the site assessments at allocation stage do not include details of any protected species found in and around the local area, as these will need to be taken into account at the planning application stage and details of mitigation measures will need to be provided.

2.4 Paragraph 2.17 describes the Habitats Regulations Appraisal which has been carried out on the Minerals and Waste Local Plan in accordance with the Conservation of Habitats and Species Regulations 2017. A Habitats Regulations Assessment (HRA) is undertaken to assess the impacts of a land-use plan against the conservation objectives of European designated nature conservation sites (SPAs, SACs and also Ramsar sites) and to ascertain where the Plan would adversely affect the integrity of the site, and if so how to amend the plan to avoid any potentially damaging effects. The Habitats Regulations Assessment forms part of the evidence base for the NM&WLP.

Development Management Criteria

2.5 The Plan then sets out the General Policies which will be applied to minerals and waste developments. Paragraphs 6.18-22 cover Biodiversity and Geological Conservation, and they are summarised as follows:

- Sites of biodiversity and geological interest will continue to be afforded strong protection; these include Special Areas of Conservation (SACs), Special Protection Areas (SPAs), Ramsar sites, National Nature Reserves (NNRs) and Sites of Special Scientific Interest (SSSIs).
- Planning permission for developments affecting an international site (SPAs, SACs or Ramsar sites) will only be granted where the conclusions of a project-level HRA

demonstrate that the proposal will have no adverse impacts on the integrity of any site, either alone or in combination with other plans or projects.

- Developments which impact on SSSIs, NNRs or irreplaceable priority habitats will only be permitted where the impact does not conflict with the conservation interests of that asset.
- Developments which impact on locally designated sites or on other priority habitats and protected/priority species will only be permitted where it has been demonstrated that the proposal will not significantly harm the site or the benefits of the development outweigh any adverse effects and such effects can be satisfactorily mitigated or (as a last resort) compensated for.
- Proposals that can show a positive contribution to the restoration, creation, protection, enhancement and management of ecological networks at the landscape scale will be encouraged.
- The criteria for identifying whether a Biodiversity Survey and Report is required at the planning application stage are set out, together with the required contents of that report.

The Brecks Protected Habitats and Species

- 2.6 Section 9 of the NM&WLP sets out the policy context for assessing proposals which affect the unique habitats and species of The Brecks landscape and designated areas. These include Breckland SPA and the three key ground-nesting bird species for which it is notified, i.e. stone-curlew, woodlark and nightjar. The Brecks area also includes four SACs and numerous SSSIs and NNRs.
- 2.7 Paragraph 9.2 describes the evidence used to support the HRA of the 2009 Breckland Core Strategy, which examined the effects of housing and roads on the distribution of stone-curlew in The Brecks. Following this, a mitigation policy was adopted requiring any new built development which may impact on the SPA to be subject to Appropriate Assessment (AA). New built development is not permitted within a 1,500m Protection Zone around the edge of the SPA unless it can be demonstrated by an AA that the development would not adversely affect the integrity of the SPA.
- 2.8 Paragraph 9.3 concerns stone-curlews found outside the SPA but which are part of the SPA population and functionally linked. The Core Strategy identified mitigation zones where there are concentrations of stone-curlew outside the SPA, and precautionary areas were identified within 3km of the SPA where stone-curlew could be found but there is a lack of survey data but future surveys could identify regular use by nesting Stone Curlew, functionally linking these areas to the SPA.
- 2.9 Paragraph 9.4 explains that built development may be brought forward within the protection, mitigation and precautionary zones, providing a project-level HRA can demonstrate that adverse effects have been prevented (e.g. by the provision of adequate mitigation measures).

- 2.10 Paragraph 9.5 describes further work carried out in 2013, which focused on the effects of buildings on the distribution of stone-curlews in The Brecks. This provided strong support for the continuation of the 1,500m protection zone around the areas capable of supporting stone-curlews; within this zone, additional built development is considered likely to have a significant effect on the SPA.
- 2.11 Paragraph 9.6 mentions that the 2013 research suggests the planting of woodland/screening as a mitigation measure (for built development) is unlikely to be effective and it identified a correlation between nest density and the amount of buildings. However, the research indicated that there was no evidence of a negative impact of agricultural or commercial buildings on stone-curlew and “As such, the analysis suggests that project level HRA for non-residential development in the SPA buffer zones may be able to demonstrate that adverse effects can be ruled out”.
- 2.12 The 2009 and 2013 research related primarily to housing development and roads, but as no specific research is available relating directly to minerals development this is used to set the context for Policy MW4: the Brecks Protected Habitats and Species, which is set out below.

The Council will require suitable information to be provided to enable it to undertake a Habitats Regulations Assessment of all proposals for development that are likely to have a significant effect on the Breckland Special Protection Area (SPA), which is classified for its populations of Stone Curlew, Woodlark and Nightjar, and/or Breckland Special Area of Conservation (SAC) which is designated for its heathland habitats. Development will only be permitted where sufficient information is submitted to demonstrate that the proposal will not adversely affect the integrity of the SPA or SAC.

Stone Curlew

A buffer zone has been defined (indicated in red hatching on Map 2) that extends 1,500m from the edge of those parts of the SPA that support or are capable of supporting Stone Curlew, where new built development would be likely to significantly affect the SPA population.

A buffer zone has also been defined (indicated in orange hatching on Map 2) that extends 1,500 metres around areas that have a functional link to the SPA, because they support Stone Curlew outside, but in close proximity to the SPA boundary, within which new built development would be likely to significantly affect the SPA population.

Built development (including plant and processing sites) within the SPA boundary, or located less than 1,500m away from the SPA boundary or identified areas that have a functional link (see Map 2) will not normally be permitted, unless a project level HRA is able to demonstrate that adverse effects can be ruled out.

Where a proposed building is outside the SPA but within 1,500m of the SPA boundary or identified areas that have a functional link, including those precautionary areas where there is currently a lack of data (see Map 2), there may be circumstances where

a project level Habitats Regulations Assessment is able to demonstrate that the proposal will not adversely affect the integrity of the SPA.

Circumstances where the proposal is able to conclusively demonstrate that it will not result in an adverse effect on the Breckland SPA may include where the proposal is:

- *More than 1,500m away from potential stone curlew nesting sites inside the SPA (these are those parts of the SPA that are also designated as Breckland Farmland SSSI);*
- *A new building that will be completely masked from the SPA by existing built development;*
- *A proposed re-development of an existing building that would not alter its footprint or increase its potential impact.*

Woodlark and Nightjar

Built development (including plant and processing sites) within 400m of the SPA that support or are capable of supporting Woodlark and/or Nightjar will not normally be permitted.

The Council will consider the need for a Habitats Regulations Assessment to determine the implications of development on Nightjar and Woodlark on a case-by-case basis, depending on the location and nature of the proposal.

- 2.13 Section 8 considers the proposed extension areas in the light of Policy MW4 and the evidence base set out in Section 9 of the NM&WLP.

