South Norfolk sites

Map of proposed sites at Earsham (MIN 209, MIN 210, MIN 211)
MIN 209 - land adjacent to the A143, Earsham (Extension area 1)

Site Characteristics

- The 7.74 hectare site is within the parish of Earsham
- The estimated sand and gravel resource at the site is 435,000 tonnes
- The proposer of the site has given a potential start date of 2019 and estimated the extraction rate to be 85,000 tonnes per annum. Based on this information the full mineral resource at the site could be extracted within six years, which would be within the plan period.
- The site is proposed by Earsham Gravels Ltd as an extension to an existing site. The Earsham sites would be worked sequentially to mitigate any cumulative impacts.
- The site is currently in agricultural use and the Agricultural Land Classification scheme classifies the land as being Grade 3
- The site is 8.2km from Harleston, which is the nearest town in Norfolk and 1.5km from Bungay, a market town in Suffolk.

A reduced extraction area has been proposed of 5.58 hectares, which creates a standoff area to the north-east corner of the site nearest to residential properties at Earsham.

**M209.1 Amenity:** The nearest residential property is 33m from the site boundary. There are 108 sensitive receptors within 250m of the site boundary. Most of these properties are in the settlement of Earsham, which is 33m away. However, land at the north-eastern corner of the site, nearest to residential properties at Earsham, is not proposed to be extracted. Therefore, the nearest residential property is 97m from the extraction area and there are 63 sensitive receptors within 250m of the proposed extraction area (2 of these are within 100m of the proposed extraction area). 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.

**M209.2 Highway access:** The site is proposed to access the existing plant site via a conveyor. From the plant site the proposed HGV route is south along Bath Hills Road, then east along Hall Road (C365) to the junction with the A143, which is a designated lorry route, for onward transportation. Widening of Hall Road and passing places on Hall Road are proposed. The site is not within an AQMA. As a proposed extension to an existing site, the number of vehicle movements is expected to remain the same but continue for a longer period. The estimated number of HGV movements is 46 (in and out) per day. The proposed highway access is considered to be suitable by the Highway Authority.

**M209.3 Historic environment:** The historic landscape character of the site is Twentieth Century agriculture with enclosure. The site is within a wider historic landscape character of Twentieth Century agriculture with boundary loss and enclosure, agriculture with 18th to 19th Century enclosure, pre-18th century irregular enclosure and enclosed drained grazing marsh. The wider historic landscape character also includes mineral extraction, a water reservoir, informal parkland and woodland (including 18th to 20th century plantation woodland, carr woodland and ancient woodland).

**M209.4** The nearest Listed Building is Grade II 38 and 39 Hall Road which is 76m away. There are 206 Listed Buildings within 2km of the site. 173 of these are within the Bungay Conservation Area, which is 1.41km from the site. The nearest Scheduled Monument is Bungay Castle which is 1.51km away. There are 3 Scheduled Monuments within 2km of the site. There are no 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.
M209.5 Archaeology: A Historic Environment record of features related to historic roadways occurs within the site boundary. The site is in a wider landscape with a significant number of finds and features from multiple periods, including Roman features including a camp and probable trackway, and a possible settlement. Therefore, there is the potential that unknown archaeology exists on the site and an assessment of the significance of archaeological remains 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 may initially be desk-based but may need to be followed up with field surveys and trial-trenching.

M209.6 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 ‘Waveney Rural River Valley’ in the South Norfolk Landscape Character Assessment.

M209.7 The site is an arable field to the south of residential properties, currently bounded by a low post and rail fence and intermittent trees to the south east along the A143. The northern boundary is open to Hall Road and enclosed with vegetation and trees along the boundary of residential properties. The remainder of the northern boundary and south western boundary are open to further arable fields. The wider landscape is predominantly open fields to the north, south and west, with hedged field boundaries to the south and larger blocks of woodland to the north, increasing with proximity to the Broads. To the east are the residential areas of the village of Earsham. A number of properties back onto the road overlooking the site.

M209.8 The impact of the proposed mineral working on the wider landscape would predominantly be the decreased long-distance views and increased roadside vegetation due to the proposed bunding and advanced planting to screen the mineral working from view.

M209.9 The plant site used by the existing mineral working is located within the Broads Authority Executive Area. Part of the proposal for the three extension areas at Earsham is for the plant site to be moved into site MIN 209, once sufficient space has been created within the site MIN 209 to accommodate the plant site, estimated to be 5 years from commencing the development. This would lead to a landscape improvement due to the removal and restoration of the current plant site within the Broads Authority Executive Area. The new plant site would need to be removed and restored once extraction has been completed in the three Earsham sites (MIN 209, MIN 210, MIN 211).

M209.10 There are no Public Rights of Way within or adjacent to the site.

M209.11 Ecology: The site is more than 5km from any SPA, SAC or Ramsar site. Therefore, there would be no likely significant effects on these sites.

M209.12 Abbey Wood, Flixton SSSI is 2.56km from the site boundary. The SSSI citation states that it is an ancient woodland consisting of coppice with standards with some 19th and 20th century planting of broadleaves and a few conifers. The woods have a varied flora including ancient woodland plants and one scarce species. The proposed extraction site is in a different hydrological catchment to the SSSI and therefore the SSSI would not be adversely affected.

M209.13 The nearest County Wildlife Site is CWS 125 ‘Holy Grove’ which is 730m from the site boundary and is an ancient woodland site. No adverse impacts to the CWS are expected from the proposed mineral extraction.

M209.14 The nearest ancient woodland site is Holy Grove, an Ancient Semi-Natural Woodland (ASNW) which is 0.80km from the site boundary. No adverse impacts to the ancient woodland site are expected from the proposed mineral extraction.

M209.15 Geodiversity: The site consists of Lowestoft Formation-river terrace deposits (sand and gravel); which are geodiversity priority features; overlying the Crag group. There is significant potential for vertebrate fossils within the Crag Group. Potential impacts to geodiversity would need to be assessed and appropriate mitigation identified as part of any future application. It would be useful to retain some open faces for scientific study during operational stages, and ideally after
restoration, and have a ‘watching brief’ during the extraction phase in case features of potential geodiversity interest are uncovered.

M209.16 Flood Risk: The site is in Flood Zone 1 (lowest risk) for flooding from rivers. The site has a low probability of surface water flooding with one location of surface water pooling in a 1 in 30 year rainfall event, two locations in a 1 in 100 year rainfall event and three locations in a 1 in 1000 year rainfall event. 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.

M209.17 Hydrogeology: The site is located over a Secondary A aquifer (superficial deposits) and a principal aquifer (bedrock). However, there are no groundwater Source Protection Zones within the proposed site.

M209.18 Water Framework Directive: The site is approximately 440 metres from the River Waveney, which is the nearest 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 River Waveney. MIN 209 and the processing plant, which the sand and gravel would be transported to conveyor, are both a sufficient distance north of the River Waveney. Therefore, the sand and gravel to be processed would not be transported across the River Waveney. Due to the distance of the site from the River Waveney it is not expected that there would be a pathway for silt ingress into the River Waveney from any future sand and gravel extraction within site MIN 209.

