

Norfolk Minerals and Waste Local Plan

Initial Consultation

May 2018



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Acronyms:

AONB – Area of Outstanding Natural Beauty
AQMA – Air Quality Management Area
ASNW – Ancient Semi-Natural Woodland
BEIS – Department for Business, Energy and Industrial Strategy
BGS –British Geological Survey
BMV – Best and Most Versatile
CD&E – Construction, demolition and excavation
C&I – Commercial and industrial
CWS – County Wildlife Site
DPD – Development Plan Document
EEFM – East of England Forecasting Model
EHO – Environmental Health Officer
ELV – End-of-Life Vehicle
HGV – Heavy Goods Vehicle
HRA –Habitats Regulations Assessment
IDB – Internal Drainage Board
IRZ – Impact Risk Zone
LAA –Local Aggregate Assessment
LACW – Local Authority Collected Waste
LNR – Local Nature Reserve
LPA –Local Planning Authority
M&WLPR – Minerals and Waste Local Plan Review
MPA –Minerals Planning Authority
MRF – Materials Recycling Facility
NNR – National Nature Reserve
NPPF – National Planning Policy Framework
NPPG – National Planning Practice Guidance
ONS – Office of National Statistics
PAWS – Plantation on Ancient Woodland
PEDL –Petroleum Exploration and Development Licence
PRoW – Public Right of Way
RDF – Refuse Derived Fuel
SA – Sustainability Appraisal
SAC – Special Area of Conservation
SEA – Strategic Environmental Assessment
SHMA – Strategic Housing Market Assessment
SPA – Special Protection Area
SSA – Site Specific Allocations
SSSI – Site of Special Scientific Interest
WDI – Waste Data Interrogator
WEEE – Waste electrical and electronic equipment
WFD – Water Framework Directive
WPA –Waste Planning Authority

1. Introduction

Norfolk County Council, as Minerals and Waste Planning Authority, has a statutory duty to produce and maintain an up-to-date Minerals and Waste Local Plan which forms the basis for determining any relevant planning applications that are lodged with the authority. The provision of a steady and adequate supply of minerals and the management of waste constitute essential infrastructure to support the economic development of the county.

Existing adopted Minerals and Waste Planning Policy Document

The existing adopted Norfolk Minerals and Waste Plan consists of three documents which cover the period to the end of 2026:

The Norfolk Core Strategy and Minerals and Waste Development Management Policies Development Plan Document (DPD) (the 'Core Strategy') was adopted by Norfolk County Council in 2011. It contains a vision, strategic objectives and policies to be used in the determination of planning applications for minerals extraction and associated development and waste management facilities in Norfolk.

The Norfolk Minerals Site Specific Allocations DPD and the Norfolk Waste Site Specific Allocations DPD were adopted in 2013. The Minerals Site Specific Allocations DPD was subsequently amended by the adoption of the Single Issue Silica Sand Review in December 2017.

The Norfolk Minerals Site Specific Allocations DPD (including the Silica Sand Review) allocated one specific sites for carstone extraction, 26 specific sites for sand and gravel extraction, two specific sites for silica sand extraction and four areas of search for future silica sand extraction. Ten of the sites allocated for sand and gravel extraction have subsequently received planning permission.

The Norfolk Waste Site Specific Allocations DPD allocated 29 sites for waste management facilities. However, none of the allocated sites have been delivered since the adoption of the Waste SSA, whilst unallocated sites have been approved.

These adopted minerals and waste planning policy documents are accompanied by a Policies Map which illustrates geographically the application of the policies contained in the adopted planning policy documents.

The existing adopted minerals and waste planning policy documents are available to view on Norfolk County Council's website at: www.norfolk.gov.uk/nmwdf on the 'Adopted Policy Documents' page.

Minerals and Waste Local Plan Review (M&WLPR)

The M&WLPR will extend the Plan period to the end of 2036 and also be one Local Plan instead of three separate DPDs.

The M&WLPR includes a vision and strategic objectives for waste management and minerals development for the Plan period to 2036.