3 ECOLOGICAL SURVEYS

- 3.1 Two ecological survey visits were conducted on 14th May and 4th July 2022 by Jan Wilkinson, the author of this report. The first visit included a walkover survey of all three of the originally proposed extension areas. The second visit focused on the two currently proposed extension areas to the south and south west of the existing quarry.
- 3.2 The surveys included a Phase 1 Habitat Survey of the Site and its immediate environs and a search for any evidence of protected species or of habitats and species of principal importance (priority habitats and species). In particular, the suitability of the habitats within the survey area for stone-curlew was evaluated and a careful search was made with binoculars for any evidence of nesting or foraging stone-curlews.
- 3.3 Figure 2 presents a Phase 1 habitat map for the survey area, including the proposed extension sites and adjacent areas to provide context. These habitats are described below, and photographs of the three areas are shown on Figure 3.

Field 1: south of existing quarry

- 3.4 The larger of the two proposed extension areas lies immediately to the south of the existing quarry. It comprises an arable field which was sown with a wheat crop at the time of survey (see Target Note 1 on Figure 2 and Photo 1 on Figure 3). The boundaries of field 1 are described below:
- The quarry access road forms the eastern boundary, and immediately to its east is a strip of conifer plantation woodland with a narrow fringe of broadleaved trees.
 - The west side of the field has a wide species-poor grassy margin and it lies adjacent to a strip of broadleaved plantation woodland which separates this field from the smaller proposed extension area to the west (field 2).
 - The southern boundary of the field lies adjacent to Lodge Road, from which it is separated by a hedgerow.
 - The northern boundary has a cultivated arable field margin supporting a sparse growth of common arable weeds and grasses. Beyond this is a screening belt of mixed plantation woodland between the field and the existing quarry; this is predominantly pine with some broadleaved trees/shrubs. There is a hedgerow on its southern edge, adjacent to the field and beneath an electricity power line.
- 3.5 Field 1 extends to approximately 6.5 hectares and it is bound by plantation woodland and hedgerows on all sides. It is thus fully enclosed by woody landscape features, which is of significance in the consideration of its potential value for stone-curlew (see Section 4).

Field 2: south west of existing quarry

- 3.6 The smaller of the two proposed extension areas lies to the south west of the existing quarry. It comprises an arable field which was planted with potatoes at the time of

survey (see Target Note 2 on Figure 2 and Photo 2 on Figure 3). The boundaries of field 2 are described below:

- The east side of the field has a wide species-poor grassy margin and lies adjacent to the strip of broadleaved plantation woodland which separates it from field 1. About half way down the boundary the woodland strip widens and projects into the field (see Figure 2).
- The northern boundary lies adjacent to mixed plantation woodland, and there is a weedy cultivated arable field margin on the edge of the field.
- The west side of the field has a species-poor grassy margin and lies adjacent to a block of conifer plantation woodland.
- The southern boundary of the field lies adjacent to Lodge Road, from which it is separated by a hedgerow.

3.7 Field 2 extends to approximately 3.2 hectares and it is bound by plantation woodland on its western, northern and eastern edges with a hedgerow along the southern boundary. It is only approximately half the size of field 1, and the sense of wooded enclosure is even more marked as the adjacent tree plantations are tall and dense (particularly the conifer plantation to the west).

Field 3: east of existing quarry

3.8 The arable field lying to the east of the existing quarry, which is no longer included within the proposed allocation, was included within the survey for completeness and to provide context (see Target Note 3 on Figure 2 and Photo 3 on Figure 3). It extends to approximately 3.5 hectares and it is completely surrounded by plantation woodland, with conifers to the north, mixed plantation to the south and broadleaved woodland to the east and west (the latter lying adjacent to the existing quarry). There is a wide cultivated margin on the western side of the field.

3.9 The eastern boundary of field 3 lies immediately adjacent to Breckland Forest SSSI and Breckland SPA. To the north, a 35-50m wide plantation belt separates the field from the SSSI and SPA boundary.

Fauna

3.10 All three fields were carefully scanned with binoculars for any evidence of ground-nesting birds, including stone-curlew. None were seen, and the only birds noted were widespread farmland bird species including pheasants, woodpigeons and magpies.

3.11 Roe deer were observed within the wooded areas.

4 ECOLOGICAL EVALUATION

Introduction

- 4.1 This Section presents a brief assessment of the ecological value of the two proposed extension areas, excluding field 3 (Target Note 3 on Figure 2) which is now excluded from the proposed allocation.

Designated sites

- 4.2 The two proposed extension areas do not lie within any designated nature conservation sites. However, they both lie within the Impact Risk Zones (IRZ) for Breckland Forest SSSI and Breckland Farmland SSSI (sites of National importance). They also lie within the 'Protection Zone' for stone-curlew which extends to 1500m from the boundary of Breckland SPA (site of International importance, see Section 2).
- 4.3 The minimum distances between the proposed extension areas and the designated sites are as follows:
- Breckland Forest SSSI/Breckland SPA: 205m east of Field 1 its closest point. Field 2 is 445m at the closest point.
 - Breckland Farmland SSSI/Breckland SPA: 900m south west of Field 2 at its closest point and on the far side of Lodge Road (the B1112) and Old Brandon Road. Field 1 is 950m at the closest point.
- 4.4 It should be noted that the existing quarry lies approximately 70m from the boundary of Breckland Forest SSSI/Breckland SPA at its closest point (the north east corner), and that the existing quarry and several other parcels of land lie between the two proposed extension fields and the designated area. These include several blocks of plantation woodland.
- 4.5 Excluding the north eastern field (Field 3) from the proposed allocation therefore has the effect of moving the proposed mineral extraction operations further away from Breckland Forest SSSI with respect to the existing quarry. The two proposed extension areas are slightly closer to Breckland Farmland SSSI compared to the existing quarry, but are still more than 900m away.
- 4.6 The survey information presented in Section 2 also shows that both of the proposed extension fields are well screened by existing mature plantation woodland. These factors have a bearing on the potential for impacts of mineral extraction to affect the designated sites and the species for which they are notified, including stone-curlew.

Habitats

- 4.7 The two proposed extension areas comprise flat arable fields of very low intrinsic ecological value. Both fields are surrounded by woodland plantations, mostly comprising conifers with some broadleaved trees. There are hedgerows along the

southern boundary adjacent to Lodge Road and along part of the northern boundary. These wooded habitats are outside the proposed mineral extraction areas and will be unaffected. They are mostly even-aged plantations of limited ecological value but they would serve to screen activities within the extraction areas from almost all surrounding land.

Fauna

- 4.8 No ground-nesting birds, including stone-curlew or skylark, were recorded during the two survey visits in May and July. However, stone-curlew are cryptically camouflaged and are active at night, so they can be difficult to spot, but habitat characteristics can provide an indication of the potential for a particular location to support breeding stone-curlew. Defra's guidance on creating nesting plots for stone-curlew includes the following advice for choosing locations¹:
- Locate plots in fields where stone-curlew have nested before, or:
 - In open fields larger than 5 hectares.
 - In open fields larger than 10 hectares, if woodland forms a quarter of the field boundary.
 - At least 100 metres away from trees and overhead power lines, as predators use them to look for prey.
 - At least 200 metres away from wind turbines.
- 4.9 The smaller proposed western extension area (Field 2) is only approximately 3.2 ha in area. 85% of the boundary comprises woodland and the remaining 15% is a hedgerow. No part of the field is more than 100m from trees.
- 4.10 The larger proposed southern extension area (Field 1) extends to approximately 6.5 ha. 80% of the boundary lies adjacent to woodland, and the other 20% is bound by a hedgerow. Only a very small area in the centre of the field would be more than 100m away from trees, and the northern third of the field is within 100m of an overhead power line.
- 4.11 For the above reasons, both proposed extension areas would not be suitable for the creation of stone-curlew nest plots, and it is reasonable to assume that stone-curlew would be unlikely to nest on them. It is also unlikely that the field margins, which are all immediately adjacent to woodland and/or hedgerows, would be favoured by foraging stone-curlew as they prefer to have clear sight-lines well away from trees.