M209.19 Utilities infrastructure: There are no Anglian Water sewerage assets or water assets within the site. Electricity distribution lines cross the site. There are no high-pressure gas pipelines within the site.

M209.20 Safeguarding aerodromes: The site is not within an aerodrome safeguarding zone.

M209.21 Restoration: The site is proposed to be restored to wet grassland with landscaping, ponds/ scrape and geological exposure, all to a nature conservation afteruse.

M209.22 Conclusion: Site MIN 209 is considered suitable to allocate for sand and gravel extraction. Development will be subject to compliance with the relevant Minerals and Waste Local Plan Policies and Specific Site Allocation Policy MIN 209 / MIN 210 / MIN 211 (Earsham sites).

MIN 210 - land adjacent to the A143, Earsham (Extension Area 2)

Site Characteristics

- The 12.69 hectare site is within the parish of Earsham
- The estimated sand and gravel resource at the site is 750,000 tonnes
- The proposer of the site has given a potential start date of 2030 and estimated the extraction rate to be 85,000 tonnes per annum. Based on this information the full mineral resource at the site could be extracted within nine years, therefore approximately 595,000 tonnes could be extracted within the plan period.
- The site is proposed by Earsham Gravels Ltd as an extension to an existing site. The Earsham sites would be worked sequentially to mitigate any cumulative impacts.
- The site is currently in agricultural use and the Agricultural Land Classification scheme classifies the land as being Grade 3
- The site is 7.4km from Harleston, which is the nearest town in Norfolk and less than 2km from Bungay, a market town in Suffolk.

A reduced extraction area has been proposed of 7.65 hectares, which creates standoff areas to the south-west corner, the north-east corner and the land immediately opposite Park Farm Cottages.

M210.1 Amenity: The nearest residential property is 16m from the site boundary. There are 3 sensitive receptors within 250m of the site boundary and 2 of these are within 100m of the site
boundary. The settlement of Earsham is 254m away. However, land at the south-west corner, the north-east corner and land within approximately 95m of Park Farm Cottages is not proposed to be extracted. Therefore, the nearest residential property is 90m from the extraction area and there are three sensitive receptors within 250m of the proposed extraction area (two of these are within 100m of the proposed extraction area). 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.

M210.2 Highway access: The site is proposed to access the new plant site (within site MIN 209) via a conveyor. From the plant site the proposed HGV route is east along Hall Road (C365) to the junction with the A143, which is a designated lorry route, for onward transportation. Widening of Hall Road and passing places are proposed. The site is not within an AQMA. As a proposed extension to an existing site, the number of vehicle movements is expected to remain the same but continue for a longer period. The estimated number of HGV movements is 46 (in and out) per day. The proposed highway access is considered to be suitable by the Highway Authority.

M210.3 Historic environment: The historic landscape character of the site is Twentieth Century agriculture with boundary loss. The site is within a wider historic landscape character of Twentieth Century agriculture with boundary loss and enclosure, agriculture with 18th to 19th Century enclosure, pre-18th century irregular enclosure and enclosed drained grazing marsh. The wider historic landscape character also includes mineral extraction, a water reservoir, informal parkland and woodland (including 18th to 20th century plantation woodland, carr woodland and ancient woodland).

M210.4 The nearest Listed Building is the Grade II River Farmhouse which is 220m away. There are 64 Listed Buildings within 2km of the site. 25 of them are within Bungay Conservation Area which is 1.7km from the site. The nearest Scheduled Monument is the Moated site of Flixton Priory which is 1.78km away. There are five Scheduled Monuments within 2km of the site. There are no 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.

M210.5 Archaeology: There are no Historic Environment records within the site boundary, however the lack of HE records may just be due to a lack of investigations. The site is in a wider landscape with a significant number of finds and features from multiple periods, including a WW1 airfield site, and a WW2 roadside bomb store. Therefore, there is the potential that unknown archaeology exists on the site and an assessment of the significance of archaeological remains 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 may initially be desk-based but may need to be followed up with field surveys and trial-trenching.

M210.6 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 ‘Waveney Rural River Valley’ in the South Norfolk Landscape Character Assessment.

M210.7 The site is a long narrow field bounded by a road on each side. The field is currently used in part for pig farming and the rest is arable. Along the A143 the site is raised slightly from the road level to the south and the boundary demarked by a post and wire fence. Further north along the A143 intermittent trees become more frequent and form a dense roadside boundary. The wider landscape is predominantly open fields to the north, south and west, with hedged field boundaries to the south and larger blocks of woodland to the north increasing with proximity to the Broads. To the east of a slightly more densely wooded areas where the River Waveney runs closer to the site.

M210.8 The impact of the proposed mineral working on the wider landscape would predominantly be the decreased long-distance views and increased roadside vegetation due to the proposed
bunding and advanced planting to screen the mineral working from view. The views of the mineral working from Park Farm Cottages will predominantly be screened by bunding.

**M210.9** There are no Public Rights of Way within or adjacent to the site.

**M210.10** Ecology: The site is more than 5km from any SPA, SAC or Ramsar site. Therefore, there would be no likely significant effects on these sites.

**M210.11** Abbey Wood, Flixton SSSI is 1.90km from the site boundary. The SSSI citation states that it is an ancient woodland consisting of coppice with standards with some 19th and 20th century planting of broadleaves and a few conifers. The woods have a varied flora including ancient woodland plants and one scarce species. The proposed extraction site is in a different hydrological catchment to the SSSI and therefore the SSSI would not be adversely affected.

**M210.12** The nearest County Wildlife Site is CWS 125 ‘Holy Grove’ which is 910m from the site boundary and is an ancient woodland site. No adverse impacts to the CWS are expected from the proposed mineral extraction.

**M210.13** The nearest ancient woodland site is Holy Grove, an Ancient Semi-Natural Woodland (ASNW) which is 0.96km from the site boundary. No adverse impacts to the ancient woodland site are expected from the proposed mineral extraction.

**M210.14** Geodiversity: The site consists of Lowestoft Formation-river terrace deposits (sand and gravel); which are geodiversity priority features; overlying the Crag group. There is significant potential for vertebrate fossils within the Crag Group. Potential impacts to geodiversity would need to be assessed and appropriate mitigation identified as part of any future application. It would be useful to retain some open faces for scientific study during operational stages, and ideally after restoration, and have a ‘watching brief’ during the extraction phase in case features of potential geodiversity interest are uncovered.

**M210.15** Flood Risk: The site is in Flood Zone 1 (lowest risk) for flooding from rivers. No areas of the site are at risk of surface water flooding. 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.

**M210.16** Hydrogeology: The site is located over a Secondary A aquifer (superficial deposits) and a principal aquifer (bedrock). However, there are no groundwater Source Protection Zones within the proposed site.

