

## **Norfolk Minerals and Waste Local Plan**

Minerals Site Specific Allocations Development Plan  
Document:  
Single Issue Silica Sand Review

December 2017



## **Norfolk Minerals and Waste Local Plan**

### **Minerals Site Specific Allocations DPD: Single Issue Silica Sand Review**

**December 2017**

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## Modifications to the adopted Minerals Site Specific Allocations DPD

The modification column of the table below, details the changes to be made to the adopted Minerals Site Specific Allocations Development Plan Document (DPD) due to the Single Issue Silica Sand Review.

Text to be deleted is shown ~~struck through~~ and additional text to be added in shown in red and underlined.

Paragraph/ Page	Modification																											
Contents page	List Policy SIL01 at Bawsey and the four areas of search and Area of Search Policy into the contents list after Policy MIN 76, and amend the page numbers accordingly.																											
1.4	<p>The following sites <u>and areas of search are</u> <del>is</del> allocated for silica sand extraction:</p> <table border="1"> <thead> <tr> <th>Parish</th> <th>Site reference</th> <th>Estimated resource (tonnes)</th> </tr> </thead> <tbody> <tr> <td colspan="3">King's Lynn and West Norfolk</td> </tr> <tr> <td>East Winch</td> <td>MIN 40</td> <td>3,000,000</td> </tr> <tr> <td><u>Bawsey</u></td> <td><u>SIL01</u></td> <td><u>1,200,000</u></td> </tr> <tr> <td><u>Wormegay, Shouldham, Marham, Shouldham Thorpe</u></td> <td><u>AOS E</u></td> <td><u>Unknown</u></td> </tr> <tr> <td><u>Runcton Holme, Stow Bardolph</u></td> <td><u>AOS F</u></td> <td><u>Unknown</u></td> </tr> <tr> <td><u>Shouldham Thorpe, Runcton Holme, Tottenham</u></td> <td><u>AOS I</u></td> <td><u>Unknown</u></td> </tr> <tr> <td><u>Tottenham, Wormegay</u></td> <td><u>AOS J</u></td> <td><u>Unknown</u></td> </tr> <tr> <td><b><u>TOTAL</u></b></td> <td></td> <td><b><u>4,200,000</u></b></td> </tr> </tbody> </table>	Parish	Site reference	Estimated resource (tonnes)	King's Lynn and West Norfolk			East Winch	MIN 40	3,000,000	<u>Bawsey</u>	<u>SIL01</u>	<u>1,200,000</u>	<u>Wormegay, Shouldham, Marham, Shouldham Thorpe</u>	<u>AOS E</u>	<u>Unknown</u>	<u>Runcton Holme, Stow Bardolph</u>	<u>AOS F</u>	<u>Unknown</u>	<u>Shouldham Thorpe, Runcton Holme, Tottenham</u>	<u>AOS I</u>	<u>Unknown</u>	<u>Tottenham, Wormegay</u>	<u>AOS J</u>	<u>Unknown</u>	<b><u>TOTAL</u></b>		<b><u>4,200,000</u></b>
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2.7	<p>No new silica sand planning permissions were granted in 2010, 2011 or 2012, <u>from 2010 to 2016</u> and therefore the landbank of reserves has reduced accordingly (the latest confirmed landbank figure is <u>2.62</u> 4.9-million tonnes as at 31 December <u>2016</u> 2012). Therefore, the quantity of additional silica sand resource needed over the plan period is <u>4.88</u> 5.6 million tonnes. <u>The two allocated silica sand sites are estimated to contain 4.2 million tonnes of silica sand.</u> However, due to the Habitats Regulations Assessment findings, it has been possible to allocate only one silica sand site (MIN 40), totalling 3 million tonnes. All other silica sand sites put forward are concluded to have either likely significant effects or an uncertain impact on Roydon Common SSSI (part of Roydon Common and Dersingham Bog SAC) and in line with the precautionary principle, they cannot be allocated. This leaves a shortfall of 2.6 <u>0.68</u> million tonnes in the quantity of silica sand allocated. However, this shortfall in allocated resources would only occur towards the end of the Plan period (about <u>2023/4 2025</u>).</p> <p><u>To address this shortfall four areas of search for silica sand extraction have been allocated, covering 946 hectares of land, within which planning permission may be granted, particularly if there is a potential shortfall in supply.</u></p> <p><del>To address this shortfall a single issue review of silica sand will be completed by 2016. The aim of the review will be to consider land for site specific allocations, preferred areas and/or areas of search, which would be suitable to address this shortfall. This would be undertaken in advance of the full review of the Minerals Site Specific Allocations DPD which will be undertaken five years after adoption to reflect market conditions and ensure an adequate landbank exists in the county; in accordance with paragraph 8.8 of the adopted Minerals and Waste Core Strategy.</del></p> <p><u>Planning applications for the extraction of silica sand are therefore directed to the</u></p>																											

Paragraph/ Page	Modification
	<p><u>allocated specific sites and Areas of Search and would be determined in accordance with the relevant specific site and Areas of Search Policy and the relevant policies of the Local Plan.</u> If planning applications are submitted for the extraction of silica sand which would address the shortfall they will be considered against the relevant policies of the Local Plan. (See policy SD1). The fact of a shortage of silica sand supply will be a 'material consideration'. The determination of such applications will take into account local amenity and environmental considerations in line with policies in the Core Strategy (including CS1, 2, 14, and DM8).</p> <p>The presumption in favour of sustainable development is important, whilst recognising that this presumption does not apply where development requiring appropriate assessment under the Birds or Habitats Directives is being considered, planned or determined.</p>
2.11	Update the illustrative diagram and legend below paragraph 2.11 to include the additional specific site and areas of search allocated for silica sand extraction.
2.14	Add new sentence at the end of the paragraph as follows: <u>"A Sustainability Appraisal of the Single Issue Silica Sand Review of the Minerals SSA Plan was carried out in 2015 and reviewed in 2016. The Sustainability Appraisal assessed the approach to be used to define potential areas of search and also assessed the specific site and each defined area of search."</u>
2.19	Delete the last sentence of this paragraph "An evidence base update has been published for this pre-submission stage and this should be read in conjunction with the original evidence base document and all previous updates."
3.1	This <del>Pre-Submission</del> Minerals Site Specific Allocations DPD was preceded by an original 'call for sites' and three public consultation stages, as follows:
Add new paragraphs after paragraph 3.5	<p>Add new text:</p> <p><u>"A Single Issue Silica Sand Review of the Minerals SSA was carried out during 2015 and 2016. An Initial Consultation took place for six weeks from 9 March to 20 April 2015. The purpose of the Initial Consultation was to determine the information that must be submitted with proposals for silica sand extraction sites to be considered through the Silica Sand Review and the methodology to be used to define areas of search for future silica sand extraction. Comments were received from 18 organisations and one individual. In addition, 'no comment' responses were received from eight organisations.</u></p> <p><u>A 'Call for sites' took place during June 2015, to enable land to be submitted for consideration for future silica sand extraction, to meet the identified shortfall. Sibelco UK is the only silica sand company operating in Norfolk and it was the only respondent to the 'call for sites'. The specific site proposed by Sibelco UK has an estimated mineral resource of 1.2 million tonnes. This is less than the 2.5 million tonnes of silica sand needed to meet the shortfall over the plan period. Therefore, as proposed in the Initial Consultation document, Norfolk County Council defined areas of search to meet the shortfall, within which planning permission may be granted for future silica sand extraction.</u></p> <p><u>Areas of search are defined in the National Planning Practice Guidance as "areas where knowledge of mineral resources may be less certain, but within which planning permission for silica sand extraction may be granted on a smaller area of land". The areas of search were defined using the following methodology:</u></p> <ol style="list-style-type: none"> <li>a. <u>The starting point for the areas of search is the extent of the Leziate Beds silica sand resource</u></li> <li>b. <u>The Norfolk Coast Area of Outstanding Natural Beauty has been excluded</u></li> <li>c. <u>All ancient woodland and 250 metres around them has been excluded</u></li> <li>d. <u>All SSSIs and 250 metres around them has been excluded (except for Roydon</u></li> </ol>