¹ <https://defrafarming.blog.gov.uk/create-nesting-plots-for-lapwing-and-stone-curlew/>

5 PRELIMINARY ASSESSMENT OF ECOLOGICAL IMPACTS

- 5.1 Any future planning application for mineral extraction within the proposed extension areas would need to be accompanied by an Ecological Impact Assessment, which would fully assess the potential impacts of the development on all identified ecological interests. The purpose of this Section is to provide a preliminary analysis of ecological issues and constraints in order to assess whether a workable mineral extraction scheme could be implemented without giving rise to unacceptable ecological impacts. This includes impacts on the designated sites and the protected species associated with them.

Outline of development proposals

- 5.2 Drawing No. KD.FELT.D.003 shows an indicative Block Proposals Plan for the two extension areas. It is intended that the larger eastern extension area (Field 1) will be worked first, in two phases (Phase 1A and 1B), followed by the smaller western area (Field 2) which will be worked in a single phase (Phase 2). There will be a 10m standoff between the limit of extraction and the Site boundary. Soil storage and screening bunds will be required, indicative locations for which are shown on the Block Proposals Plan, and there will be an appropriate standoff to protect the root zones of adjacent trees and hedgerows. Advance scrub planting will be carried out along the majority of the site boundaries, except where access or soil storage/screening bunds are required.
- 5.3 It is anticipated that the extension areas will be worked in much the same way as the existing quarry. The mineral processing plant and site office will remain within the existing quarry, and the deposits will be worked dry.
- 5.4 In terms of timescales, further geological investigation has revealed that the two extension areas contain an estimated reserve of 651,000t which will be worked at a rate of 60,000tpa. This would equate to about 11 years. Factoring in progressive restoration to follow on behind the mineral extraction, the total life of the extensions would be in the region of 12-13 years.
- 5.5 As both parcels of land are extension areas, it is not anticipated that there would be any additional traffic movements over and above those associated with the existing quarry as the commencement of operations will follow on from the completion of mineral extraction within the existing quarry.

Potential impacts of mineral extraction

- 5.6 Mineral extraction within the two proposed extension areas will not affect habitats of high biodiversity value and a preliminary assessment has indicated that the habitats are unlikely to support protected species, including nesting stone-curlew. Any future planning application would be accompanied by detailed ecological surveys and consideration of other relevant data, including any breeding records of stone-curlew, woodlark and nightjar.
- 5.7 There will be no direct impacts on designated sites in terms of habitat loss or damage.

5.8 Potential impacts on the designated sites would be fully addressed at the planning application stage; at this point, the requirement is to demonstrate that it is possible to work the extension areas without giving rise to adverse effects on the SSSIs/SPA. In this respect, the following factors are noted:

- Both extension areas are surrounded by tree plantations and hedgerows, which provide significant screening and enclosure and will help to reduce the likelihood of any disturbance impacts associated with noise, light and traffic movements.
- The extension areas are both separated from the Breckland Forest SSSI/SPA boundary to the north by the existing quarry and the former landfill site, and to the east by private properties (Feltwell Lodge, The Bungalow and Sawmill) and woodland blocks. The larger southern extension is a minimum of 205m from the designated site boundary, and the western extension is 445m at its closest point.
- Breckland Farmland SSSI/SPA is situated a minimum of 900m from the proposed extension areas, from which it is separated by Lodge Road and several arable fields. Consideration of aerial photographs indicates that the fields have wooded blocks or lines of trees along the boundaries, further increasing the screening between the designated sites and the proposed extension areas.
- The mineral deposit will be worked dry so there is no risk of the proposal giving rise to hydrological changes within the designated sites.
- There will be no buildings or plant site within the extension areas.
- As part of any future planning application, it is likely that an EIA would need to be prepared and this would include full assessments of all potential impacts on designated sites, and appropriate mitigation measures would be implemented if potential impacts are identified.
- Experience at other sites indicates that mineral extraction activities do not tend to give rise to significant disturbance impacts on stone-curlews, which have been recorded nesting close to extraction areas and the main quarry access road at another Breckland minerals site.

5.9 In summary, the proposal to allocate only the two southern proposed extension areas is not likely to give rise to unacceptable impacts on the SSSIs/SPA.

6 RESTORATION PROPOSALS

6.1 The proposed restoration scheme presents an opportunity to create habitats which are of significantly higher value than those which currently exist and which could potentially attract bird species for which the SPA is designated. Given the proximity of existing mature woodland to both proposed extension areas, it is proposed that it would be more appropriate to target the provision of habitats for nightjar and woodlark rather than stone-curlew, which require large open spaces. The key habitat requirements of these species are summarised below:

Nightjar

6.2 The most important habitats for nightjar are heathland and young forestry plantations, and particularly open wooded areas on heathland. They nest in secluded patches of bare ground within low, often shrubby vegetation (e.g. gaps in deep heather). Foraging habitat includes heathland, forest rides and edges, wetlands, native woodlands, mature hedges and old pasture.

Woodlark

6.3 Key habitats for woodlark include young or recent clear-fell plantation, forestry, heathland and uncropped arable land. Recently felled forestry plantations and heathland are particularly important for nesting. They require a mosaic of bare ground or short vegetation for feeding and tussocks of vegetation with disturbed ground for nest sites. Sites need to be managed to maintain a mosaic of bare ground and short grass (less than 5cm), usually either by rabbit or stock grazing.

Concept Restoration proposals

6.4 The habitat requirements for nightjar and woodlark are similar, i.e. they both include heathland with a mosaic of taller tussocky or shrubby vegetation and short vegetation with patches of bare ground. Woodland edges, hedgerows and wetlands can be valuable components of a varied habitat mosaic.

6.5 A Concept Restoration Plan has been prepared to support the representation for allocation of the two extension areas (Drawing No. KD.FELT.D.004). It is proposed that the majority of both proposed extension areas will be restored to grass heathland, comprising short and sparse grasses (less than 5cm tall) with patches of bare ground. Other components of the mosaic may include:

- A shrubby woodland edge adjacent to the existing mature plantations around the boundaries of both extension areas. This would comprise appropriate locally native broadleaved shrub and small tree species and will provide a biodiverse transition zone between the open heathland and the off-site woodland habitats.
- The existing boundary hedgerows will be retained, enhanced and managed to maximise their biodiversity value for a range of birds and other wildlife.
- Small ponds will be created as part of the drainage scheme. These will be designed to provide valuable enhancement within the open heathland habitats and will provide water resources for a range of wildlife.