**M210.17** Water Framework Directive: The site is approximately 140 metres from the River Waveney, which is the nearest 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 River Waveney. MIN 210 and the processing plant, which the sand and gravel would be transported to by conveyor, are both a sufficient distance north of the River Waveney. Therefore, the sand and gravel to be processed would not be transported across the River Waveney. Due to the distance of the site from the River Waveney it is not expected that there would be a pathway for silt ingress into the River Waveney from any future sand and gravel extraction within site MIN 210.

**M210.18** Utilities infrastructure: There are no Anglian Water sewerage assets or water assets within the site. Electricity distribution lines cross the site. There are no high-pressure gas pipelines within the site.

**M210.19** Safeguarding aerodromes: The site is not within an aerodrome safeguarding zone.

**M210.20** Restoration: The site is proposed to be restored to wet grassland with landscaping, ponds/ scrape and geological exposure, all to a nature conservation afteruse.

**M210.21** Conclusion: Site MIN 210 is considered suitable to allocate for sand and gravel extraction. Development will be subject to compliance with the relevant Minerals and Waste Local Plan Policies and Specific Site Allocation Policy MIN 209 / MIN 210 / MIN 211 (Earsham sites).
MIN 211 - land west of Bath Hills Road, Earsham (Extension area 3)

Site Characteristics

- The 9.54 hectare site is within the parish of Earsham
- The estimated sand and gravel resource at the site is 485,000 tonnes
- The proposer of the site has given a potential start date of 2024 and estimated the extraction rate to be 85,000 tonnes per annum. Based on this information the full mineral resource at the site could be extracted within six years, which would be within the plan period.
- The site is proposed by Earsham Gravels Ltd as an extension to an existing site. The Earsham sites would be worked sequentially to mitigate any cumulative impacts.
- The site is currently in agricultural use and the Agricultural Land Classification scheme classifies the land as being Grade 3
- The site is 8.5km from Harleston, which is the nearest town in Norfolk and 1.5km from Bungay, a market town in Suffolk.

A reduced extraction area has been proposed of 4.77 hectares, which creates a standoff area to the south-eastern corner of the site (to exclude the land nearest to the residential properties on Bath Hills Road and Hall Road) and to the north of the site.

M211.1 Amenity: The nearest residential property is adjacent to the site boundary. There are 25 sensitive receptors within 250m of the site boundary and 5 of these are within 100m of the site boundary. The settlement of Earsham is 215m away. However, land at the south-eastern corner of the site (nearest to the residential properties) is not proposed to be extracted. Therefore, the nearest residential property is 43m from the extraction area and there are 7 sensitive receptors within 250m of the proposed extraction area (5 of these are within 100m of the proposed extraction area). 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.

M211.2 Highway access: The site is proposed to access the new plant site (within site MIN 209) via a conveyor. From the plant site the proposed HGV route is east along Hall Road (C365) to the junction with the A143, which is a designated lorry route, for onward transportation. Widening of Hall Road and passing places are proposed. The site is not within an AQMA. As a proposed extension to an existing site, the number of vehicle movements is expected to remain the same but continue for a longer period. The estimated number of HGV movements is 46 (in and out) per day. The proposed highway access is considered to be suitable by the Highway Authority.

M211.3 Historic environment: The historic landscape character of the site is Twentieth Century agriculture with boundary loss. The site is within a wider historic landscape character of Twentieth Century agriculture with boundary loss and enclosure, 18th to 19th Century enclosure, pre-18th century irregular enclosure and enclosed drained grazing marsh. The wider historic landscape character also includes mineral extraction, a water reservoir, informal parkland and woodland (including 18th to 20th century plantation woodland, carr woodland and ancient woodland).

M211.4 The nearest Listed Buildings are Grade II Rookery Farmhouse which is 170m from the site boundary, but 230m from the extraction area boundary and Grade II 38 & 39 Hall Road, which is approximately 10m from the site boundary, but 130m away from the extraction area boundary. There are 194 Listed Buildings within 2km of the site, 161 of these are within Bungay Conservation Area which is 1.38km from the site. The nearest Scheduled Monument is Bungay Castle which is 1.62km away. There are 3 Scheduled Monuments within 2km of the site. There are no 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.
M211.5 Archaeology: A Historic Environment record of the remains of a ring ditch is shown within the site boundary. The site is in a wider landscape with a significant number of finds and features from multiple periods, including a Bronze Age cemetery and a WW2 bomb store adjacent to the site. Therefore, there is the potential that unknown archaeology exists on the site and an assessment of the significance of archaeological remains 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 may initially be desk-based but may need to be followed up with field surveys and trial-trenching.

M211.6 Landscape: The site is not located within the AONB, a Core River Valley or any other designated landscape feature. The site is adjacent to the boundary of the Broads Authority Executive Area. The site is within the landscape character area described as ‘Waveney Rural River Valley’ in the South Norfolk Landscape Character Assessment and is adjacent to the landscape character area described as ‘Waveney – Outney Common and Bath Hills Area’ in The Broads Landscape Character Assessment.

M211.7 The site is irregular in shape with dense woodland bounding the western boundary, low lying vegetation to the southern boundary and open roadside to the east. The site is currently an arable field. To the north the land slopes down, resulting in the northern section of the site not being visible from Hall Road. The wider landscape reflects the close proximity of the Broads and consists of wooded areas to the north and west. Restoration of the mineral workings to the north east reflect this landscape, and beyond lies the River Waveney and a golf course.

M211.8 The impact of the proposed mineral working on the wider landscape would predominantly be the decreased long-distance views and increased roadside vegetation due to bunding and advanced planting to screen the mineral working from view. The views of the mineral working from nearby properties will predominantly be screened by bunding. A planning application for mineral extraction at this site must also assess potential impacts on views to and from the Broads Authority Executive Area, within a Landscape and Visual Impact Assessment, and propose appropriate mitigation measures.

M211.9 There are no Public Rights of Way within or adjacent to the site.

M211.10 Ecology: The site is more than 5km from any SPA, SAC or Ramsar site. Therefore, there would be no likely significant effects on these sites.

M211.11 Sexton Wood SSSI is 2.22km from the site boundary. The SSSI citation states that it is one of the largest woods in south-east Norfolk and is almost entirely of ancient origins consisting largely of coppice with standards. The site is not within the Impact Risk Zone for Sexton Wood or any other SSSI and therefore there would be no adverse effects on any SSSIs from the proposed mineral extraction.

M211.12 The nearest County Wildlife Sites are: CWS 125 ‘Holy Grove’ is 130m from the site boundary and is an ancient woodland site. CWS 134 ‘Great Wood & America Wood’ is 255m from the site boundary and are ancient woodland sites. CWS 2102 ‘Rich’s Hill’ is 430m from the site boundary and is a species rich, unimproved meadow with extensive scrub. No adverse impacts to the CWSs are expected from the proposed mineral extraction.