Paragraph/ Page	Modification
	<p><u>Common and Dersingham Bog – see below)</u></p> <ul style="list-style-type: none"> <li>e. <u>The hydrological catchment around Roydon Common and Dersingham Bog has been excluded</u></li> <li>f. <u>Registered Common Land has been excluded</u></li> <li>g. <u>Designated heritage assets (Listed Buildings, Scheduled Monuments, registered historic parks and gardens, Conservation Areas) and 250 metres around each heritage asset has been excluded</u></li> <li>h. <u>Sensitive receptors to amenity impacts (residential dwellings, educational facilities, workplaces, healthcare and leisure facilities) and 250 metres around each sensitive receptor has been excluded</u></li> <li>i. <u>Agricultural land grades 1 and 2 have been excluded</u></li> <li>j. <u>Allocated, current and restored mineral extraction sites have been excluded</u></li> <li>k. <u>The areas of the Leziate Beds silica sand resource that were remaining at this point were all potential areas of search</u></li> <li>l. <u>Potential areas of search below 20 hectares in size have not been taken further</u></li> <li>m. <u>The remaining ten areas of search are above 20 hectares in size and were included in the Preferred Options consultation document.</u></li> </ul> <p><u>The Preferred Options Consultation took place over six weeks from 6 November to 21 December 2015 and included one potential specific site and ten defined areas of search for silica sand extraction in Norfolk. The document contained an initial assessment of the site and each area of search and described the County Council’s suggested way forward in terms of which sites/areas were considered suitable for future silica sand extraction.</u></p> <p><u>Comments on the Preferred Options Consultation were received from 18 organisations and 11 individuals. In addition, ‘no comment’ responses were received from eight organisations. The comments received were taken into account in the preparation of the Pre-Submission document, including the assessment of the proposed specific site and areas of search considered suitable for allocation.</u></p> <p><u>Following the representations period on the Pre-submission publication version of the Silica Sand Review, officers assessed the representations made.</u></p> <p><u>The purpose of the areas of search process was to allocate those parts of the silica sand resource which are least constrained; and where a suitable future planning application for silica sand extraction may be approved.</u></p> <p><u>Therefore, it was decided that AOS A should not be allocated as an area of search and an Addendum to the Silica Sand Review Pre-submission document was subject to a six week representations period during Autumn 2016.</u></p> <p>Re-number the subsequent paragraphs.</p>
3.7	<p>This DPD contains policies for 28 <del>29</del> allocated sites <u>and four areas of search</u>. Only sites <u>and areas of search</u> suitable for allocation are listed; unallocated sites <u>or areas of search</u> are excluded from this document.</p>
3.18	<p><b>Air Quality and Dust</b> Policy DM13 covers air quality. The <u>National Planning Practice Guidance (NPPG) (paragraphs 27-023 to 27-032)</u> <del>Technical Guidance to the NPPF</del> contains more detailed guidance on dust emissions and the control of dust generated by mineral workings, including the health effects of dust.</p>
3.19	<p>All planning applications – including those for allocated sites in this document – will be judged against the appropriate Core Strategy policies, with the <u>NPPG</u></p>

Paragraph/ Page	Modification
	<p><del>Technical Guidance to the NPPF</del> providing greater details on, for instance, the preparation of a dust assessment study. Paragraph <del>023</del> 24 indicates the scope of the dust assessment study (including mitigation) which would need to accompany any future planning application:</p> <p><del>“The scope of a dust assessment study should be agreed with the minerals planning authority and local planning authority. Such studies should be used to:</del></p> <p><u>There are five key stages to a dust assessment study:</u></p> <p>establish baseline conditions of the existing dust climate around the site of the proposed operations;</p> <p>identify site activities that could lead to dust emission without mitigation;</p> <p>identify site parameters which may increase potential impacts from dust;</p> <p>recommend mitigation measures, including modification of site design; and</p> <p>make proposals to monitor and report dust emissions to ensure compliance with appropriate environmental standards and to enable an effective response to complaints.”</p>
3.20	<p><u>Paragraphs 025 to 028 of the NPPG</u> <del>Table 6 of the Technical Guidance</del> provides further guidance on the stages and methodology of a dust assessment study, <del>with paragraphs 26 and 27 covering the health effects of dust.</del></p>
3.22	<p><b>Noise</b></p> <p>Policies CS14 and DM12 of the adopted Norfolk Core Strategy and Minerals and Waste Development Management Policies DPD cover amenity issues generally. The <u>National Planning Practice Guidance</u> <del>Technical Guidance to the NPPF</del> contains more detailed guidance on noise emissions and standards (<del>paragraphs 28-31</del>) <u>(paragraphs 019 to 022)</u>, including information on the preparation of noise emissions assessments, and the noise standards applicable to mineral operations.</p>
Legend at the start of Section 5	<p>Include Areas of Search for silica sand extraction in the legend</p>
40.1	<p>The site is close to a number of properties on <del>Station Road</del> <u>Gayton Road</u>, the nearest residential property is within 10 metres of the site boundary.</p>
Policy MIN 40	<p>A screening scheme which will include mitigation of views from the properties along <del>Station Road</del> <u>Gayton Road</u>, the PROW and surrounding roads, and protection of the setting of listed buildings, including All Saint’s Church East Winch;</p>
New sections: Site SIL01, AOS E, AOS F, AOS I and AOS J	<p>Include section SIL01 and Policy SIL01 of this document.</p> <p>Include sections AOS E, AOS F, AOS I and AOS J of this document.</p>
New Areas of Search Policy	<p>Include the Areas of Search Policy detailed in this document</p>
Glossary	<p>Add additional definitions into the glossary as listed in this document</p>






# Allocated specific site and areas of search

## Legend







### Areas of Search and allocations

-  Areas of Search
-  Mineral site allocations
-  Consultation area for safeguarded mineral extraction - allocation
-  Waste site allocations
-  Indicative site screening
-  Indicative site buffers






### Insets

-  allocation insets
-  AQMA insets
-  RIGS insets




### Safeguarded existing Mineral and Waste sites

-  Safeguarded existing mineral extraction sites
-  Safeguarded existing waste management sites
-  Safeguarded existing mineral infrastructure
-  Safeguarded existing key wastewater treatment works
-  Consultation area for safeguarded waste management sites-existing
-  Consultation area for safeguarded mineral infrastructure-existing
-  Consultation area for safeguarded mineral extraction sites-existing
-  Consultation area for safeguarded key WWTW-existing
-  Air Quality Management Area (AQMA)



### Road Network

-  Trunk Roads
-  A Roads
-  Mineral access route
-  Waste access route
-  Designated Lorry Routes in Norfolk




### Safeguarded mineral resources

-  Mineral Safeguarding Area (Silica Sand)
-  Mineral Safeguarding Area (Sand and Gravel)
-  Mineral Safeguarding Area (Carstone)


### Landscape designations

-  North Norfolk Heritage Coast
-  Core River Valleys
-  Area of Outstanding Natural Beauty (AONB)
-  Broads Authority Executive Area



### Administrative boundaries

-  Norwich Policy Area
-  Districts
-  Norfolk Parishes




### Environmental designations

-  Local Nature Reserves
-  National Nature Reserves
-  Special Protection Area (SPA)
-  Special Area of Conservation (SAC)
-  Site of Special Scientific Interest (SSSI)
-  Ramsar sites
-  County Wildlife Sites
-  Ancient Woodland
-  Regionally Important Geological Sites (RIGS)
-  Mitigation zone for stone curlews
-  Protection zone for stone curlews