7 CONSIDERATION OF PROPOSED ALLOCATION

- 7.1 As discussed in Section 2 of this report, paragraph 2.5 of the NM&WLP describes the basis of site allocation assessments as follows:
- Details of any designated nature conservation sites nearby;
 - Whether the proposed site or area could affect any designated sites, including the drainage of those sites;
 - Whether a suitable restoration scheme could be proposed; and
 - Whether there is any potential to create any target habitats (e.g. heathland).
- 7.2 The preceding sections of this report have provided details of the relationship between the two proposed extension areas and the designated sites, including Breckland Forest SSSI, Breckland Farmland SSSI and Breckland SPA. It has shown that there will be no direct impacts on these sites in terms of habitat loss or damage, and no unacceptable indirect impacts have been identified that could affect the SSSIs/SPA. A restoration scheme is put forward which focuses on the creation of Brecks heathland, which is the most appropriate habitat to provide in this location in order to benefit biodiversity and the species for which the designated sites are notified.
- 7.3 Section 9 of the NM&WLP and Policy MW4 set out the requirements for assessing the effects of proposals on Breckland SPA. Detailed information will be provided at the planning application stage to demonstrate compliance with this policy, including suitable information to enable Norfolk County Council to carry out a project level Habitats Regulations Assessment (HRA). However, at this stage we have provided sufficient information to demonstrate that it would be possible to develop the site in a way that would not adversely affect the integrity of the SPA.

8 CONSIDERATION OF REASONS FOR REFUSAL

- 8.1 The 2019 preferred options consultation document for Feltwell Quarry (site reference MIN 204) included a number of detailed comments with regard to Ecology (paragraphs M204.8 to M204.13 – see extract in Appendix 2). Each of these, plus the concluding comments (M204.21) are addressed in Table 1 and discussed further below.

Table 1 Consultation document comments and responses

Paragraph reference.	Comment	Response
M204.8	Ecology: Breckland Forest SSSI, part of the Breckland SPA, is adjacent to the site boundary. The SSSI citation states that the clear fell areas and young plantations within Breckland Forest SSSI provide suitable breeding habitat for woodlark and nightjar which occur in internationally important numbers. The forest also supports an important assemblage of protected plant species, internationally rare and nationally scarce plant species. The forest also supports an exceptionally rich invertebrate fauna. All three parcels of land are within the Protection Zone for Stone Curlews, an internationally protected ground nesting bird.	<p>The amended proposal excludes the eastern extension area which was adjacent to Breckland Forest SSSI and Breckland SPA. The closest distance to the SSSI/SAC boundary is now 205m from the southern extension area and 445m from the western extension area. Both proposed extension areas are within the 1500m Protection Zone for stone-curlew.</p> <p>Both proposed extension areas are well screened by existing mature plantation woodland, and both are separated from Breckland Forest SSSI/SPA by the existing quarry and former landfill site to the north and by private properties and woodland blocks to the east.</p>
M204.9	The potential exists for impacts from mineral extraction at site MIN 204. An assessment of potential impacts, including from dust deposition, noise and disturbance to protected species, together with appropriate mitigation, would be required at the planning application stage as part of a Habitats Regulations Assessment (HRA). Due to the precautionary principle in relation to the Habitats Regulations, if effects to the SPA are judged as uncertain then development should not take place. Due to the proximity of the proposed site to the Breckland SPA, mitigation measures would be required to the proposed mineral extraction operation and impacts are uncertain. It is therefore not possible, at the screening stage of the HRA of the M&WLPR, to conclude that there would be no likely significant effects from mineral extraction at site MIN 204.	<p>This comment relates to the previous proposal to allocate three extension areas, including one which lies adjacent to Breckland Forest SSSI/Breckland SPA. The north eastern extension area was subsequently removed from the proposed allocation, and consequently there is a much reduced risk of adverse effects on the designated sites. At the project level, a full assessment would be included as part of a HRA. However, on the basis of the ecological assessment presented in this report, there is a reasonable level of confidence that mineral extraction within the two southern areas would not give rise to significant effects on the SPA or adversely affect its integrity. There is therefore no justification for excluding the allocation on this basis.</p>

Paragraph reference.	Comment	Response
M204.10	Weeting Heath SSSI, part of the Breckland SAC, is 2.03km from the site boundary. The SSSI citation states that the site is a classic example of open, rabbit-grazed, Breckland grass-heath. Most of the site is covered by calcareous grassland and lichen-dominated heath, and a number of rare plants characteristic of Breckland are present. A small arable weed reserve is included within the site and many of the rare Breckland annuals have been introduced to it. The site is of considerable ornithological importance supporting a high breeding density and variety of heathland birds, including the Stone Curlew. Whilst the site is within the Impact Risk Zone for the SSSI, due to the distance no impacts on this SSSI are expected.	Agreed. No further consideration is necessary at this stage for Weeting Heath SSSI.
M204.11	Breckland Farmland SSSI is 0.90km from the site boundary. The SSSI citation states that the predominantly arable site has an internationally important population of Stone Curlew. All three parcels of land are within the Protection Zone for Stone Curlews. The potential exists for impacts from mineral extraction at MIN 204, if uncontrolled. An assessment of potential impacts, together with appropriate mitigation would be required as part of any planning application.	This report has demonstrated that the habitats within the proposed extension areas are likely to be unsuitable for stone-curlew owing to the proximity of mature tree plantations. Both areas are also well screened from Breckland Farmland SSSI by tree plantations associated with arable fields to the south of Lodge Road. Further detailed assessment of potential impacts on stone-curlew would be carried out in association with any future planning application, and if necessary appropriate mitigation measures would be implemented (e.g. the use of screening bunds).
M204.12	There are no County Wildlife Sites within 1km of the site.	No further consideration of Local Sites is necessary at this stage.
M204.13	There are no ancient woodland sites within 3km of the site.	Agreed. All woodland blocks adjacent to the site are secondary plantation woodland, and no further consideration of Ancient Woodland is necessary.
M204.21	Conclusion: The site is considered to be unsuitable for allocation because: <ul style="list-style-type: none"> • Due to the proximity of the site to the Breckland Forest SSSI (part of the Breckland SPA), and the location of the site within the Protection Zone for Stone Curlews, there is the potential for 	Conclusion: the site is considered to be suitable for allocation because: <ul style="list-style-type: none"> • It is further away from Breckland Forest SSSI than the existing quarry and the enclosure of both fields by surrounding mature tree plantations both serves as a screen

Paragraph reference.	Comment	Response
	<p>unacceptable adverse effects on the SSSI from the proposed mineral extraction.</p> <ul style="list-style-type: none"> Whilst it may be possible to design and operate a site where there would not be any adverse effects on the SSSI or SAC, this uncertainty is a significant constraint to the development of the site and therefore the site is considered to be less deliverable than other sites that have been proposed for extraction. 	<p>and makes it unlikely that stone-curlew would nest within the site. No unacceptable adverse effects on the SSSI have been identified.</p> <ul style="list-style-type: none"> Excluding the north east proposed extension area removes the uncertainty regarding adverse effects on the designated sites. Sufficient information has been provided to demonstrate that it is possible to design and operate a site where there would not be any significant effects on the SSSI or SPA (NB not Breckland SAC, which is more than 2 km from the site and is not anticipated to be affected). The site is considered to be no less deliverable than other sites that have been proposed for extraction.