M211.13 The nearest ancient woodland sites are: Holy Grove, an Ancient Semi-Natural Woodland (ASNW) which is 0.23km from the site boundary; Great Wood, an ASNW and Plantation on Ancient Woodland Site (PAWS) which is 0.34km from the site boundary and America Wood, an ASNW which is 0.60km from the site boundary. No adverse impacts to the ancient woodland sites are expected from the proposed mineral extraction.

M211.14 Geodiversity: The site consists of Lowestoft Formation-river terrace deposits (sand and gravel); which are geodiversity priority features; overlying the Crag group. There is significant potential for vertebrate fossils within the Crag Group. Potential impacts to geodiversity would need to be assessed and appropriate mitigation identified as part of any future application. It would be useful to retain some open faces for scientific study during operational stages, and ideally after
restoration, and have a ‘watching brief’ during the extraction phase in case features of potential geodiversity interest are uncovered.

**M211.15 Flood Risk:** The site is in Flood Zone 1 (lowest risk) for flooding from rivers. No areas of the site are at risk of surface water flooding. 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.

**M211.16 Hydrogeology:** The site is located over a Secondary A aquifer (superficial deposits) and a principal aquifer (bedrock). There are no groundwater Source Protection Zones within the proposed site.

**M211.17 Water Framework Directive:** The site is approximately 480 metres from the River Waveney, which is the nearest 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 River Waveney. MIN 211 and the processing plant, which the sand and gravel would be transported to by conveyor, are both located considerable distance north of the River Waveney. Therefore, the sand and gravel to be processed would not be transported across the River Waveney. Due to the distance of the site from the River Waveney it is not expected that there would be a pathway for silt ingress into the River Waveney from any future sand and gravel extraction within site MIN 211.

**M211.18 Utilities infrastructure:** There are no Anglian Water sewerage assets or water assets within the site. Electricity distribution lines cross the site. There are no high-pressure gas pipelines within the site.

**M211.19 Safeguarding aerodromes:** The site is not within an aerodrome safeguarding zone.

**M211.20 Restoration:** The site is proposed to be restored to wet grassland with landscaping, ponds/ scrape and geological exposure, all to a nature conservation afteruse.

**M211.21 Conclusion:** Site MIN 211 is considered suitable to allocate for sand and gravel extraction. Development will be subject to compliance with the relevant Minerals and Waste Local Plan Policies and Specific Site Allocation Policy MIN 209 / MIN 210 / MIN 211 (Earsham sites).
Specific Site Allocation Policy MIN 209 / MIN 210/ MIN 211 (Earsham sites):

The Earsham sites are allocated as specific sites for sand and gravel extraction. Development will be subject to compliance with the Minerals and Waste Local Plan policies and all the following requirements:

- Submission of noise and dust assessments and a programme of mitigation measures to deal appropriately with any amenity impacts;
- Submission of a Landscape and Visual Impact Assessment which will identify any potential impacts to the wider landscape and suggest appropriate mitigation measures, particularly regarding views from nearby properties, and long-range views from the Waveney Valley and the Broads Authority Executive Area.
- Submission of a progressive restoration scheme to a wet grassland nature conservation afteruse to provide landscape and biodiversity gains;
- Provision of opportunities during working for any geodiversity assets to studied, and if compatible with the landscape and ecology objectives an open face to be included within any restoration scheme for future scientific study;
- Submission of a Heritage Statement to identify heritage assets and their settings, assess the potential for impacts and identify appropriate mitigation measures if required;
- 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 used by Norfolk County Council/Historic Environment Service to agree appropriate mitigation measures;
- Each extension area allocated by this policy will need to be phased with the other mineral extraction sites in the area so that only one site is worked for extraction at a time;
- The existing processing plant to be relocated, as soon as practicable, out of the Broads Authority Executive Area into one of the new extraction areas allocated by this policy. The new location for the processing plant will have regard to mitigation of potential impacts on the Broads Authority Executive Area;
- Unprocessed material from the extraction areas to be moved to the processing plant site by conveyor; and
- A highway access to be formed from the relocated processing plant site, to the satisfaction of the Highway Authority.
MIN 25 - land at Manor Farm (between Loddon Road and Thorpe Road), Haddiscoe

Site Characteristics

- The 21.95 hectare site is within the parish of Haddiscoe
- The estimated sand and gravel resource at the site is 1,300,000 tonnes
- The proposer of the site has given a potential start date of 2022 or earlier and estimated the extraction rate to be 150,000 tonnes per annum. Based on this information the full mineral resource at the site could be extracted within 9 years which would be within the plan period.
- The site is proposed by Cemex UK Materials Ltd as a new site.
- The site is currently in agricultural use and the Agricultural Land Classification scheme classifies the land as being grade 3.
- The site is 11km from Great Yarmouth and 10.5km from Gorleston-on-Sea, which are the nearest towns.

M25.1 Amenity: The nearest residential property is 19m from the site boundary. There are 55 sensitive receptors within 250m of the site boundary and 15 of these are within 100m of the site boundary. Most of these properties are within the settlement of Haddiscoe, which is 55m 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. The operational area of the site would need to be set back approximately 100 metres from the nearest residential properties. 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.

M25.2 Highway access: The site would access Crab Apple Lane and then turn east onto the B1136 Loddon Road to the junction with the A143 Beccles Road, which are both designated lorry routes. However, if the mineral is transported to the existing mineral extraction site at Norton Subcourse for processing, then HGVs would turn west from Crab Apple Lane onto the B1136 Loddon Road, continue west along the B1136 Yarmouth Road and then turn north onto Ferry Road to access the existing off-highway haul route to the Norton Subcourse site. The site is not within an AQMA. The estimated number of HGV movements is 80 (in and out) per day. The proposed highway access is considered to be suitable by the Highway Authority, subject to appropriate road improvements along Crab Apple Lane.

M25.3 Historic environment: The historic landscape character of the site is Twentieth Century agriculture with boundary loss and agriculture with 18th to 19th Century piecemeal enclosure. The site is within a wider historic landscape character of 20th century agriculture with enclosure, boundary loss and boundary loss with a relict element; agriculture with 18th to 19th century piecemeal enclosure and modern built-up areas of small farm clusters and residential development. The wider historic landscape character also includes enclosed drained rectilinear grazing marsh (17th to 20th century enclosure), enclosed wetland meadow, mineral extraction, and woodland (carr woodland, regenerating alder carr woodland and 18th to 20th century plantation woodland).