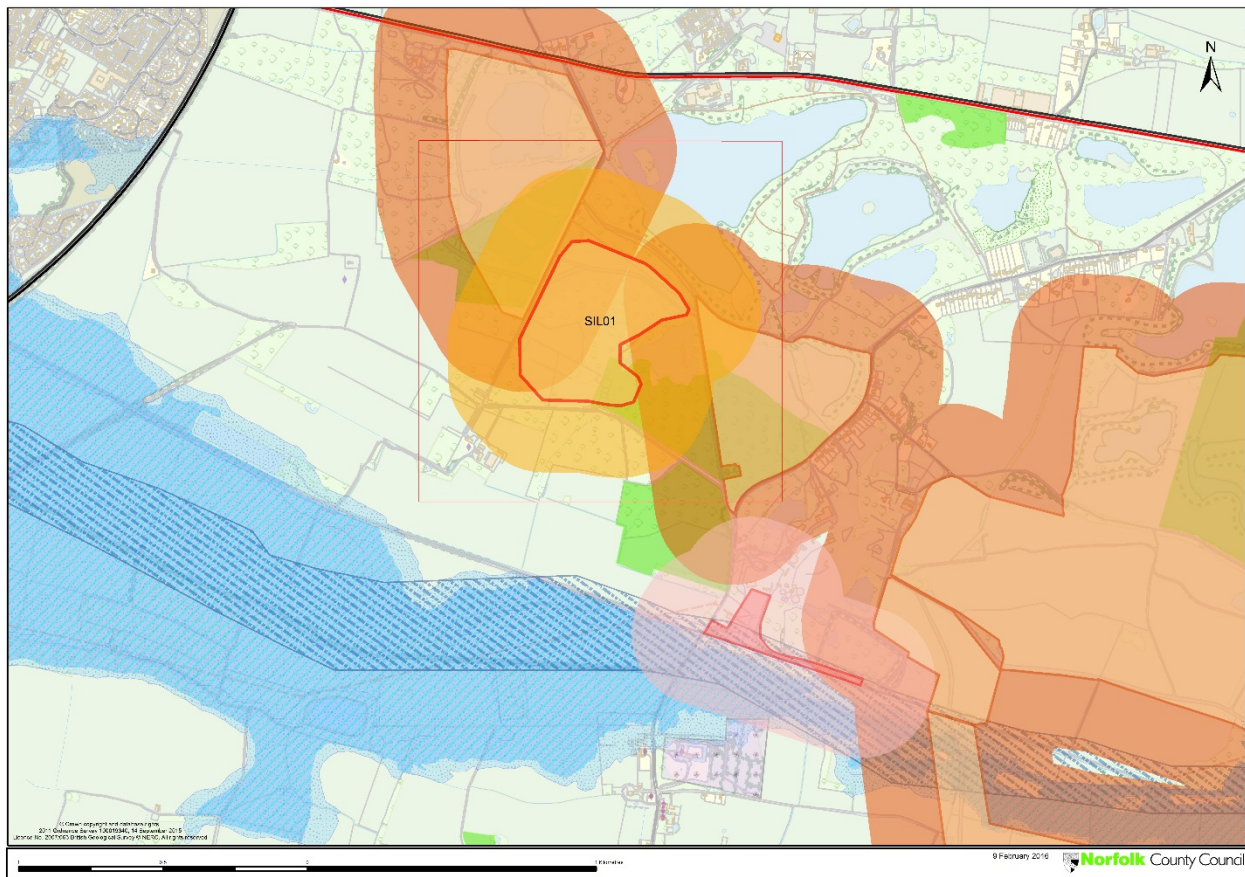
### Heritage designations

-  Registered Historic Parks and Gardens
-  Scheduled Monuments
-  Listed Buildings
-  Conservation Areas

### Environment Agency designations

-  Groundwater Source Protection Zone 1
-  Flood zone 2 & 3
-  Flood zone 2

## Specific Site: SIL01 – Mintlyn South



### SIL01 - Site Characteristics

- The 21 hectare site is within the parish of Bawsey
- The estimated silica sand resource at the site is 1,200,000 tonnes
- The site is part of a former mineral working which was partially extracted.
- The site is located in an area which has a history of mineral working and is adjacent to restored and permitted workings.
- The Agricultural Land Classification scheme classifies the land as being in 'Non-Agricultural' use.
- The nearest residential property is approximately 280 metres from the site boundary.
- The site is in Flood Zone 1 (low risk) of flooding from rivers and the sea. 4% of SIL01 is at low risk of flooding from surface water and less than 1% is at medium risk of flooding from surface water.
- The site is approximately 700 metres from the Leziat processing plant and the proposer of the site has indicated that it is intended that mineral will be transferred by conveyor to the processing plant.

**S.1** The site is set within a landscape which has evidence of former settlements. The Ruins of Church of St Michael (Grade II\*) sits just under 650 metres to the west of site SIL01. The majority of the site is screened from the ruins of the Church of St Michael by established woodland. Any future planning application would need to consider whether additional screening would be required for the southern part of the site to ensure that the setting of the church is not affected. The site is just under 1.4km from the Scheduled Monument, Remains of St James' Church and surrounding Saxon and Medieval Settlement. Any future planning application for site SIL01 would need to include a



Heritage Statement assessing the setting of heritage assets, addressing the potential for impacts and suggesting potential mitigation measures such as bunding and screen planting.

**S.2** SIL01 contains a series of cropmarks related to undated ditches and banks, together with a possible Bronze Age barrow. A detailed assessment of the significance of archaeological deposits will be required by field evaluation at the planning application stage, in order to protect and mitigate the impact of mineral extraction in this area of search.

**S.3** Site SIL01 is set within a landscape which has been modified over time by the extraction of mineral, particularly silica sand and carstone. Extraction in the 19<sup>th</sup> and 20<sup>th</sup> century has resulted in a number of lakes and previously worked areas and the restored workings are important for biodiversity and recreation in the area.

**S.4** The site is on a flat topped ridge between the valleys of the Gaywood River and the Mintlyn Stream (Middleton Stop Drain). The Gaywood River valley is just to the north of the site and the valley of the Middleton Stop Drain is to the south. The southern boundary of the site starts to gently fall away to the Middleton Stop Drain.

**S.5** The site is within a landscape characterised as 'Farmland with woodland and wetland'. This creates a landscape with different scales of enclosure created by the interaction between woodland blocks, agricultural fields and wetlands. Viewpoints of the site are generally limited by hedgerows and woodland over large parts of the area. It is considered that bunding and screen planting could provide successful mitigation if well designed. Any future planning application for site SIL01 will need to ensure that any proposed extraction is appropriately screened through the use of a Landscape and Visual Impact Assessment and appropriate mitigation.

**S.6** There is a County Wildlife Site partly within site SIL01 (CWS 416 '70 & 100 Plantations'), therefore part CWS 416 would be directly affected by mineral extraction. There is also a CWS adjacent to this site (CWS 418 'Haverlesse Manor Plantation') on an area which has been subject to previous mineral working. Due to the proximity of these County Wildlife Sites to site SIL01, there is the potential for adverse impacts to be caused by mineral extraction which will need to be assessed as part of a planning application and mitigation measures proposed.

**S.7** SIL01 is located 2.8km from Roydon Common SSSI (which forms part of Roydon Common and Dersingham Bog SAC and is also designated as Roydon Common Ramsar. SIL01 is 2.6km from Leziate, Sugar and Derby Fens SSSI. However, the majority of SIL01 is outside the hydrological catchment for both of these SSSIs and is down gradient of these sites. In addition, Bawsey Lakes are located between SIL01 and these SSSIs. Therefore, no adverse impacts are expected on these SSSIs and no likely significant effects are expected on the qualifying features of the SAC or Ramsar site.

**S.8** Site SIL01 is within the hydrological catchments of the Gaywood River and Middleton Stop Drain. The proposed site is located over a principal aquifer and partially over a secondary B aquifer; but it mainly overlays an unproductive secondary aquifer. There are no Groundwater Source Protection Zones within the proposed site. If extraction below the watertable and/or dewatering is proposed a hydrogeological risk assessment will be necessary to identify potential risks and appropriate mitigation.

**S.9** Site SIL01 is approximately 910 metres from the Mintlyn Stream which is a Water Framework Directive waterbody. The groundwater level in this area is several metres below ground level and therefore, overland flows are not expected from the site towards the stream. SIL01 and the existing processing plant at Leziate, which the silica sand would be transported to by conveyor, are both located north of Mintlyn Stream so the silica

sand would not be transported across the Mintlyn Stream. Therefore it is not expected that there would be a pathway for silt ingress into the Mintlyn Stream from future silica sand extraction within site SIL01.

**S.10** There is the potential for this site to contain examples of geodiversity priority features. Potential impacts to geodiversity would need to be assessed and appropriate mitigation identified as part of any future planning application. There would be a preference for restoration to provide opportunities for further geological research of suitable exposures.

#### **Specific Site Allocation Policy SIL01:**

The site is allocated as a specific site for silica sand extraction. Development will be subject to compliance with the adopted Core Strategy and Development Management policies, national legislation, policy and guidance, and will require any planning application to address, as appropriate, the requirements below:

- A programme of mitigation measures (e.g. standoff areas, screening and/or bunding) to deal appropriately with any potential amenity impacts, including noise and dust, to comply with the requirements of policy DM12;
- A Landscape and Visual Impact assessment to identify potential landscape impacts. The LVIA will include Scheduled Monuments, Listed Buildings, archaeological assets and non-designated assets as affected and their settings, together with suitable mitigation measures to address the impacts and conserve the significance of those assets. The completed assessment will comply with the requirements of policies CS14, DM2 and DM8;
- A Heritage Statement to identify heritage assets and their settings, assess the potential for impacts and identify appropriate mitigation if required. As a result of the historically complex and significant environment in which the mineral resource is present, applicants should consider the potential for early engagement with Historic England, the Norfolk Historic Environment Service and Conservation Officers in the preparation of the Heritage Statement. The completed statement will comply with the requirements of policies CS14, DM8 and DM9;
- An appropriate archaeological assessment must be prepared; this may initially be desk-based but may need to be followed up with field surveys and trial-trenching. The archaeological assessment will be compliant with Policy DM9 and will be used by Norfolk County Council/Historic Environment Service to agree appropriate mitigation measures;
- A Hydrogeological Risk Assessment, based on proportionate evidence,
  - to identify potential impacts to groundwater quality, quantity and levels;
  - to propose appropriate mitigation to protect any abstraction points, ecosystems and surface water features that are reliant on groundwater, in particular SSSIs, SACs and SPAs.