The M&WLPR includes revised figures for the quantities of waste that need to be planned for over the Plan period to 2036. An annual growth rate of 1% has been used to forecast arisings of Local Authority Collected Waste in line with forecast household growth. An annual growth rate of 1.5% has been used to forecast both commercial and industrial, and construction and demolition waste arisings, in line with forecast economic growth. An annual reduction of 6.6% has been forecast for hazardous waste arisings, based on the most recent time series data for hazardous waste arisings in Norfolk, in accordance with national guidance.

As, none of the allocated sites for waste management have been delivered since the adoption of the Waste SSA, whilst unallocated sites have been approved, we consider that it would be more appropriate for the M&WLPR contain criteria based policies to determine planning applications for waste management facilities instead of allocating specific sites.

The M&WLPR therefore includes a spatial strategy for new waste management facilities, a policy detailing the land uses considered to be potentially suitable for waste management facilities and criteria based policies for the determination of planning applications for waste management facilities for the following types of waste: inert (construction, demolition and excavation waste), non-hazardous, hazardous waste and waste water. It also includes criteria based policies for the determination of planning applications for the following types of waste management facilities: inert waste recycling, waste transfer and treatment, composting, anaerobic digestion, household waste recycling centres, residual waste treatment, landfill and water recycling centres. Specific policies also cover the design of waste management facilities, landfill mining and safeguarding waste management facilities and water recycling centres.

The M&WLPR includes the revised quantities of sand and gravel, carstone and silica sand that need to be planned for during the period to 2036 in order to provide a steady and adequate supply of minerals. Based on the average sales data and other relevant local information, the M&WLPR proposes to plan for the extraction of 750,000 tonnes per annum of silica sand, 126,500 tpa of carstone extraction and 1,980,000 tpa of sand and gravel extraction.

The M&WLPR contains a spatial strategy for minerals development. Policies relevant to the determination of applications for minerals development include: borrow pits for highway schemes, agricultural reservoirs, protection of core river valleys, cumulative impacts and phasing of workings, progressing working and restoration, aftercare, concrete batching and asphalt plants and energy minerals. Specific policies also cover safeguarding mineral resources, mineral sites and infrastructure.

The M&WLPR also includes policies relevant to both minerals and waste management development covering the following issues: the presumption in favour of sustainable development, development management criteria, transport, climate change mitigation and adaptation, The Brecks protected habitats and species, and agricultural soils.

Mineral extraction sites proposed in the Minerals and Waste Local Plan Review

Since the adoption of the Minerals SSA, the allocated carstone site and silica sand sites have not yet come forward for planning permission and the M&WLPR continues to include the one proposed carstone extraction site and the two sites proposed for silica sand extraction. In addition, Sibelco UK have proposed a new preferred area for silica sand extraction (an area of known mineral resources with a willing landowner where planning permission might reasonably be anticipated) which is being considered as part of the M&WLPR. The Minerals SSA also defined four areas of search for future silica sand extraction in West Norfolk; the M&WLPR continues to include these areas of search.

Since the adoption of the Minerals SSA, ten of the 26 allocated sites for sand and gravel extraction have received planning permission. Of the 16 remaining allocated sites, three are no longer proposed to be developed for mineral extraction. The remaining 13 allocated sites are being reassessed for their suitability for future sand and gravel as part of this M&WLPR. In addition to the 13 currently allocated sites, a further 24 sites have been proposed in response to a 'call for mineral extraction sites' carried out for the purpose of the M&WLPR.

The assessments of both the currently allocated mineral extraction sites without planning permission and those proposed in response to the 'call for sites' are included in the this Initial Consultation document. Not all of the sites will be needed for mineral extraction over the Plan period to 2036. There is no guarantee that currently allocated sites for mineral extraction will continue to be allocated in the M&WLPR if more suitable sites have been proposed as part of the review. Landowner willingness for a site to be included in the M&WLPR has been provided for all of the proposed sites.