M25.4 There are three Listed Building within 250m of the site; they are Grade II White House Farm (70m away), Grade I Church of St Mary (110m away), Grade II Monument to William Salter set in the churchyard wall (130m away). There are 13 Listed Buildings within 2km of the site. There are mature screen planting forming hedgerows on all sides of the site, except a section of the eastern boundary closest to Manor Farm; which is the landowner’s property. The site is separated from the Church of St Mary by the B1136, Loddon Road, and the screen planting along the road. Views of the church from the road would not be affected by the mineral extraction. The site is enclosed by mature screen planting and users of the road would not have views of the mineral extraction when viewing the church. Due to the screen planting around the site, with the addition of bunding during the extraction phases, it is considered that mineral extraction within this site would not adversely affect the setting of the Church, the monument in the churchyard wall or White House Farm.
M25.5 There are no Scheduled Monuments, 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.

M25.6 Archaeology: There are Historic Environment records of multi-period finds and features within the site boundary. The site is in a wider landscape with a significant number of finds and features from multiple periods. Therefore, there is the potential that unknown archaeology exists on the site and an assessment of the significance of archaeological remains 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 may initially be desk-based but may need to be followed up with field surveys and trial-trenching.

M25.7 Landscape: The site is not located within the AONB, a Core River Valley or any other designated landscape feature. The site is adjacent to a Core River Valley and is adjacent to the boundary of the Broads Authority Executive Area. The site comprises an arable agricultural field which slopes gently to the northeast, towards the Haddiscoe Marshes. The site is within the landscape character area described as ‘Thurlton Tributary Farmland with Parkland’ in the South Norfolk Landscape Character Assessment.

M25.8 There are mature screen planting forming hedgerows on all sides of the site, except a section of the eastern boundary closest to Manor Farm; which is the landowner’s property. There is also a small disused mineral working adjacent to part of the eastern boundary. The site is separated from the Grade I Listed Church by the B1136, Loddon Road, and the screen planting along the road. There are a number of properties along the northern boundary which borders Thorpe Road, however the mature screen planting will limit views of the site from these properties. The operational area of the site would need to be set back approximately 100 metres from the nearest residential properties and be screened by bunds as well as boundary hedge planting along all the site boundaries.

M25.9 This site, together with a processing plant site and extraction area to the south of the B1136 were the subject of an appeal against the refusal of planning permission, the appeal (APP/X2600/A/13/2197841) was dismissed in 2014. Impact on the setting of the Grade I Listed Church was only of the reasons for refusal dismissed. Significant factors were the location of the plant site to the south of the B1136 (the same side as the church), the open nature of the existing landscape on that side of the road, views along the road towards the church, and the expected length of extraction (21 years).

M25.10 The current proposal submitted to the Minerals and Waste Local Plan Review, does not include any land to the south of the B1136. Therefore, views of the church from the road would not be affected by the mineral extraction. The site is enclosed by mature screen planting and users of the road would not have views of the mineral extraction when viewing the church. The appeal Inspector noted that the harm from the working to the south of the B1136 was increased by the longevity of the extraction and the fact that the plant site would be on that side of the road for the whole 21 years of the mineral working. The evidence to the appeal, noted in paragraph 26 of the appeal decision, states the land parcel “to the north, is well screened from Loddon Road and comprises low grade agricultural land, and attracts no landscape objection”. In the current proposal, all mineral extraction and associated activity would only take place north of the B1136 and the estimated length of extraction is 9 years. Therefore, it is considered that the site is suitable in landscape terms.

M25.11 This is a Public Right of Way running across the site (from Thorpe Road to Crab Apple Lane) (Haddiscoe BR5). The PROW would need to be diverted during mineral extraction operations and reinstated as part of the restoration of the site.

M25.12 Ecology: The site is 3.84km from The Broads SAC and Broadland SPA and Ramsar site and is outside the 3km Impact Risk Zone for Halvergate Marshes SSSI and Standley and Alder
Carrs, Aldeby SSSI, which form part of these internationally designated sites. Therefore, there would not be any adverse effects on these designated sites.

M25.13 The site is 4.36 km from Breydon Water SPA and Ramsar site. Breydon Water is an inland tidal estuary and it has extensive areas of mud-flats that are exposed at low tide and these form the only tidal flats on the east coast of Norfolk. There are also extensive areas of floodplain grassland adjacent to the intertidal areas. Breydon Water is internationally important for wintering waterbirds, some of which feed in the Broadland SPA that adjoins this site at Halvergate Marshes. The proposed extraction site is within the 5km Impact Risk Zone for these designated sites, but outside the 3km Impact Risk Zone for Breydon Water SSSI. The proposed extraction site is located in a different hydrological catchment to Breydon Water and therefore would not adversely affect the hydrology of the designated sites. Due to the distance of the proposed extraction site to Breydon Water noise and lighting would not disturb the birds on the designated sites. Therefore, no adverse effects are expected on the SPA or Ramsar site.

M25.14 There are no SSSIs within 3km of the site boundary and the site is not within the Impact Risk Zone for any SSSIs. Therefore, no adverse effects are expected on SSSIs, SPAs, SACs or Ramsar sites.

M25.15 The nearest County Wildlife Site is CWS 2221 ‘Devil’s End Meadow’ which is 170m from the site boundary and is comprised of grassland with wet ditches, a small area of wet woodland and an area of dry woodland, lying along the Landspring Beck. The potential exists for impacts from mineral extraction at MIN 25, if uncontrolled. An assessment of potential impacts, including from dust deposition and hydrogeology, together with appropriate mitigation would be required as part of any planning application.

M25.16 The nearest ancient woodland site is Long Row Wood, an Ancient Semi-Natural Woodland (ASNW) which is 1.55km from the site boundary. Due to the distance from the ancient woodland there would be no impacts from dust deposition. The potential exists for hydrogeological impacts from mineral extraction at MIN 25, if uncontrolled. An assessment of potential hydrogeological impacts, together with appropriate mitigation would be required as part of any planning application.

M25.17 Geodiversity: The site consists of the Haddiscoe formation - sand and gravel, Corton formation-sand (undifferentiated), Lowestoft Formation - diamicton; overlying the Crag group. There is significant potential for vertebrate fossils within the Crag Group. It is likely that geological exposures at this site would be of academic interest. Potential impacts to geodiversity would need to be assessed and appropriate mitigation identified as part of any future application. It would be useful to retain some open faces for scientific study during operational stages, and ideally after restoration, and have a ‘watching brief’ during the extraction phase in case features of potential geodiversity interest are uncovered.

M25.18 Flood Risk: The site is in Flood Zone 1 (lowest risk) for flooding from rivers. The site has a low risk of surface water flooding with two areas of surface water pooling in a 1 in 30 and 1 in 100-year rainfall event. There are additional areas of surface water pooling in a 1 in 1000-year rainfall event. 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.

M25.19 Hydrogeology: The site is located over a Secondary A aquifer (superficial deposits) and a principal aquifer (bedrock). However, there are no groundwater Source Protection Zones within the proposed site.