8.2 The above comments were made in response to the original proposal to allocate all three potential extension areas within the Norfolk Minerals and Waste Local Plan. The amended proposal which excludes the north eastern field has the effect of moving the proposed mineral extraction areas further away from Breckland Forest SSSI, which is cited as the main reason for not allocating the site. In addition, both proposed extension areas are well screened by existing mature plantation woodland, and both are separated from Breckland Forest SSSI/SPA by the existing quarry and former landfill site to the north and by private properties and woodland blocks to the east. The habitats within the proposed extension areas are considered to be of low suitability for stone-curlew owing to the proximity of the adjacent woodland blocks and hedgerows. Consequently, there is a much reduced risk of adverse effects on Breckland Forest SSSI, Breckland Farmland SSSI and Breckland SPA.

8.3 The amended proposal would still need to be subject to appropriate assessment, as government guidance² requires a precautionary approach to the consideration of likely significant effects on a European site, i.e. a risk or a possibility of such an effect is enough to warrant the need for an appropriate assessment but this should be based on 'objective information'. Whilst the *People Over Wind* case clarified that mitigation measures cannot be taken into account at the screening stage when deciding whether an appropriate assessment is required, mitigation measures can be taken account of

² <https://www.gov.uk/guidance/appropriate-assessment>

within the project level appropriate assessment. However, the government's appropriate assessment guidelines also state that:

"An appropriate assessment for a more strategic plan, such as the local plan, can consider the impacts on sites and confirm the suitability or likely success of mitigation measures for associated non-strategic policies and projects."

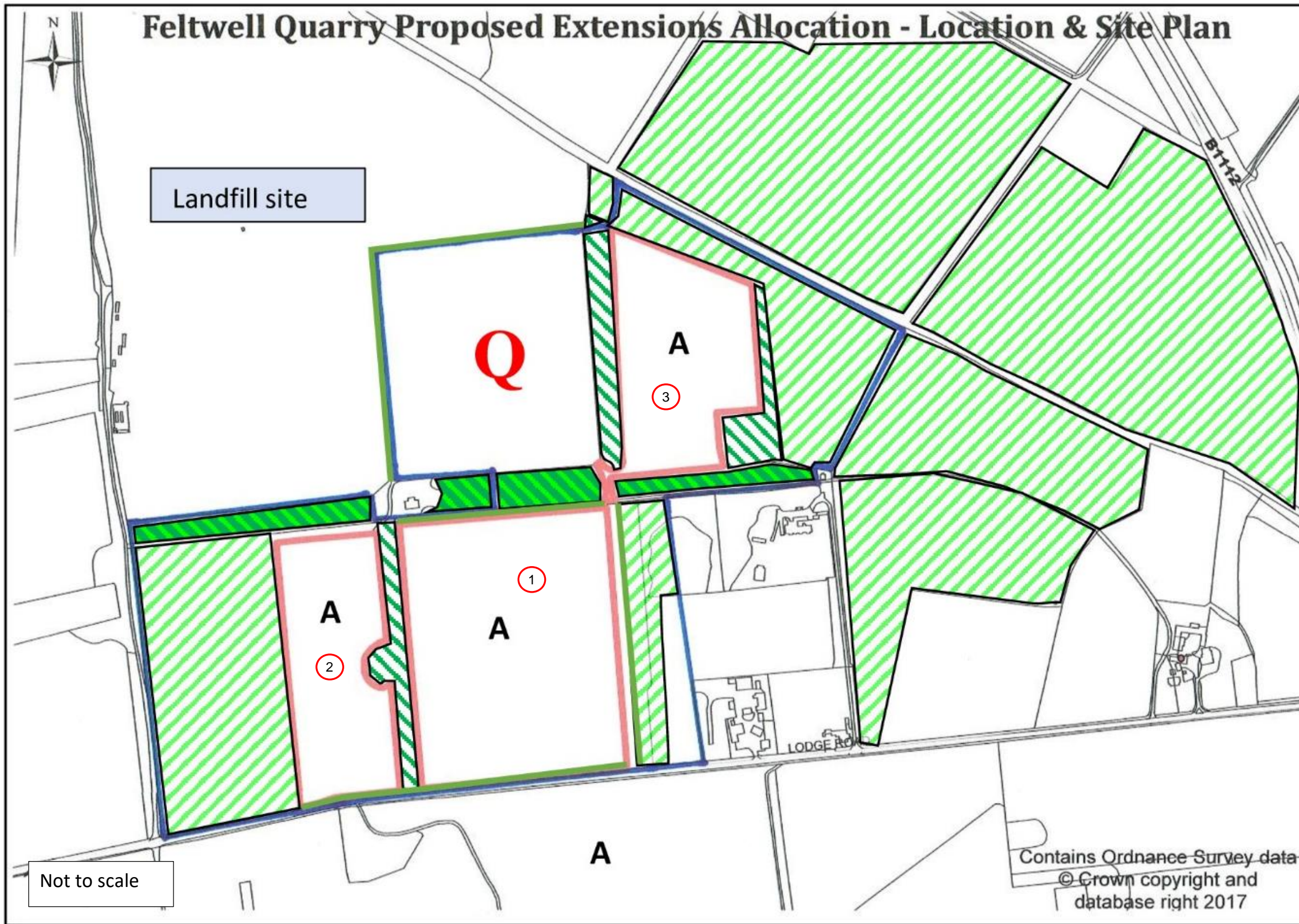
8.4 The first stage of the Minerals and Waste Local Plan Review concluded³:

"The Habitat Regulations Assessment (HRA) Task 1 has found that the two southern parcels are likely to be able to (be) extracted without giving rise to unacceptable impacts if appropriate mitigation is put in place; this conclusion is based on the experience of mineral working to the north which is closer to the SPA. The most north-easterly parcel of land has a boundary adjacent to the SPA, and is closer than any previous working; the conclusion of the HRA is that impacts are uncertain. Therefore, the north-western (sic) parcel of land is not considered suitable for allocation."

8.5 The current assessment supports this conclusion. That is, there is a reasonable degree of confidence that working the two southern extension areas will not lead to unacceptable impacts on the SSSIs/SPA and that any mitigation measures required would be successful. On this basis, it is possible for the strategic level appropriate assessment to confirm the likely success of any mitigation measures identified during project level assessment. The amended proposal thus removes the uncertainty regarding likely significant effects on the SSSI and SPA, which was the main reason for Natural England's objection.

8.6 In conclusion, this report has demonstrated that the amended proposal to allocate only the two southern extension areas will not give rise to unacceptable impacts on the designated sites or the species for which they are notified. Any future planning application would be accompanied by an Ecological Impact Assessment and information to inform a project-level Habitats Regulations Assessment, which would identify any mitigation measures required and would provide full details of an ecological enhancement restoration scheme.