You are invited to read the following document and comment on the issues raised. It would be helpful to the process if comments made can be backed up by supporting information where possible as the Minerals and Waste Local Plan Review will be subject to Examination in Public by a

Planning Inspector appointed on behalf of the Secretary of State. The consultation process is detailed in the following section.

2. The consultation process

All information on the Initial consultation will be available on the County Council's website at www.norfolk.gov.uk/nmwdf (on the Minerals and Waste Local Plan Review page) and respondents will be able to make direct online responses.

The consultation documents will be available for public inspection, free of charge, within normal opening hours, at all public libraries in Norfolk and at:

- Norfolk County Council, County Hall, Martineau Lane, Norwich, NR1 2DH
- Breckland District Council, Elizabeth House, Walpole Loke, East Dereham, NR19 1EE
- Broadland District Council, Thorpe Lodge, Yarmouth Road, Norwich, NR7 0DU
- Great Yarmouth Borough Council, Town Hall, Great Yarmouth, NR30 2QF
- Borough Council of King's Lynn and West Norfolk, King's Court, Chapel Street, King's Lynn, PE30 1EX
- North Norfolk District Council, Holt Road, Cromer, NR27 9EN
- Norwich City Council, City Hall, Bethel Street, Norwich, NR2 1NH
- South Norfolk Council, South Norfolk House, Swan Lane, Long Stratton, NR15 2XE
- The Broads Authority, Yare House, 62-64 Thorpe Road, Norwich, Norfolk, NR1 1RY

The preferred method of submitting consultation responses is by using the County Council's online consultation system to make the comments directly at <https://norfolk.jdi-consult.net/localplan/>. However, emails and letters and also acceptable and the relevant contact details are as follows:

Post to: Planning Services, CES Department, Norfolk County Council, County Hall, Martineau Lane, Norwich, NR1 2DH

Email: LDF@norfolk.gov.uk

Please note that consultation responses cannot be treated as confidential and will be published on the consultation website.

You are invited to read the following document and comment on the issues raised. It would be helpful to the process if comments made can be backed up by supporting information where possible, as the Minerals and Waste Local Plan Review will be subject to Examination in Public by a Planning Inspector appointed on behalf of the Secretary of State.

We are seeking comments on:

- the draft vision
- the draft strategic objectives for waste management and for minerals development
- the draft policies for waste management facilities and for minerals development
- the proposed mineral extraction sites
- the accompanying Initial Sustainability Appraisal Report
- the draft Habitats Regulations Assessment

3. The process so far

Drafting Minerals and Waste Management Policies

The Core Strategy and Development Management Policies in Norfolk's adopted plan have been reviewed and replacement policies and supporting text have been drafted. This process has taken into account the National Planning Policy Framework, National Planning Policy for Waste, National Planning Policy Guidance, other relevant policies and guidance, the performance of current adopted policies, current data on waste management, minerals extraction, proposed development and environmental constraints in Norfolk.

Proposed Mineral Extraction Sites

Call for sites (July 2017) A call for sites was advertised for six weeks to enable landowners, mineral companies and their agents to submit land for consideration for future mineral extraction, of either sand and gravel, carstone, or silica sand during the plan period to 2036. The information required to be submitted included landowner willingness for the site to be included in the plan, geological information to provide an estimate of the mineral resource and information on the environmental constraints of the site.

Assessment of proposed sites

The specific sites proposed in response to the 'call for sites' have been assessed by Planning Officers at Norfolk County Council, in consultation with the relevant County Council officers.

The basis for the site assessments undertaken by the County Council has followed a very similar methodology to that used in the assessment of sites in the adopted Minerals Site Specific Allocations DPD and is as follows:

Landscape

- A description of the site/area of search and its landscape context;
- Any known landscape constraints (e.g. designated landscape areas);
- The presence of any landscape detractors (e.g. overhead power lines);
- Comments on how existing landscape features or viewpoints might be affected by mineral extraction;
- The landscape impact of mineral extraction (on residents, travellers/visitors' enjoyment of the countryside, light pollution etc) and whether any potential screening itself would be intrusive; and
- Consideration of whether a potential restoration scheme could be proposed which is feasible, suitable and offers opportunities for longer term landscape gains.