M25.20 Water Framework Directive: The site is approximately 700 metres from Landspring Beck, which is the nearest 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 Landspring Beck. If mineral is extracted from site MIN 25, it is expected to be dry screened on site. There is the potential that the mineral would then be transported to the existing mineral extraction site at Norton Subcourse for further processing. In either case, the sand and gravel to be processed would not be transported across the Landspring Beck. Due to the distance of the site
from Landspring Beck it is not expected that there would be a pathway for silt ingress into the Beck from any future sand and gravel extraction within site MIN 25.

M25.21 Utilities infrastructure: There are no Anglian Water sewerage assets within the site. There are two water mains within the site and 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. There is no electricity transmission infrastructure within the site. There are no high-pressure gas pipelines within the site.

M25.22 Safeguarding aerodromes: The site is not within an aerodrome safeguarding zone.

M25.23 Restoration: The site is proposed to be restored to a combination of acid grassland, woodland planting and shallow wetland/pond.

M25.24 Conclusion: Site MIN 25 is considered suitable to allocate for sand and gravel extraction. Development will be subject to compliance with the relevant Minerals and Waste Local Plan Policies and Specific Site Allocation Policy MIN 25.

Specific Site Allocation Policy MIN 25 (land at Manor Farm, between Loddon Road and Thorpe Road, Haddiscoe):

The site is allocated as a specific site for sand and gravel extraction. Development will be subject to compliance with the Minerals and Waste Local Plan policies and all the following requirements:

- Submission of noise and dust assessments and a programme of mitigation measures to deal appropriately with any amenity impacts; mitigation measures should include setting back the working area at least 100 metres from the nearest residential properties;
- Submission of a Landscape and Visual Impact Assessment which will identify any potential impacts to the wider landscape and suggest appropriate mitigation measures; particularly regarding views from nearby properties, surrounding roads, and provide protection of the setting of nearby listed buildings. The mitigation measures should include a combination of advanced planting with native species and bunds;
- Submission of a phased working and progressive restoration scheme to a nature conservation afteruse to provide landscape and biodiversity gains;
- Provision of opportunities during working for any geodiversity assets to studied, and if compatible with the landscape and ecology objectives an open face to be included within any restoration scheme for future scientific study;
- Submission of a suitable scheme for the temporary diversion and reinstatement of the Public Right of Way;
- A sufficient stand-off distance around the water mains that cross the site or diversion of the water mains at the developers costs and to the satisfaction of Anglian Water;
- Submission of a Heritage Statement to identify heritage assets and their settings, assess the potential for impacts and identify appropriate mitigation measures if required;
- 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 used by Norfolk County Council/Historic Environment Service to agree appropriate mitigation measures; and
- Provision of a highway access that is considered suitable by the Highway Authority.
MIN 92 – land east of Ferry Lane, Heckingham

Site Characteristics

- The 15.18 hectare site is within the parish of Heckingham
- The estimated sand and gravel resource at the site is 570,000 tonnes
- The proposer of the site has given a potential start date of 2026 at the earliest, but potentially not until 2035, depending on the rate of extraction at the currently operational adjacent site. The proposer of the site has estimated the extraction rate to be 100,000 to 200,000 tonnes per annum. Based on this information the full mineral resource at the site could be extracted within 3 to 6 years, but it is uncertain whether this would take place within the plan period.
- The site is proposed by Cemex UK Materials Ltd as an extension to an existing site.
- The site is currently in agricultural use and the Agricultural Land Classification scheme classifies the land as being Grade 3. The proposer of the site has submitted an agricultural land classification report which concludes that the site is grade 3b.
- The site is 13.6km from Gorleston and Great Yarmouth, which are the nearest towns.

M92.1 Amenity: The nearest residential property is 40m from the site boundary. There are seven sensitive receptors within 250m of the site boundary and five of these are within 100m of the site boundary. The settlement of Nogdam End is 821m 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.

M92.2 Highway access: The site would access the existing plant site across Ferry Road. From the existing plant site the existing site access is via an off-highway haul route to the B1136 Yarmouth Road and then onto the A143, which are both designated lorry routes. The site is not within an AQMA. As a proposed extension to an existing site, the number of vehicle movements is expected to remain the same but continue for a longer period. The estimated number of HGV movements is 46 per day. The proposed highway access is considered to be suitable by the Highway Authority.

M92.3 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 20th century agriculture with enclosure, boundary loss and boundary loss with a relict element; and agriculture with 18th to 19th century piecemeal enclosure. The wider historic landscape character also includes enclosed drained rectilinear grazing marsh (17th to 20th century enclosure), enclosed wetland meadow, mineral extraction, sea defences and woodland (carr woodland, regenerated alder carr woodland and 18th to 20th century woodland plantation).

M92.4 The nearest Listed Building is Grade II* Hardley Hall which is 770m away. There are 11 Listed Buildings within 2km of the site. The only Scheduled Monument within 2km of the site is ‘Hardley Cross, immediately south-west of the rivers Yare and Chet’ 1.69km away. There are no Conservation Areas within 2km of the site. Raveningham Hall, a Registered Historic Park and Garden is 1.78km from 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 to sustain heritage values if required.

M92.5 Archaeology: Historic Environment records exist of a possible medieval settlement and multi-period finds within the site boundary. The site is in a wider landscape with a significant number of finds and features from multiple periods, including Saxon, Roman and medieval settlement locations close to the site. Therefore, there is the potential that unknown archaeology exists on the site and an assessment of the significance of archaeological remains 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 may initially be desk-based but may need to be followed up with field surveys and trial-trenching.
**M92.6 Landscape:** The site is not located within the AONB, a Core River Valley or any other designated landscape feature. The site is adjacent to the boundary of the Broads Authority Executive Area on three sides. The site is within the landscape character area described as ‘Thurlton Tributary Farmland with Parkland’ in the South Norfolk Landscape Character Assessment. The site is immediately adjacent to the landscape character area described as the ‘Chet Valley’ in the Broads Authority Landscape Character Assessment.

**M92.7** The site comprises an arable field which slopes down to the west and is divided by a line of hedgerow oaks. There is a hedge along the eastern boundary and trees and hedges lie along the remaining boundaries. The site forms part of an attractive gently rolling arable landscape on the edge of the Broads. There are overhead high voltage power lines along the southern boundary of the site and the existing mineral extraction operation is to the east. There are intermittent views into the site through gaps in the hedges along the adjoining eastern road and views from the road to the west. The oaks within the site are a notable landscape feature as are the veteran oaks along the western boundary. One farm lies to the south but does not have views of the area, two properties lie to the north which may have views from upstairs windows. Generally, the site is remote from village settlement. Screening the site from the more open views from the road to the west would be difficult due to the sloping nature of the site. This road forms part of the Wherryman’s Way long distance path and is also the boundary to the Broads Authority Executive Area. The site lies to the west of the active permitted sand and gravel extraction area. The mature oaks in the site and proximity to the Broads Authority Executive Area would make it difficult to work this site without unacceptable landscape impacts.