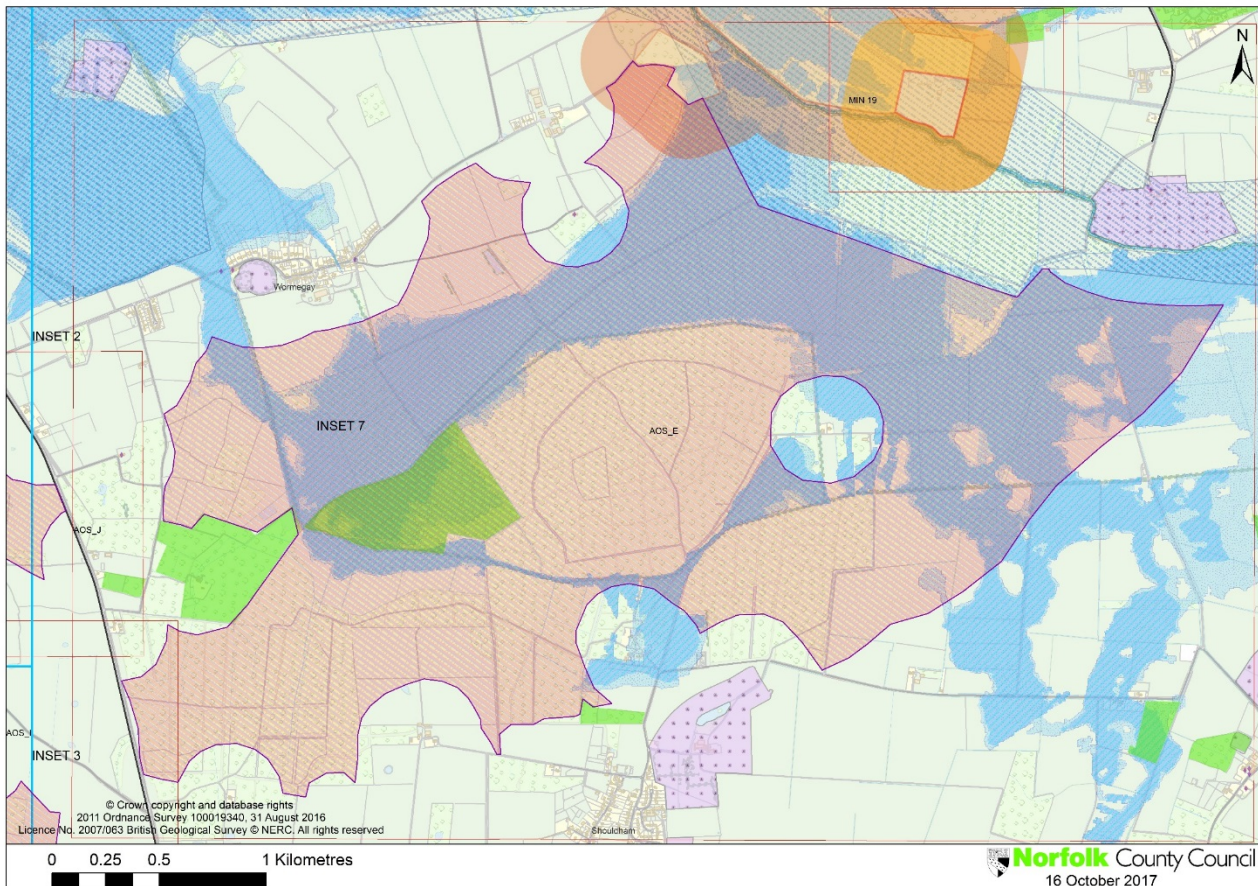
The assessment will need to consider the precautionary principle as it relates to European designations. The assessment should include a programme of mitigation measures to address identified potential impacts, and comply with the requirements of policies CS14, DM1 and DM3;

- An assessment to consider the potential for impacts on environmental designations, and suggest suitable mitigation, to comply with policies CS14 and DM1;
- An assessment to consider the potential for impacts on the Mintlyn Stream and Gaywood River, including from silt ingress and modification, and appropriate mitigation to prevent unacceptable adverse impacts.
- A Transport Assessment or Statement which considers the potential for

transport impacts and identifies appropriate mitigation measures, including highway improvements where appropriate, to address these impacts. There will be a preference for a transport route which minimises amenity impacts through the use of off-highway haul routes from the B1145 to the processing plant. The assessment or statement will comply with policy DM10;

- A comprehensive working and restoration plan which is compliant with Policy DM14, in particular considering the opportunities, on restoration, for ecological enhancement, the improvement of public access and geological exposures for future study;
- An air quality assessment of the potential for any emissions, including dust, together with suitable mitigation measures to address these potential impacts on humans, flora and fauna. The Air Quality Assessment will need to be compliant with Policy DM13;
- Information demonstrating how proposals comply with Policy DM15.

## AOS\_E: Land to the north of Shouldham



### Area of Search Characteristics

- The area of search covers 815 hectares within the parishes of Wormegay, Shouldham, Marham and Shouldham Thorpe.
- The AoS is an area of agricultural use with commercial plantation and other woodland.
- The area of search is adjacent to areas of previous and current mineral workings and close to a sand and gravel allocation.
- The area of search is a mixture of forestry and agricultural uses and the area is split between non-agricultural, Grade 3 and Grade 4.
- The nearest residential property is approximately 250 metres from the AOS boundary. The settlements of Shouldham and Wormegay are 250 metres from the boundary of the AoS. A planning application for mineral extraction within AoS E would need to include mitigation measures to deal appropriately with any amenity impacts.
- The area of search is approximately 15 kilometres from the Leziat processing plant and it is considered likely that any extraction site would transfer mineral to the processing plant by road.

**E.1** The area of search is located on the A134 which is a principal route and designated HGV route in the route hierarchy. Access via West Briggs Lodge is unsuitable. Preferred access would be via the A134. Existing access roads to the A134 should be used subject to improvement and junction improvements. The Highway Authority considers that the area of search is suitable subject to network improvements.

**E.2** The route from the area of search to the Leziat processing plant would be expected to be north along A134 and A10 and A149, before turning east onto the B1145. From the B1145 the preferred access to the Leziat processing plant would be an off-road route turning right off the B1145 before Bawsey and utilising the existing track and/or conveyor

route through the existing mineral workings at Mintlyn to access Station Road and the processing plant south of Brow of the Hill. A right turn lane at the junction with the B1145 would probably be required to provide a suitable junction. Utilising an off-road haul route would avoid lorries accessing the processing plant via Brow of the Hill, Fair Green or Middleton and therefore mitigate amenity impacts.

**E.3** AoS E is within a historic environment which contains numerous high value heritage assets from multiple time periods starting in early prehistory. There are four Scheduled Monuments located less than 400 metres from the area of search. They are the Remains of Pentney Priory at Abbey Farm (267 metres), the Motte and Bailey Castle in Wormegay village (250 metres), Shouldham Priory (250 metres), and Village Cross 330 metres south of Cross Hill Farm (250 metres). In addition there are five Listed Buildings located less than 300 metres from the area of search. They are the Church of St Michael (Grade II\*), the Church of St Botolph (Grade I), Castle Meadow (Grade II), Castle Road Bridge (Grade II) and Village Cross (Grade II). Any future planning application within the AoS would need to include a Heritage Statement assessing the setting of heritage assets, addressing the potential for impacts and suggesting potential mitigation measures such as bunding and screen planting, recognising that there may be locations where these may be intrusive in themselves.

**E.4** AOS E is adjacent to a large area of fen edge, parts of which were studied as part of the Fenland Survey. The Fenland Survey recorded evidence of prehistoric and later land use and occupation across the fen close to the AoS, including a probable Iron Age settlement and some significant palaeoenvironmental deposits. The northern edge of the AoS contains the southern fringe of the early medieval settlement at Wormegay, a Bronze Age barrow, the site of a former windmill, several finds of metalworking remains and several isolated instances of human skeletal remains. The place-name Shouldham Warren suggests that earthworks along the north edge could be remnants of a medieval warren, although no definitive research has been carried out; and there is the potential for the area to contain further earthworks. Shouldham Warren was used as a military training area in the Second World War, and there are surviving earthworks relating to this period.

**E.5** Given the constrained nature of this AoS with regards to the historic environment, any proposal for extraction here should pay particular attention to the setting of the designated heritage assets. The Norfolk Historic Environment Service recommend that proposals for extraction avoid areas of palaeoenvironmental potential, the former barrow and the areas of former settlement. The Norfolk Historic Environment Service would not support proposals that result in the destruction of historic earthworks. Therefore, a detailed assessment of the significance of archaeological deposits will be required by field evaluation at the planning application stage, in order to protect and mitigate the impact of mineral extraction in this area of search. In addition, the relevant assessments in support of any planning application will need to have regard to the historic landscape character of the wider area, with specific regard to the medieval landscape, to an extent agreed with Norfolk County Council/Historic Environment Service.

**E.6** The AoS falls under two different landscape character areas, with the north-east classified as 'fen, open inland marshes' and the south-west as a landscape of 'Settled Farmland with Plantations'. This is a transitional landscape between the Fens to the west and the Brecks to the east. Generally, the AoS slopes gently away to the west but at a rate where many parts of the area would be perceived as flat. In the AoS viewpoints are limited by field boundaries and woodland over large parts of the area, however in some northern and eastern parts drainage dykes form a more significant landscape component as boundary features.