³ <https://norfolk.oc2.uk/document/46/3814#d3864>



Key:

- Broad-leaved plantation
- Coniferous plantation
- Mixed plantation
- Hedgerow/tree line
- Arable land
- Existing quarry
- Target Note number

Figure 3 Photographs

1. View of field south of existing quarry, from access road on eastern side.



2. View of field south west of existing quarry, with pine plantation to east and strip of broadleaved woodland to west.



3. Field to east of existing quarry (no longer included in proposed allocation)



APPENDIX 1

Initial consultation responses for site MIN 204

MIN 204 land north of Lodge Road, Feltwell

Representations received about site MIN 204	Norfolk County Council Planning Officer's response
<p>(Comment) Representation ID: 93215</p> <p>Respondent: Norfolk County Council Historic Environment Service (Dr James Albone) [8137]</p> <p>We agree with the initial conclusion for this site, but with the following comments: There is no mention made of the find of Palaeolithic handaxe on adjacent land. We would like to see the text on archaeology updated as a result of new information. The old Lodge Pit (aka Frimstone's Quarry) located c.500 m north of MIN 204 has yielded significant assemblages of quartzite as well as flint palaeoliths and has been subject to recent study for evidence of a Middle Pleistocene Stage 6 glaciation. Interpretation of the lithic assemblages and geology at Feltwell are relevant to current archaeological debate relating to pre-Anglian human occupation of Britain. It is highly likely that similar deposits will be present at MIN 204, which means that archaeological assessments must consider the impact of any planning application on Palaeolithic/Pleistocene exposures. If planning permission were to be granted mitigation would likely include monitoring of spoil heaps for artefacts in addition to any pre-application archaeological surveys and trial trenching.</p>	<p>Noted. The site assessment refers to 'a wider landscape with a significant number of finds and features from multiple period, but especially the Neolithic and Bronze Age'. Specific finds have not been referred to in the site assessment. The archaeology site assessment has been amended as requested. However, the site is concluded to be unsuitable to allocate because of its proximity to the Breckland Forest SSSI (part of the Breckland SPA).</p>
<p>(Comment) Representation ID: 93137</p> <p>Respondent: Norfolk County Council - Highway Authority (Ms H Grimes) [18346]</p> <p>The Highway Authority considers the site is acceptable subject to the use of the existing access.</p>	<p>Noted</p>
<p>(Comment) Representation ID: 93117</p> <p>Respondent: Norfolk County Council - Natural Environment Team (Ms A Crotty) [18343]</p> <p>This site is surrounded by coniferous woodland and hedgerows and would require an AIA to ensure sufficient standoff from the adjacent trees to ensure their roots are protected for their safe long term retention.</p>	<p>Noted. The site assessment has been amended to state that an AIA would be required at the planning application stage. However, the site is concluded to be unsuitable to allocate because of its proximity to the Breckland Forest SSSI (part of the Breckland SPA).</p>
<p>(Comment) Representation ID: 93092</p> <p>Respondent: Norfolk County Council - Natural Environment Team (Ms E Smith) [18345]</p> <p>I support the requirement for a detailed landscaping scheme to mitigate impacts on Feltwell Gate Lodge and surrounding landscape.</p>	<p>Noted. However, the site is concluded to be unsuitable to allocate because of its proximity to the Breckland Forest SSSI (part of the Breckland SPA).</p>

Representations received about site MIN 204	Norfolk County Council Planning Officer's response
<p>(Comment) Representation ID: 92973 Respondent: Historic England (Dr Natalie Gates) [17465] Whilst there is an existing quarry and landfill site nearby, this proposed site allocation brings the quarrying in closer proximity to grade II Denton Lodge. The recommendations in the Sustainability Appraisal Appendix B should be incorporated in policy.</p>	<p>Noted. The site assessment states that a Heritage Statement would be required at the planning application stage, to identify heritage assets and their settings, assess the potential for impacts and identify appropriate mitigation measures if required. However, the site is concluded to be unsuitable to allocate because of its proximity to the Breckland Forest SSSI (part of the Breckland SPA).</p>
<p>(Comment) Representation ID: 92917 Respondent: Environment Agency (Miss E Stewart) [18012] At sites MIN 6, MIN 204, MIN 23 and MIN 116 it is not stipulated if these sites are to be utilised for waste disposal or recovery. If either of the options are progressed a robust risk assessment will be required. We would expect waste disposal here to meet all best practice techniques. Whilst the site does not lie within an SPZ we would expect groundwater to be sufficiently protected.</p>	<p>Noted. No information has been provided on whether inert waste would be required for the restoration of the site to grass heathland but is a possibility. However, the site is concluded to be unsuitable to allocate because of its proximity to the Breckland Forest SSSI (part of the Breckland SPA).</p>
<p>(Comment) Representation ID: 92917 Respondent: Environment Agency (Miss E Stewart) [18012] In this section we have provided guidance on the pollution prevention measures that we would expect to be considered at these allocated sites. MIN 204, land off Lodge Road Feltwell It is not clear whether de-watering is proposed. Planning requirements in the initial conclusion should include the need for 'an appropriate hydrogeological risk assessment'.</p>	<p>Noted. The site would be worked dry, above the water table, and dewatering would not be required. The site assessment has been amended to clarify this. However, the site is concluded to be unsuitable to allocate because of its proximity to the Breckland Forest SSSI (part of the Breckland SPA).</p>
<p>(Comment) Representation ID: 92350 Respondent: Ministry Of Defence (Defence Infrastructure Organisation) (Ms L Dale) [17971] DIO Safeguarding main concern when reviewing Mineral and Waste local plan, relates to the proposed site allocations and the restoration/aftercare scheme. The county of Norfolk has several statutory safeguarding sites within its authority area, these being RAF Lakenheath, RAF Mildenhall and RAF Marham. On reviewing the proposed mineral sites the following occupy statutory birdstrike safeguarding consultation zones for RAF Marham. The following sites MIN 6; MIN 204; MIN 74; MIN 206 and MIN 32 the restoration is dry using inert waste or imported inert materials. If this were to change</p>	<p>Noted. The site is proposed to be restored to grass heathland. There is no proposal for a wet restoration or a wet working.</p>

Representations received about site MIN 204	Norfolk County Council Planning Officer's response
<p>to wet restoration or there was potential for wet working as part of the extraction scheme, DIO Safeguarding would need to be consulted.</p>	
<p>(Comment) Representation ID: 92334 Respondent: Borough Council of King's Lynn and West Norfolk (Ms F Pollard) [17968] MIN204 - north of Lodge Rd Feltwell: The report notes that 'The nearest residential property is 21m from the site boundary. There are six sensitive receptors within 250m of the site boundary. We agree that any planning application for mineral extraction at this site would need to include a dust assessment and mitigation measures to deal appropriately with any amenity or health impacts. This is likely to include a buffer zone due to the proximity of the nearest sensitive receptors.</p>	<p>Noted. In the absence of site specific noise and dust assessments at the site allocation stage, it is considered that the operational area would need to be set back approximately 100 metres from the nearby residential property. However, the site is concluded to be unsuitable to allocate because of its proximity to the Breckland Forest SSSI (part of the Breckland SPA).</p>
<p>(Object) Representation ID: 92099 Respondent: Natural England (Ms Louise Oliver) [1874] Please refer to our separate comments regarding the Habitats Regulations Assessment (HRA), and why we do not agree that this site can be screened in as suitable at present. Annex 1: Natural England's comments on the Draft Habitats Regulations Assessment of the M&WLPR, dated May 2018 A recent judgment from the Court of Justice of the European Union (Case C-323/17 People Over Wind v Coillte Teoranta) has provided authoritative interpretation relating to the use of mitigation measures at the screening stage of a Habitats Regulations Assessment (HRA). The judgment concluded that it is not appropriate, at the screening stage, to take account of measures intended to avoid or reduce the harmful effects of the plan or project on a European site. However, when determining whether the plan or project will have an adverse effect on the integrity of the European site at appropriate assessment, a competent authority may take account of those avoidance and mitigation measures. The Local Planning Authority, as competent authority for the Minerals and Waste Local Plan, should consider this judgment when undertaking the HRA screening under the Conservation of Habitats and Species Regulations 2017 and may wish to take its own legal advice on the implications of the judgment. This means that for any sites where avoidance and mitigation measures have been identified to</p>	<p>Objection noted. The site is now concluded to be unsuitable to allocate because of its proximity to the Breckland Forest SSSI (part of the Breckland SPA).</p> <p>Noted.</p> <p>Noted.</p>