**M92.8** There are no Public Rights of Way within or adjacent to the site.

**M92.9 Ecology:** The site is 4.45km from Breydon Water SPA and Ramsar site. The site would be worked dry (above the water table) therefore there would be no adverse effects on the hydrology of Breydon Water. Due to the distance of the proposed site from Breydon Water there would not be adverse effects from dust deposition, noise or lighting. Therefore, no adverse effects are expected to Breydon Water SPA and Ramsar site from the proposed mineral extraction.

**M92.10** The site is 0.58km from Hardley Flood SSSI, which is part of The Broads SAC, Broadland SPA and Ramsar site. The SSSI citation states that Hardley Flood SSSI is an area of shallow lagoons and reedbeds; soft muds are exposed at low tide and these attract a range of wading birds in spring and autumn whilst the undisturbed reedbeds support nesting wildfowl and other fenland birds, including nationally important breeding populations of Shoveler, Pochard and Gadwall. The site would be worked dry (above the water table) therefore there would be no adverse effects on the hydrology of the SSSI. Due to the distance of the proposed site from the SSSI, no adverse effects are expected from dust deposition, noise or lighting. Therefore, no adverse effects are expected to the SSSI, SAC, SPA or Ramsar site from the proposed mineral extraction.

**M92.11** The nearest County Wildlife Site is CWS 2194 ‘Old Hall Carr and Marshes’ which is adjacent to the site boundary. The CWS is an area of mixed broadleaved woodland and coniferous plantation, marshy grassland and swamp in the Chet valley. The site would be worked dry (above the water table) therefore there would be no adverse effects on the hydrology of the CWS. A potential impact could be dust deposition from extraction, if uncontrolled. Therefore, a dust assessment and identification of appropriate mitigation measures will be required as part of the planning application process, to ensure that the CWS is not adversely affected.

**M92.12** There are no ancient woodland sites within 3km of the site.

**M92.13 Geodiversity:** The site consists of the Lowestoft Formation - sand and gravel, Corton Formation (undifferentiated), Crag Group and Bytham Formation - sand and gravel (which is a priority feature due to its method of formation) all overlying Crag Group. There is the potential for large vertebrate fossils and other paleo-environmental evidence in deposits laid down by a tributary (River Bytham) of the proto-Thames. Potential impacts to geodiversity would need to be assessed and appropriate mitigation identified as part of any future application. It would be useful to retain some open faces for scientific study during operational stages, and ideally after restoration, and
have a ‘watching brief’ during the extraction phase in case features of potential geodiversity interest are uncovered.

**M92.14 Flood Risk:** The site is in Flood Zone 1 (lowest risk) for flooding from rivers. The site has a low risk of surface water flooding, with two minor surface water flow paths developing within the site in a 1 in 1000 year rainfall event. Sand and gravel extraction is considered to be a ‘water compatible’ land use which is suitable in all flood zones. The site is not within an Internal Drainage Board area. Part of the south-western boundary of the site is adjacent to the Waveney, Lower Yare and Lothingland Internal Drainage Board area.

**M92.15 Hydrogeology:** The site is located partially over a Secondary A aquifer (superficial deposits) and a principal aquifer (bedrock). However, there are no groundwater Source Protection Zones within the proposed site.

**M92.16 Water Framework Directive:** The site is approximately 300 metres from the River Chet, which is the nearest 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 River Chet. MIN 92 and the existing adjacent processing plant, which the sand and gravel would be transported to, are both located a considerable distance east of the River Chet. Therefore, the sand and gravel to be processed would not be transported across the River Chet. Due to the distance of the site from the River Chet it is not expected that there would be a pathway for silt ingress into the River Chet from any future sand and gravel extraction within site MIN 92.

**M92.17 Utilities infrastructure:** There are no Anglian Water sewerage assets or water assets within the site. Electricity distribution pylons cross the south of the site. There are no high-pressure gas pipelines within the site.

**M92.18 Safeguarding aerodromes:** The site is not within an aerodrome safeguarding zone.

**M92.19 Restoration:** The site is proposed to be restored to a mosaic of nature conservation and agricultural land uses.

**M92.19 Conclusion:** The site is considered to be unsuitable for allocation because:

- The site is adjacent to the boundary of the Broads Authority Executive Area on three sides. Screening the site from the more open views from the road to the west and from the Broads Authority Executive Area to the south-west in particular, would be difficult due to the sloping nature of the site, therefore working this site would lead to unacceptable landscape impacts.
- It is considered that the retention of the line of mature oaks in the centre of the site would make an acceptable working scheme unlikely, and a working scheme that resulted in the removal of the oaks would have an unacceptable landscape impact, especially given the proximity of the Broads Authority Executive Area.
MIN 212 - land south of Mundham Road, Mundham

Site Characteristics

- The 4.95 hectare site is within the parish of Mundham
- The estimated sand and gravel resource at the site is 325,000 tonnes
- The proposer of the site has given a potential start date of 2019 and estimated the extraction rate to be 30,000 tonnes per annum. Based on this information the full mineral resource at the site could be extracted within eleven years, which would be within the plan period.
- The site is proposed by Earsham Gravels Ltd as a new site that would use an existing processing plant located at Caister St Edmund.
- The site is currently in agricultural use and the Agricultural Land Classification scheme classifies the land as being Grade 3
- The processing site is 1km from the Norwich urban area and within the Norwich Policy Area.

M212.1 Amenity: The nearest residential property is 147m from the site boundary. There are 2 sensitive receptors within 250m of the site boundary. The settlement of Mundham is 482m 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.

M212.2 Highway access: The site would use the existing haul route to access the C203 Mundham Road and turn right only to travel approximately 1.8km before joining the A146 Loddon bypass at the existing junction, which is a designated lorry route. Additional passing place improvements are proposed at two places on Mundham Road. The current processing plant sites is located at Caistor St Edmund quarry and is proposed to be continue to be used for mineral extracted from site MIN 212. This involves routing via the A146 towards Norwich, the A147 towards the Martinque Lane roundabout, The Street and then through White Horse Lane and Trowse and then onto Caistor St Edmund Quarry off Stoke Road. The site is not within an AQMA. The estimated HGV movements are a maximum of 14 per day. The proposed highway access is considered to be suitable by the Highway Authority.

M212.3 Historic environment: The historic landscape character of the site is Twentieth Century agriculture with boundary loss. The site is within a wider historic landscape character of 20th century agriculture with enclosure and boundary loss, agriculture with 18th to 19th century piecemeal enclosure, enclosed wetland meadow and pre-18th century rectilinear coaxial agricultural fields.

M212.4 The nearest Listed Buildings are the Grade II Mundham House and the stables at Mundham House, which are 470m and 440m away. There are 24 Listed Buildings within 2km of the site. There are no Scheduled Monuments within 2km of the site. Seething Conservation Area is 1.88km from the site. There are no 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.