**E.7** There are a number of viewpoints in the AoS from roads and Public Rights of Way. Within the AoS Shouldham Warren is a significant woodland plantation managed by the



Forestry Commission as a commercial forestry operation and the landowner allows the Forestry Commission to permit access throughout Shouldham Warren. Additionally, the Warren is crossed by a number of PRoWs and has some picnic areas within it. Any future planning application within the area of search will need to ensure that any proposed extraction is appropriately screened through the use of a Landscape and Visual Impact Assessment and appropriate mitigation.

**E.8** There is one County Wildlife Site within the area of search, CWS 425 'Mow Fen'. CWS 424 'Westbrigg's Wood', and CWS 373 'Adjacent Adams Plantation' are adjacent to the AoS boundary. AOS E is a large area of search; therefore the effect on any of these County Wildlife Sites from mineral extraction would depend on the location of mineral extraction within the area of search. The potential for adverse impacts to be caused to County Wildlife Sites by mineral extraction will need to be assessed as part of a planning application and mitigation measures proposed if necessary.

**E.9** AOS E is located just less than 2.5km from Setchey SSSI. Whilst the southern part of the AoS is within the hydrological catchment (Polver Drain) of Setchey SSSI, due to the land being artificially drained to multiple outlets, the AoS does not drain towards Setchey SSSI. The land in the AoS that is within the catchment of Mow Fen IDB Drains does not drain to Setchey SSSI. Therefore there are no likely adverse impacts on Setchey SSSI from mineral extraction within AOS E.

**E.10** AOS E is located 250 metres from the River Nar SSSI. However, due to the land within AOS E being artificially drained to multiple outlets (within the catchments of the Polver Drain and Mow Fen IDB Drains), none of the land in the AoS drains to the River Nar. Therefore there are no likely adverse impacts on the River Nar SSSI from mineral extraction within AOS E.

**E.11** AOS E is within the hydrological catchment (Polver Drain) for Bowl Wood Ancient Woodland and there is the potential for hydrological impacts if mineral extraction operations cause changes in the water table. If extraction below the watertable and/or dewatering is proposed a Hydrogeological Risk Assessment will be necessary to identify potential risks and appropriate mitigation.

**E.12** 52% of the area of search is in Flood Zones 2 and 3 (medium and high risk) for flooding from rivers. Silica sand extraction is considered to be a 'water compatible' land use which is suitable in all flood zones. Silica sand extraction would be a temporary non-residential use, which exposes relatively few people to risk as only a small number of employees are required. Residual risk can be addressed through the use of a site evacuation plan. 7% of AOS E is at low risk of flooding from surface water and 2% is at medium or high risk of flooding from surface water.

**E.13** AOS E is within the hydrological catchments for the Mill Fen IDB Drains, Mow Fen IDB Drains and Polver Drain. The AoS is located over a principal aquifer and partially over secondary B and secondary undifferentiated aquifers; however there are no Groundwater Source Protection Zones within the area of search. If extraction below the watertable and/or dewatering is proposed a Hydrogeological Risk Assessment will be necessary to identify potential risks and appropriate mitigation.

**E.14** The northern part of the AoS (within the catchment of Mill Fen IDB Drains) drains to the River Nar. The River Nar is a Water Framework Directive waterbody which runs to the north of the AoS. A future planning application within the AoS will need to assess the potential for impacts on the River Nar, including from silt ingress and modification, and propose appropriate mitigation to prevent unacceptable adverse impacts.

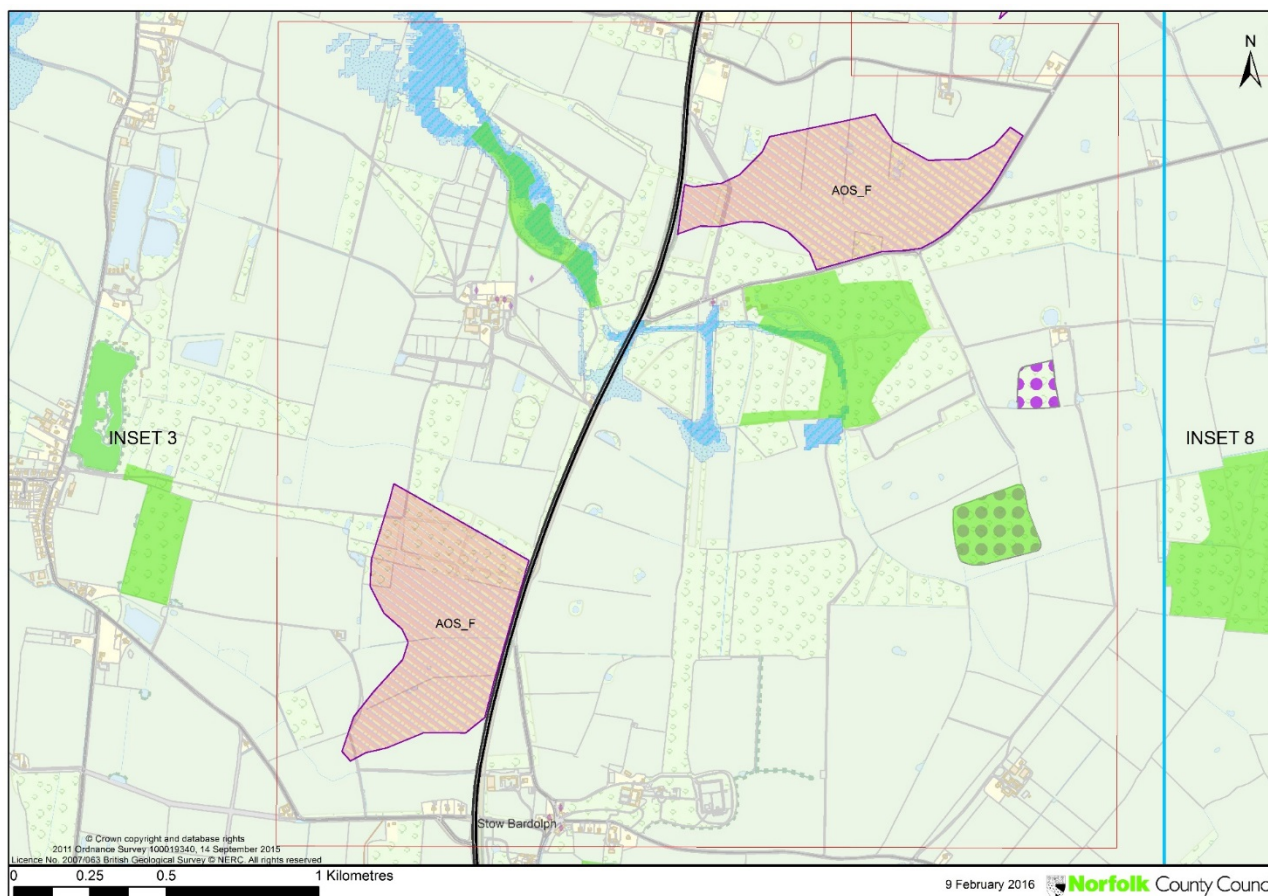
**E.15** The AoS contains geodiversity priority features in the form of paleo-environmental deposits, and Setchey SSSI, north of the site, is designated for its geological features

related to successive periods of marine inundation and retreat. There is the potential for a mineral extraction site within this area to contain other examples of geodiversity priority features. Potential impacts to geodiversity would need to be assessed and appropriate mitigation identified as part of any future planning application. There would be a preference for restoration to provide opportunities for further geological research of suitable exposures.

**E.16** There are public water mains within the boundary of AOS E. Anglian Water would require the standard protected easement widths for the water mains and for any requests for alteration or removal to be conducted in accordance with the Water Industry Act 1991.

**E.17** AOS E is allocated as an Area of Search for silica sand extraction. Development will be subject to compliance with the Core Strategy and Development Management Policies and the Areas of Search Policy.

## AOS\_F: Land to the north of Stow Bardolph



### Area of Search Characteristics

- The AoS consists of two parcels of land covering approximately 31 and 30 hectares respectively within the parishes of Runcton Holme and Stow Bardolph.
- The AoS is a mixture of forestry and agricultural uses with the agricultural land in grades 3 and 4.
- The nearest residential property is approximately 250 metres from the AOS boundary. The settlement of Stow Bardolph is 250 metres from the AOS boundary and South Runcton is less than 400 metres from the AOS boundary. A planning application for mineral extraction within AoS F would need to include mitigation measures to deal appropriately with any amenity impacts.
- The area of search is in Flood Zone 1 (low risk) for flooding from rivers. 4% of AOS F is at low risk of flooding from surface water and less than 1% is at medium or high risk of flooding from surface water.
- The area of search is approximately 17 kilometres from the Leziate processing plant and it is considered likely that any extraction site would transfer mineral to the processing plant by road.