Representations received about site MIN 204	Norfolk County Council Planning Officer's response
<p>protect designated Natura 2000 sites such as Special Areas of Conservation (SACs), Special Areas of Protection (SPAs) or Ramsar sites, the sites should not be screened out for likely significant effect but carried forward to Appropriate Assessment, at which point any mitigation measures, eg not de-watering, conditions to control dust or lighting etc, can be assessed in detail and taken into account.</p> <p>Our specific comments on various individual allocations included in the initial consultation are intended to reflect this ruling. That is, where measures have been identified specifically to protect a Natura 2000 site, then these allocations should be screened in to Appropriate Assessment. At this stage the effectiveness of any proposed avoidance and mitigation measures and all the evidence should be examined to reach a conclusion of likely significant effect, either alone or in combination with other plans or projects, and to ascertain whether an adverse effect on the integrity of the site can be ruled out.</p> <p>Note that any proposal which may affect a Natura 2000 designated site must go through a project level HRA in addition to this strategic plan-level HRA. This should be identified for each relevant allocation and reflected in the policy wording, including what avoidance and mitigation measures would be necessary. This can be at a 'high' level, e.g. work would take place outside the bird breeding season to avoid disturbance to nesting birds. However, more detail would be expected in the HRA at planning application stage.</p> <p>The future conclusions and recommendations of the HRA will need to be incorporated into later revisions of the Sustainability Appraisal (SA) report, and be reflected in the allocations and policies of the M&WLPR.</p>	<p>Noted.</p> <p>Noted.</p> <p>Noted.</p> <p>Noted.</p>
<p>(Comment) Representation ID: 92028</p> <p>Respondent: Borough Council of King's Lynn and West Norfolk (Mr Geoff Hall) [9627]</p> <p>o Feltwell (Site 204 - Lodge Road). This is an extension of existing works. If better quality geological information is supplied which proves the estimated mineral resource, the two southern parcels of land are potentially acceptable subject to the requirements in the policy.</p>	<p>Noted. This comment repeats the conclusion contained in the Initial Consultation document. However, the site is now concluded to be unsuitable to allocate because of its proximity to the Breckland Forest SSSI (part of the Breckland SPA).</p>
<p>(Comment) Representation ID: 91934</p> <p>Respondent: Norfolk Geodiversity Partnership (Mr Timothy Holt-Wilson) [17710]</p> <p>The texts regarding potential impact on Geodiversity and Archaeology need modifying to make clear about the potential impact on Palaeolithic resources. The old Lodge Pit (aka Frimstone's</p>	<p>Noted. The site assessment has been amended as requested in the archaeology and geodiversity sections. However, the site is concluded to be unsuitable to allocate because of its proximity to the Breckland Forest SSSI (part of the Breckland SPA).</p>

Representations received about site MIN 204	Norfolk County Council Planning Officer's response
<p>Quarry) located c.500 m north of MIN 204 has yielded significant assemblages of quartzite as well as flint palaeoliths (see Wessex Archaeology 1996; Macrae 1999; Hardaker & Macrae 2000), and has been subject to recent study for evidence of Middle Pleistocene Stage 6 glaciation (see Gibbard et al 2011). Interpretation of the lithic assemblages and geology at Feltwell are relevant to current archaeological debate relating to pre-Anglian human occupation of Britain. It is highly likely that similar deposits will be present at MIN 204, which means that watching briefs and permissive access for geological and archaeological monitoring of exposures and spoil heaps should be requested as a planning condition.</p>	

APPENDIX 2

Extract from Initial Consultation Feedback Report (July 2019)

MIN 204 - land north of Lodge Road, Feltwell

Site Characteristics

- The 13.86 hectare site is within the parish of Feltwell
- The estimated sand and gravel resource at the site is 720,000 tonnes for all three parcels of land.
- The proposer of the site has given a potential start date of 2023 and estimated the extraction rate to be 50,000 tonnes per annum. Based on this information the full mineral resource at the site could be extracted within fifteen years. Therefore, 650,000 tonnes could be extracted within the plan period.
- The site is proposed by LP Pallet Quarry (Feltwell) Ltd as an extension to an existing site.
- The site is made up of three separate parcels of land which are currently in agricultural use and the Agricultural Land Classification scheme classifies the land as being mainly non-agricultural land, with a small area of Grade 4 agricultural land.
- The site is 13.8km from Thetford, which is the nearest town.

M204.1 Amenity: The nearest residential property is 21m from the site boundary. There are five sensitive receptors within 250m of the site boundary and two of these are within 100m of the site boundary. The settlement of Feltwell is 1.3km away. Even without mitigation, adverse dust impacts from sand and gravel sites are uncommon beyond 250m from the nearest dust generating activities. The greatest impacts will be within 100 metres of a source, if uncontrolled. A planning application for mineral extraction at this site would need to include noise and dust assessments and mitigation measures to deal appropriately with any amenity impacts.

M204.2 Highway access: The site would use the new access onto the B1112 (Lodge Road), which is a designated lorry route (approx. 150 m west of the Sawmill access). The site is not within an AQMA. The estimated number of HGV movements is 20 per day. The proposed highway access is considered to be suitable by the Highway Authority.

M204.3 Historic environment: The historic landscape character of the site is agriculture with 18th to 19th Century piecemeal enclosure. The site is within a wider historic landscape character of Twentieth Century agriculture with enclosure and boundary loss, agriculture with 18th to 19th Century piecemeal enclosure, 18th to 20th century woodland plantation, and mineral extraction.

M204.4 There is one Listed Building within 2km of the boundary; Grade II Denton Lodge which is 640m away. The nearest Scheduled Monument is the Bowl Barrow in Lynnroad Covert, which is 1.59km away. There are 2 Scheduled Monuments within 2km of the site boundary. There are no Conservation Areas or Registered Historic Parks and Gardens within 2km of the site. A planning application for mineral extraction at this site would need to include a Heritage Statement to identify heritage assets and their settings, assess the potential for impacts and identify appropriate mitigation measures if required.

M204.5 Archaeology: The site is located within a Historic Environment feature for Methwold Rabbit Warren. There are no HE records indicating finds but this may be as a result of lack of investigations. The site is in a wider landscape with a significant number of finds and features from the multiple periods, but especially the Neolithic and Bronze Ages, and a Palaeolithic handaxe was found on adjacent land. The Norfolk Historic Environment Service has stated that "The old Lodge Pit located c.500m north of MIN 204 has yielded significant assemblages of quartzite as well as flint palaeoliths and has been subject to recent study for evidence of a Middle Pleistocene Stage 6 glaciation. Interpretation of the lithic assemblages and geology at Feltwell are relevant to current archaeological debate relating to Pre-Anglican human occupation of Britain". It is highly likely that similar archaeological remains will be present at site MIN 204 and an assessment of the impact of mineral extraction on archaeological remains (particularly Palaeolithic/Pleistocene exposures) will be required at the planning application stage, in order to protect and mitigate the impact of mineral extraction in this site. The archaeology assessment will need to include field surveys and trial-trenching.