M212.5 Archaeology: A Historic Environment record of the remains of an undated road is shown within the site boundary. The site is in a wider landscape with a significant number of finds and features from multiple periods, including a Saxon cemetery and a Roman settlement adjacent to the site. Therefore, there is the potential that unknown archaeology exists on the site and an assessment of the significance of archaeological remains 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 may initially be desk-based but may need to be followed up with field surveys and trial-trenching.
M212.6 **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 ‘Chet Tributary Farmland’ in the South Norfolk Landscape Character Assessment. The site comprises an irregularly shaped area of land within an arable field, with the eastern boundary being formed by a drain and associated hedgerow. The western boundary is formed by the access track to the existing quarry site. The northern and southern site boundaries are unmarked. The site slopes down from east to west. The wider landscape consists of arable fields with some hedged field boundaries and intermittent trees.

M212.7 There are two properties on Mundham Road that are located to the north of the proposed site which currently have views across the proposed site. A screen bund is proposed across the northern boundary of the site to screen views of the mineral working from those properties and from the adjacent Public Right of Way. A screen bund is also proposed along the eastern boundary of the site. A bund already exists along the access track to the west, but the height of this bund may need to be increased to sufficiently screen views of the site from the west. The impact of the proposed mineral working on the wider landscape would predominantly be the decreased long distance views due to bunding to screen the mineral working from view. The views of the mineral working from nearby properties will predominantly be screened by bunding. On restoration, the bunding to the north and east would be removed and the current open views across the site from the north would be reinstated. Increased scrub woodland planting is proposed along the eastern and western boundaries of the site as part of the restoration scheme.

M212.8 There is a Public Right of Way adjacent to eastern boundary of the site (Mundham FP6) and PROW Mundham FP7 runs through the north-west corner of the site. PROW Mundham FP7 is therefore proposed to be diverted around the north-west corner of the site.

M212.9 **Ecology:** The site is 3.67km from Hardley Flood SSSI, which is part of the Broads SAC, Broadland SPA and Ramsar site and is outside the Impact Risk Zone for this SSSI.

M212.10 There are no SSSIs within 3km of the site boundary and the site is not within the Impact Risk Zone for any SSSIs.

M212.11 There are no County Wildlife Sites within 1km of the site boundary.

M212.12 The nearest ancient woodland site is Hales Hall Wood, an Ancient Semi-Natural Woodland (ASNW) and Plantation on Ancient Woodland Site (PAWS), which is 2.16km from the site boundary. Due to the distance from the site, no adverse impacts to the ancient woodland site are expected from the proposed mineral extraction.

M212.13 **Geodiversity:** The site consists of the Corton formation - sand (undifferentiated), Head deposits - clay, silt, sand & gravel which are priority features due to their method of formation, Lowestoft Formation - diamicton; overlying the Crag group. There is significant potential for vertebrate fossils within the Crag Group. Potential impacts to geodiversity would need to be assessed and appropriate mitigation identified as part of any future application. It would be useful to retain some open faces for scientific study during operational stages, and ideally after restoration, and have a ‘watching brief’ during the extraction phase in case features of potential geodiversity interest are uncovered.

M212.14 **Flood Risk:** The majority (84%) of the site is in Flood Zone 1 (lowest risk) for flooding from rivers. However, the eastern part of the site is within both Flood Zone 2 (medium risk) and Flood Zone 3 (high risk) for flooding from rivers. The site has a high probability of surface water flooding with a surface water flow path running through the eastern part of the site (north-south) in a 1 in 30 year rainfall event. The area of the site included within this flow path increases in 1 in 100 and 1 in 1000 year rainfall events to affect up to 10% of the site. Sand and gravel extraction is considered to be a ‘water compatible’ land use which is suitable in all flood zones. If the site includes Flood Zone 3b (the functional flood plain) then the site should be designed and constructed to remain operational and safe for users in times of flood, result in no net loss of flood plain storage, not impede water flows and not increase flood risk elsewhere. The site is not in an Internal Drainage Board area.
**M212.15 Hydrogeology:** The site is located partially over a Secondary A aquifer and a Secondary (undifferentiated) aquifer (superficial deposits) and a principal aquifer (bedrock). However, there are no groundwater Source Protection Zones within the proposed site.

**M212.16 Water Framework Directive:** The site is approximately 1.5km from the River Chet, which is the nearest 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 River Chet. If mineral is extracted from MIN 212, it would be transported to the existing processing plant at Caister St Edmund by covered HGV along the A146. The existing drainage system installed along the A146, along with transporting the mineral by covered HGV would prevent dust deposition into the River Chet from this source. Due to the distance of the site from the River Chet it is not expected that there would be a pathway for silt ingress into the River Chet from any future sand and gravel extraction within site MIN 212.

**M212.17 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.

**M212.18 Safeguarding aerodromes:** The site is not within an aerodrome safeguarding zone.

**M212.19 Restoration:** The site is proposed to be restored to a nature conservation afteruse with species rich acid grassland with scrub woodland and a water body fringed with reeds.

**M212.20 Conclusion:** Site MIN 212 is considered suitable to allocate for sand and gravel extraction. Development will be subject to compliance with the relevant Minerals and Waste Local Plan Policies and Specific Site Allocation Policy MIN 212.
Specific Site Allocation Policy MIN 212 (land south of Mundham Road, Mundham):

The site is allocated as a specific site for sand and gravel extraction. Development will be subject to compliance with the Minerals and Waste Local Plan policies and all the following requirements:

- Submission of noise and dust assessments and a programme of mitigation measures to deal appropriately with any amenity impacts;
- Submission of a Heritage Statement to identify heritage assets and their settings, assess the potential for impacts and identify appropriate mitigation measures if required;
- 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 used by Norfolk County Council/Historic Environment Service to agree appropriate mitigation measures;
- The site will need to be phased with other sites in the area so that only one site is worked for extraction at a time;
- The existing access route for the permitted extraction site to be used;
- No onsite processing of mineral to take place;
- If the site includes Flood Zone 3b (the functional flood plain) then the site should be designed and constructed to remain operational and safe for users in times of flood, result in no net loss of flood plain storage, not impede water flows and not increase flood risk elsewhere.
- Submission of a Landscape and Visual Impact Assessment which will identify any potential impacts to the wider landscape and suggest appropriate mitigation measures; particularly regarding views of the site from surrounding properties and viewpoints, including long range views;
- Submission of a suitable scheme for the temporary diversion and reinstatement of the Public Right of Way;
- Submission of a progressive restoration scheme to a nature conservation afteruse to provide landscape and biodiversity gains; and
- Provision of opportunities during working for any geodiversity assets to studied, and if compatible with the landscape and ecology objectives an open face to be included within any restoration scheme for future scientific study.

MIN 79 – land north of Hickling Lane, Swardeston
MIN 80 – land south of Mangreen Hall Farm, Swardeston

Both of these proposed sites have been withdrawn from the Minerals and Waste Local Plan Review process by the mineral operator who was proposing them. The landowners have also agreed to the sites being withdrawn. Therefore, they will no longer be considered in this process.