**F.1** The area of search is located on the A10 which is a principal route and designated HGV route in NCC route hierarchy. The Highway Authority considers that access to parts of AOS F from the Runcton Road is suitable, subject to improvements to the junction onto the A10. The route from AOS F to the Leziate processing plant would be expected to be north along the A10 and A149, before turning east onto the B1145. From the B1145 the preferred access to the Leziate processing plant would be an off-road route turning right off the B1145 before Bawsey and utilising the existing track and/or conveyor route through the existing mineral workings at Mintlyn to access Station Road and the processing plant

south of Brow of the Hill. A right turn lane at the junction with the B1145 would probably be required to provide a suitable junction. Utilising an off-road haul route would avoid lorries accessing the processing plant via Brow of the Hill, Fair Green or Middleton and therefore mitigate amenity impacts.

**F.2** The historic environment in which the AoS is located has features and land use patterns which are related to the formation of parkland and estates related to high status buildings in particular the wider setting of Stow Hall (now demolished) and Wallington Hall, a Listed Building (Grade I). Both parts of AOS F are separated from Wallington Hall by areas of woodland. The northern part of AOS F is separated from the setting of Stow Hall by woodland and the southern part of AOS F is separated from the grounds of Stow Hall by the A10. The AoS is 385 metres from the nearest Listed Building, The Cottage (Grade II). Any future planning application within the AoS would need to include a Heritage Statement assessing the setting of heritage assets, addressing the potential for impacts and suggesting potential mitigation measures such as bunding and screen planting.

**F.3** Area AOS F is largely unstudied in terms of archaeology. Therefore, a detailed assessment of the significance of archaeological deposits will be required by field evaluation at the planning application stage, in order to protect and mitigate the impact of mineral extraction in this area of search.

**F.4** This is a transitional landscape between the Fens to the west and the Brecks to the east. Generally, the AoS slopes gently away to the west but at a rate where many parts of the area would be perceived as flat. Any future planning application within the area of search will need to ensure that any proposed extraction is appropriately screened through the use of a Landscape and Visual Impact Assessment and appropriate mitigation.

**F.5** There is a County Wildlife Site adjacent to the area of search (CWS 365 'Broad Meadow Plantation'). CWS 361 'north-east of Wallington Hall' is 280 metres from the AoS, and consists of a series of four mesotrophic lakes which could be adversely affected if mineral extraction operations cause changes in the water table. If mineral extraction in the AoS were to go below the watertable and/or dewatering is proposed a hydrogeological risk assessment will be necessary to identify potential risks and appropriate mitigation.

**F.6** There are three ancient woodlands (Chiswick's Wood and two unnamed ancient woodlands) located between 500 to 1,000 metres from AOS F. AOS F is within the hydrological catchment (War Bank Drain) for these ancient woodlands, however, the land within the AoS drains away from the ancient woodland sites and therefore adverse hydrological impacts are not likely. Due to the distance of the AoS from the ancient woodland sites other adverse impacts are also unlikely.

**F.7** AOS F is within the hydrological catchments for the Mill Fen IDB Drains, Mow Fen IDB Drains and Polver Drain. The AoS is located over a principal aquifer and partially over a secondary undifferentiated aquifer; however there are no Groundwater Source Protection Zones within the area of search. If extraction below the watertable and/or dewatering is proposed a hydrogeological risk assessment will be necessary to identify potential risks and appropriate mitigation.

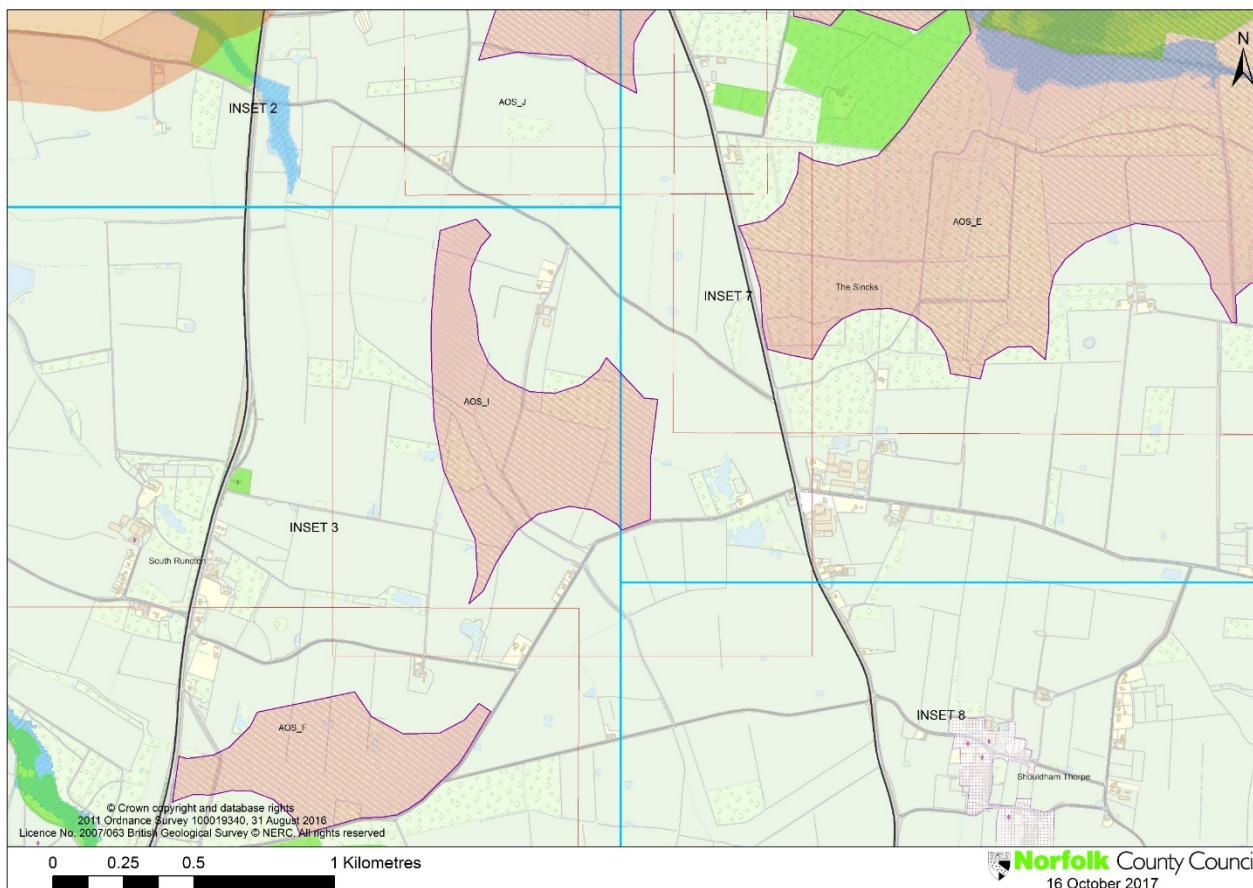
**F.8** There is the potential for a mineral extraction site within this area to contain other examples of geodiversity priority features under more recent deposits. Potential impacts to geodiversity would need to be assessed and appropriate mitigation identified as part of any future planning application. There would be a preference for restoration to provide opportunities for further geological research of suitable exposures.

**F.9** There is a public water main within the boundary of AOS F. Anglian Water would require the standard protected easement widths for the water main and for any requests for alteration or removal to be conducted in accordance with the Water Industry Act 1991.

**F.10** AOS F is allocated as an Area of Search for silica sand extraction. Development will be subject to compliance with the Core Strategy and Development Management Policies and the Areas of Search Policy.



## AOS\_I: Land to the east of South Runcton



### Area of Search Characteristics

- The area of search covers just over 47 hectares within the parishes of Runcton Holme, Shouldham Thorpe, and Tottenhill.
- The area of search is in an agricultural landscape between the A10 and A134.
- The area of search is a mixture of small blocks of woodland and agricultural uses and the area is classified as Grade 3 land.
- The nearest residential property is approximately 250 metres from the AOS boundary and a planning application for mineral extraction within AoS I would need to include mitigation measures to deal appropriately with any amenity impacts.
- AOS I is in Flood Zone 1 (low risk) for flooding from rivers. 8% of AOS I is at low risk of flooding from surface water, 4% is at medium risk and 3% is at high risk of flooding from surface water.
- The area of search is approximately 16 kilometres from the Leziat processing plant and it is considered likely that any extraction site would transfer mineral to the processing plant by road.

**I.1** Access to the area of search is suitable subject to improvements to the junction onto the A10 from Runcton Road, and if a route using the A134 was proposed this may also require junction improvements. If Watlington Road was proposed, junction improvements may be necessary to allow access to the A10 or A134. The Highway Authority considers that the area of search is suitable to subject to network improvements.

**I.2** The route from AOS I to the Leziat processing plant would be expected to be north along the A10 and A149, before turning east onto the B1145. From the B1145 the preferred access to the Leziat processing plant would be an off-road route turning right

off the B1145 before Bawsey and utilising the existing track and/or conveyor route through the existing mineral workings at Mintlyn to access Station Road and the processing plant south of Brow of the Hill. A right turn lane at the junction with the B1145 would probably be required to provide a suitable junction. Utilising an off-road haul route would avoid lorries accessing the processing plant via Brow of the Hill, Fair Green or Middleton and therefore mitigate amenity impacts.