M204.6 Landscape: The site is not located within the AONB, a Core River Valley or any other designated landscape feature. The site is within the landscape character area described as 'Northwold Settled Farmland with Plantations' in the King's Lynn and West Norfolk Landscape Character Assessment. The site consists of three separate parcels of land which are surrounded by mainly coniferous woodland except for the southern boundaries of the two parcels along Lodge Road, which are bordered by hedgerows. Therefore, all parcels of land are screened from views from the north, east and west, by existing trees. However, there are views into the site from Lodge Road and therefore additional screen planting and bunding will be required to ensure that site is also sufficiently screened from the south. Due to the surrounding woodland and hedgerows an Arboricultural Impact Assessment would be required at the planning application stage to ensure sufficient standoff from adjacent trees to ensure their roots are protected for their safe long-term retention.

M204.7 There are no Public Rights of Way within or adjacent to the site.

M204.8 Ecology: Breckland Forest SSSI, part of the Breckland SPA, is adjacent to the site boundary. The SSSI citation states that the clear fell areas and young plantations within Breckland Forest SSSI provide suitable breeding habitat for woodlark and nightjar which occur in internationally important numbers. The forest also supports an important assemblage of protected plant species, internationally rare and nationally scarce plant species. The forest also supports an exceptionally rich invertebrate fauna. All three parcels of land are within the Protection Zone for Stone Curlews, an internationally protected ground nesting bird.

M204.9 The potential exists for impacts from mineral extraction at site MIN 204. An assessment of potential impacts, including from dust deposition, noise and disturbance to protected species, together with appropriate mitigation, would be required at the planning application stage as part of a Habitats Regulations Assessment (HRA). Due to the precautionary principle in relation to the Habitats Regulations, if effects to the SPA are judged as uncertain then development should not take place. Due to the proximity of the proposed site to the Breckland SPA, mitigation measures would be required to the proposed mineral extraction operation and impacts are uncertain. It is therefore not possible, at the screening stage of the HRA of the M&WLPR, to conclude that there would be no likely significant effects from mineral extraction at site MIN 204.

M204.10 Weeting Heath SSSI, part of the Breckland SAC, is 2.03km from the site boundary. The SSSI citation states that the site is a classic example of open, rabbit-grazed, Breckland grass-heath. Most of the site is covered by calcareous grassland and lichen-dominated heath, and a number of rare plants characteristic of Breckland are present. A small arable weed reserve is included within the site and many of the rare Breckland annuals have been introduced to it. The site is of considerable ornithological importance supporting a high breeding density and variety of heathland birds, including the Stone Curlew. Whilst the site is within the Impact Risk Zone for the SSSI, due to the distance no impacts on this SSSI are expected.

M204.11 Breckland Farmland SSSI is 0.90km from the site boundary. The SSSI citation states that the predominantly arable site has an internationally important population of Stone Curlew. All three parcels of land are within the Protection Zone for Stone Curlews. The potential exists for impacts from mineral extraction at MIN 204, if uncontrolled. An assessment of potential impacts, together with appropriate mitigation would be required as part of any planning application.

M204.12 There are no County Wildlife Sites within 1km of the site.

M204.13 There are no ancient woodland sites within 3km of the site.

M204.14 Geodiversity: The site consists of the Croxton sand and gravel member, Ingham sand and gravel formation in NW of site, overlying Chalk Formations. There is a significant potential that glacial and peri-glacial geodiversity priority features may exist within the Croxton sands and gravels. The Ingham sands and gravels may also contain geodiversity priority features due to the method of formation. The Norfolk Geodiversity Partnership has stated that "The Old Lodge Pit located c.500m north of site MIN 204 has yielded significant assemblages of quartzite as well as flint palaeoliths and has been subject to recent study for evidence of Middle Pleistocene Stage 6 glaciation. Interpretation of the lithic assemblages and geology at Feltwell are relevant to current archaeological debate relating to pre-Anglian human occupation of Britain." Potential impacts to geodiversity would need to be assessed and appropriate mitigation identified as part of any future application. Due to the site's importance, some open faces should be retained for scientific study during operational stages, and ideally after restoration. A 'watching brief' would be required during the extraction phase in case features of potential geodiversity interest are uncovered.

M204.15 Flood Zone: The site is in Flood Zone 1 (lowest risk) of flooding from rivers. The site has a low risk of surface water flooding with two locations of surface water pooling in a 1 in 30 year rainfall event and a five locations of surface water pooling in a 1 in 100 year rainfall event. In the 1:1000 year rainfall event approximately 40% of the western field is covered by surface water pooling. Sand and gravel extraction is considered to be a 'water compatible' land use which is suitable in all flood zones. The site is not in an Internal Drainage Board area.

M204.16 Hydrogeology: The site is located over a principal aquifer (bedrock) and partially located over a secondary A aquifer (superficial deposits). Part of the site is within groundwater Source Protection Zone 2. The rest of the site is not within a groundwater SPZ. The site would be worked dry (above the water table) and therefore dewatering would not be required. A planning application for mineral extraction at this site would need to include a Hydrogeological Risk Assessment to identify any potential impacts to groundwater and appropriate mitigation measures.

M204.17 Water Framework Directive: The site is approximately 3.9km from the Cut-off Channel; the River Wissey and Cut-off Channel are the nearest Water Framework Directive waterbodies. The groundwater level in this area is several metres below ground level and therefore overland flows are not expected from the site towards the River Wissey and Cut-off Channel. MIN 204 and the existing adjacent processing plant, which the sand and gravel would be transported to by internal haul route, are both located a considerable distance north of the River Wissey and Cut-off Channel. Therefore, the sand and gravel to be processed would not be transported across these waterbodies. Due to the distance of the

site from the River Wissey and Cut-off Channel, it is not expected that there would be a pathway for silt ingress into these waterbodies from any future sand and gravel extraction within site MIN 204.

M204.18 Utilities infrastructure: There are no Anglian Water sewerage assets or water assets within the site. There is no electricity transmission infrastructure within the site. There are no high-pressure gas pipelines within the site.

M204.19 Safeguarding aerodromes: The site is within the zone for RAF Lakenheath where the Defence Infrastructure Organisation must be consulted on developments with the potential to increase the number of birds and the 'bird strike' risk to aircraft. Therefore, a Bird Hazard Assessment would be required at the planning application stage.

M204.20 Restoration: The site is proposed to be restored to grass heathland with some areas of bare ground and short vegetation in each to create habitat for stone curlew, nightjar and woodlark.

M204.21 Conclusion: The site is considered to be unsuitable for allocation because:

- Due to the proximity of the site to the Breckland Forest SSSI (part of the Breckland SPA), and the location of the site within the Protection Zone for Stone Curlews, there is the potential for unacceptable adverse effects on the SSSI from the proposed mineral extraction.
- Whilst it may be possible to design and operate a site where there would not be any adverse effects on the SSSI or SAC, this uncertainty is a significant constraint to the development of the site and therefore the site is considered to be less deliverable than other sites that have been proposed for extraction.