**I.3** Historic England have no immediate concerns regarding this area of search if the site proposed is well contained, although the setting of the Church of St Andrew (Grade II\*) and Church of St Mary the Virgin (Grade II\*) and a number of Grade II Listed Buildings and should be taken into consideration at an early stage. Any future planning application within the AoS would need to include a Heritage Statement assessing the setting of heritage assets, addressing the potential for impacts and proposing mitigation measures such as bunding and screen planting.

**I.4** Area AOS I is almost entirely unstudied in terms of archaeology. Therefore, a detailed assessment of the significance of archaeological deposits will be required by field evaluation at the planning application stage, in order to protect and mitigate the impact of mineral extraction in this area of search.

**I.5** The AoS is characterised as a landscape of 'Settled Farmland with Plantations'. This is a transitional landscape between the Fens to the west and the Brecks to the east. Generally, the AoS slopes gently away to the west but at a rate where many parts of the area would be perceived as flat. Viewpoints are limited by field boundaries and woodland over large parts of the landscape area. However, hedgerows are intermittent in the area surrounding the AoS opening up views across open fields often to tree lined horizons. There are a number of viewpoints in the AoS from roads and Public Rights of Way, and any future planning application in the area of search will need to ensure that any proposed extraction is appropriately screened through the use of a Landscape and Visual Impact Assessment and appropriate mitigation.

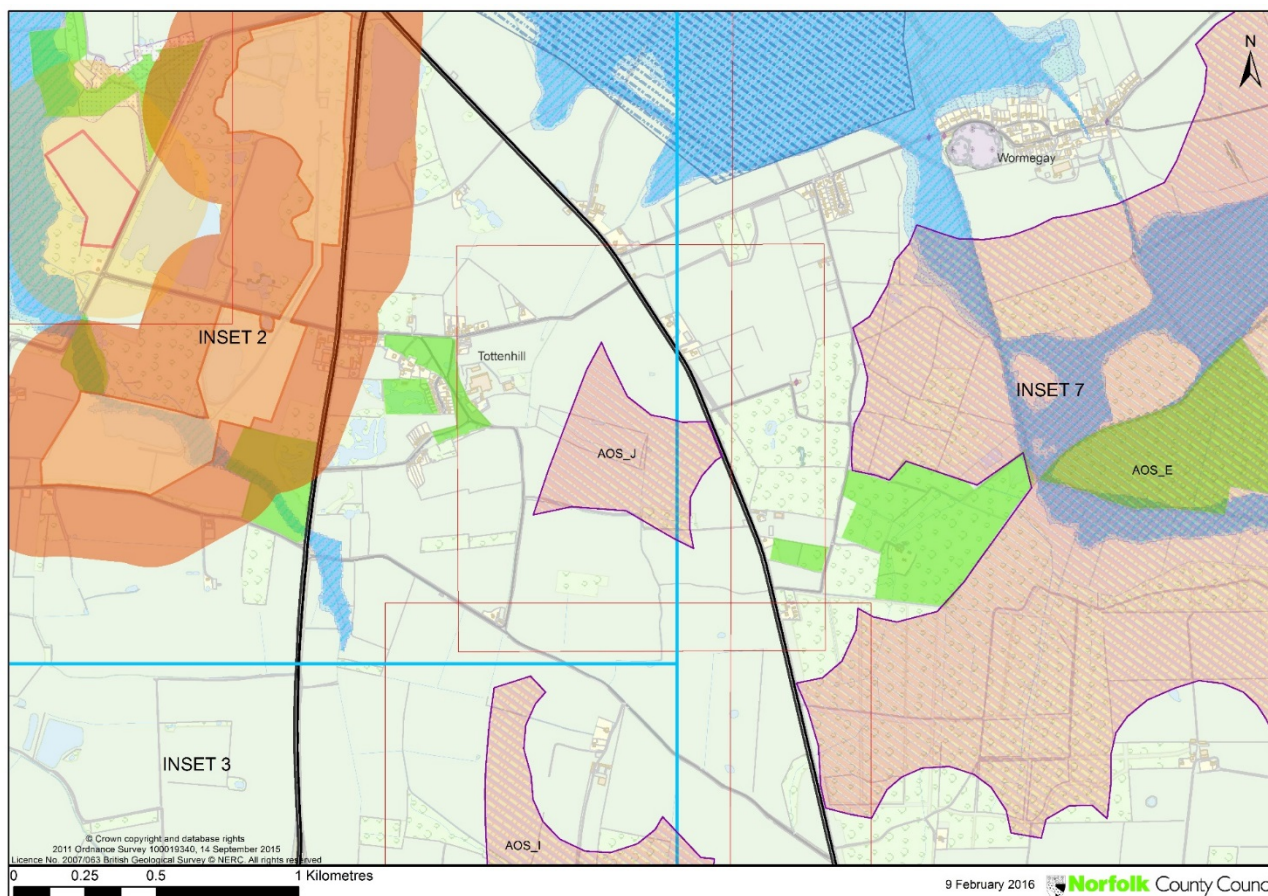
**I.6** AOS I is within the hydrological catchments for the Polver Drain. The AoS is located over a principal aquifer and partially over secondary A and B aquifers. However, there are no Groundwater Source Protection Zones within the area of search. If extraction below the watertable and/or dewatering is proposed a hydrogeological risk assessment will be necessary to identify potential risks and appropriate mitigation.

**I.7** There is the potential for a mineral extraction site within this area to contain examples of geodiversity priority features. Potential impacts to geodiversity would need to be assessed and appropriate mitigation identified as part of any future planning application. There would be a preference for restoration to provide opportunities for further geological research of suitable exposures.

**I.8** The nearest County Wildlife Site to the AoS is over 600m away (CWS 366 'St Andrews Churchyard'). Due to the distance of the CWS from the area of search, no adverse impacts are expected from mineral extraction within the AoS.

**I.9** AOS I is allocated as an Area of Search for silica sand extraction. Development will be subject to compliance with the Core Strategy and Development Management Policies and the Areas of Search Policy.

## AOS\_J: Land to the east of Tottenhill



### Area of Search Characteristics

- The area of search covers just less than 23 hectares within the parishes of Tottenhill and Wormegay.
- The area of search is in an agricultural landscape between the A10 and A134.
- The area of search is a mixture of small blocks of woodland and agricultural uses and the area is classified as Grade 4 land.
- The nearest residential property is approximately 250 metres from the AOS boundary and the settlement of Tottenhill is less than 300 metres from the boundary of the AOS. A planning application for mineral extraction within AoS J would need to include mitigation measures to deal appropriately with any amenity impacts.
- AOS J is in Flood Zone 1 (low risk) for flooding from rivers. 9% of AOS J is at low risk of flooding from surface water, 4% is at medium risk and 1% is at high risk of flooding from surface water.
- The area of search is approximately 15 kilometres from the Leziat processing plant and it is considered likely that any extraction site would transfer mineral to the processing plant by road.

**J.1** Access from AOS J could be via the southern track onto the A134 which is a principal route in the NCC route hierarchy, subject to junction improvements. A dedicated access could also be created to the A134, or the A10 to the west with junction improvements to the existing network. The area of search is acceptable to the Highway Authority subject to highway improvements.

**J.2** The route from AOS J to the Leziat processing plant would be expected to be north along the A10 and A149, before turning east onto the B1145. From the B1145 the

preferred access to the Leziat processing plant would be an off-road route turning right off the B1145 before Bawsey and utilising the existing track and/or conveyor route through the existing mineral workings at Mintlyn to access Station Road and the processing plant south of Brow of the Hill. A right turn lane at the junction with the B1145 would probably be required to provide a suitable junction. Utilising an off-road haul route would avoid lorries accessing the processing plant via Brow of the Hill, Fair Green or Middleton and therefore mitigate amenity impacts.

**J.3** There is a Listed Building, the Church of St Botolph at West Briggs (Grade I), within 325 metres of the area of search. The AoS is approximately 1.2km from the motte and bailey castle in Wormegay village and 1.6km to Wormegay Priory Scheduled Monuments. Any future planning application within the AoS would need to include a Heritage Statement assessing the setting of heritage assets, addressing the potential for impacts and proposing mitigation measures such as bunding and screen planting.

**J.4** AOS J contains a number of cropmark sites, including a series of late prehistoric to Romano-British enclosures, and medieval banks (including a parish boundary bank). The cropmarks are accompanied by finds of Bronze Age, medieval and post medieval date. Therefore, a detailed assessment of the significance of archaeological deposits will be required by field evaluation at the planning application stage, in order to protect and mitigate the impact of mineral extraction in this area of search.

**J.5** The AoS is characterised as a landscape of ‘Settled Farmland with Plantations’. This is a transitional landscape between the Fens to the west and the Brecks to the east. Generally, the AoS slopes gently away to the west but at a rate where many parts of the area would be perceived as flat. However, it is considered that there are areas within the AoS where bunding and screen planting could provide successful mitigation if well designed. Viewpoints are limited by field boundaries and woodland over large parts of the landscape area. However, hedgerows are intermittent in the area surrounding the AoS opening up views across open fields often to tree lined horizons. There are a number of viewpoints in the AoS from roads and Public Rights of Way, and any future planning application in the area of search will need to ensure that any proposed extraction is appropriately screened through the use of a Landscape and Visual Impact Assessment and appropriate mitigation.

**J.6** AOS J is within the hydrological catchments for the Polver Drain. The AoS is located over a principal aquifer and partially over secondary A and B aquifers. However, there are no Groundwater Source Protection Zones within the area of search. If extraction below the watertable and/or dewatering is proposed a hydrogeological risk assessment will be necessary to identify potential risks and appropriate mitigation.

**J.7** There is the potential for a mineral extraction site within this AoS to contain examples of geodiversity priority features. Potential impacts to geodiversity would need to be assessed and appropriate mitigation identified as part of any future planning application. There would be a preference for restoration to provide opportunities for further geological research of suitable exposures.

**J.8** There are two County Wildlife Sites within 300 metres of the area of search: CWS 385 ‘Tottenham Village Green’ (250 metres) and CWS 424 ‘Westbrigg’s Wood’ (271 metres). If mineral extraction in the AoS were to go below the water table or involve dewatering, then there could be impacts on the ponds in CWS 385. In that instance, a hydrogeological risk assessment would be necessary to identify potential risks and appropriate mitigation.

**J.9** AOS J is allocated as a Area of Search for silica sand extraction. Development will be subject to compliance with the Core Strategy and Development Management Policies and the Areas of Search Policy.



The following policy applies to all of the allocated areas of search for silica sand extraction.

### **Areas of Search Policy:**

AOS E, AOS F, AOS I and AOS J are allocated as areas of search for silica sand extraction. It is considered that a planning application for silica sand mineral extraction could be submitted for part/s of the area of search. Development will be subject to compliance with the adopted Core Strategy and Development Management policies, national legislation, policy and guidance, and will require any planning application within the Area of Search to address, as appropriate, the requirements below:

- To address the shortfall in silica sand supply to meet the requirements of the existing processing plant (as set out in the NPPF);
- A programme of mitigation measures (e.g. standoff areas, screening and/or bunding) to deal appropriately with any potential amenity impacts, including noise and dust, to comply with the requirements of policy DM12;
- A Landscape and Visual Impact assessment to identify potential landscape impacts. The LVIA will include Core River Valleys, Scheduled Monuments, non-designated heritage assets of archaeological interest, Listed Buildings and Conservation Areas and their settings where appropriate, together with suitable mitigation measures to address the impacts and manage change in ways that will best sustain heritage values. The completed assessment will comply with the requirements of policies CS14, DM2 and DM8;
- A Heritage Statement to identify heritage assets and their settings, assess the potential for impacts and identify appropriate mitigation to sustain heritage values if required. As a result of the historically complex and significant environment in which the mineral resource is present, applicants should consider the potential for early engagement with Historic England, the Norfolk Historic Environment Service and Conservation Officers in the preparation of the Heritage Statement. The completed statement will comply with the requirements of policies CS14, DM8, DM9 and DM15;
- An appropriate archaeological assessment must be prepared in consultation with Norfolk County Council; this may initially be desk-based but may need to be followed up with field surveys and trial-trenching. The archaeological assessment will be compliant with Policy DM9 and will be used by Norfolk County Council/Historic Environment Service to agree appropriate mitigation measures;
- A Hydrogeological Risk Assessment; based on proportionate evidence,
  - to identify potential impacts to groundwater quality, quantity and levels; and
  - to propose appropriate mitigation to protect any abstraction points, ecosystems and surface water features that are reliant on groundwater, in particular SSSIs, SACs and SPAs.

The assessment will need to consider the precautionary principle as it relates to European designations. The assessment should include a programme of mitigation measures to address identified potential impacts, and comply with the requirements of policies CS14, DM1 and DM3;

- An assessment to consider the potential for impacts on environmental designations, and suggest suitable mitigation, to comply with policies CS14 and DM1;
- A protected species assessment will be required and if protected species are found on the proposed extraction site then appropriate mitigation will be required.
- An assessment of the potential for impacts on Water Framework Directive waterbodies, including from silt ingress and modification, and appropriate mitigation to prevent unacceptable adverse impacts.



- If the application area contains Grade 3 agricultural land then a detailed agricultural land survey will be required to identify subgrades. Land identified as being within the Best and Most Versatile classification (grades 1, 2, 3a) will require a working scheme which incorporates a soil management and handling strategy which is compliant with Policy DM16.
- A Transport Assessment or Statement which considers the potential for transport impacts and identifies appropriate mitigation measures, including highway improvements where appropriate, to address these impacts. There will be a preference for a transport route which minimises amenity impacts through the use of off-highway haul routes from the B1145 to the processing plant. A right-turn lane at the junction with the B1145 would probably be required to provide a suitable junction. The assessment or statement will comply with policy DM10;
- A comprehensive working and restoration plan which is compliant with Policy DM14, in particular considering the opportunities, on restoration, for ecological enhancement, the improvement of public access and geological exposures for future study;
- An air quality assessment of the potential for any emissions, including dust, together with suitable mitigation measures to address these potential impacts on humans, flora and fauna. The Air Quality Assessment will need to be compliant with Policy DM13;
- Within the allocated areas of search, the development of mineral extraction sites should follow a sequential approach to flood risk;
- Information demonstrating how proposals comply with Policy DM15.

## Glossary

**The following definitions will be added to the glossary in the adopted Minerals Site Specific Allocations Plan:**

**Area of Search:** areas where knowledge of mineral resources may be less certain but within which planning permission may be granted, particularly if there is a potential shortfall in supply. If it is not possible to designate Specific Sites, or Preferred Areas, the alternative way to plan for the steady and adequate supply of minerals is to designate Areas of Search.

**Core Strategy (for Minerals and Waste):** This planning policy document contains the vision, objectives and strategic planning policies for minerals and waste development in Norfolk until 2026. The Minerals and Waste Core Strategy also includes Development Management policies which are used in the determination of planning applications to ensure that minerals extraction and associated development and waste management facilities can happen in a sustainable way.

**Heritage asset:** A World Heritage Site, Scheduled Monument, Listed Building, Protected Wreck Site, Registered Park and Garden, Registered Battlefield or Conservation Area designated under the relevant legislation.

**Local Plan:** The plan for the future development of the local area, drawn up by the local planning authority in consultation with the community. In law this is described as the development plan documents adopted under the Planning and Compulsory Purchase Act 2004 (as amended). Current core strategies or other planning policies, which under the regulations would be considered to be development plan documents, form part of the Local Plan. The term includes old policies which have been saved under the 2004 Act.

**National Planning Policy Framework (NPPF):** This document sets out the Government's planning policies for England and was published on 27 March 2012. The NPPF must be taken into account in the preparation of Local and neighbourhood Plans, and is a material consideration in planning decisions. It states that in order to be considered sound a Local Plan should be consistent with national planning policy.

**National Planning Practice Guidance (NPPG):** A web-based resource published by the Department for Communities and Local Government (DCLG) on 6 March 2014 and updated as needed. It is available at:  
<http://planningguidance.planningportal.gov.uk/blog/guidance/>

**Preferred Areas:** If it is not possible to designate Specific Sites, the next way to plan for a steady and adequate supply of minerals is to designate preferred areas, which are areas of known resources where planning permission might reasonably be anticipated. Such areas may also include essential operations associated with mineral extraction.

**Principal Aquifers:** These are layers of rock or drift deposits that have high intergranular and/or fracture permeability - meaning they usually provide a high level of water storage. They may support water supply and/or river base flow on a strategic scale. In most cases, principal aquifers are aquifers previously designated as major aquifer.

**Secondary Aquifers:** These include a wide range of rock layers or drift deposits with an equally wide range of water permeability and storage. Secondary aquifers are subdivided into two types:

**Secondary A** - permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers;

**Secondary B** - predominantly lower permeability layers which may store and yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers.

**Secondary Undifferentiated** - has been assigned in cases where it has not been possible to attribute either category A or B to a rock type. In most cases, this means that the layer in question has previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type.

**Setting of a heritage asset:** The surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral.

**Site Specific Allocations: Also known as Specific Sites** - where viable resources are known to exist, landowners are supportive of minerals development and the proposal is likely to be acceptable in planning terms. Such sites may also include essential operations associated with mineral extraction. This is the preferred way to plan for the steady and adequate supply of minerals as it provides the necessary certainty on when and where development may take place.

**Strategic Environmental Assessment:** A procedure (set out in the Environmental Assessment of Plans and Programmes Regulations 2004) which requires the formal environmental assessment of certain plans and programmes which are likely to have significant effects on the environment.