Ecology

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

The site assessments do not include details of any protected species found in and around the local area. New minerals sites, being located on rural greenfield sites, are likely to need a biodiversity survey and report as required by Norfolk County Council's Local List for Validation of Planning Applications, or as part of an Environmental Statement accompanying a planning application. The results of a biodiversity survey and report may impact upon the scheme of working, detail potential mitigation measures and might require planning conditions to be attached to any permission granted. However, if certain key species, especially bats or great crested newts, are thought to be

present on a site, a full survey with details of mitigation will need to accompany the planning application.

Highways

- The hierarchy level of the road used to access the site or area (e.g. HGV access route)
- If not on an HGV access route or better, the suitability of the route to the nearest suitable road (an HGV access route, principal road or distributor road)
- Details of any improvements required to make the site or area suitable in highways terms (e.g. road widening, junction improvements etc).
- Highways access for proposed silica sand extraction will be assessed in terms of suitability of the route from the proposed extraction site or area to the existing silica sand processing plant at Leziate.

Historic Environment and Archaeology

- Details of known heritage assets in the vicinity of the site/ area of search;
- Initial assessment of the historic environment in the vicinity of the site/ area of search based on the heritage conservation principles (aesthetic, evidential, historic and communal values);
- Details of known archaeological assets, including information on finds from the Historic Environment Records Service;
- Assessment of the likelihood of archaeological assets occurring on site;
- Proposals for protection/mitigation likely to be necessary for archaeological assets; and
- Whether potential mineral extraction within the site/area would be supported by Norfolk County Council's Historic Environment Service and whether this is dependent on appropriate protection/mitigation.

The initial site assessment work has been published in this consultation document along with supporting documents as required.

Sustainability Appraisal / Strategic Environmental Assessment

Through the Sustainability Appraisal process, the potential impact (positive or negative) of each planning policy option and each proposed site/area for future mineral extraction will also be assessed on:

- amenity (noise, vibration, visual intrusion, health)
- water resources/ water quality and flood risk
- geodiversity
- heritage assets – conservation areas/ listed buildings/ scheduled monuments/ historic parks and gardens / archaeology
- agricultural land grade/ soil quality
- air quality
- employment and economic growth

Sustainability appraisal is central to the planning system. The purpose of Sustainability Appraisal, which is required under the Planning and Compulsory Purchase Act 2004, is to promote sustainable development through integration of social, environmental and economic considerations into the preparation of Local Plans. The Sustainability Appraisal process helps to make sure that the proposals in the plan are the most appropriate given the reasonable alternatives, as well as a means of identifying and mitigating any potential adverse effects that the plan might otherwise have.

Sustainability Appraisals incorporate the requirements of the 'Environmental Assessment of Plans and Programmes' 204 (commonly referred to as the Strategic Environmental Assessment Directive) on the assessment of the effects of certain plans on the environment. Sustainability appraisal

ensures that potential environmental effects are given full consideration alongside social and environmental issues.

Sustainability Appraisal is an integral element of the preparation of the Minerals and Waste Local Plan Review, informing in a comprehensive way of the likely impacts of proposed planning policies, and specific sites/ preferred areas and areas of search for future mineral extraction as appropriate. The Sustainability Appraisal will form part of the evidence base for the development of the Minerals and Waste Local Plan Review.

The Initial Sustainability Appraisal is published in two parts: Part A is the Scoping Report and Part B covers developing and refining alternatives and assessing effects.

Habitats Regulations Assessment

A Habitats Regulations Appraisal will be carried out on the Minerals and Waste Local Plan Sand Review in accordance with the *Conservation of Habitats and Species Regulations 2017*. If the Minerals and Waste Local Plan Review is likely to have significant effects on European habitats or species, located within, or in the vicinity of Norfolk, then a full Habitats Regulations Assessment will be undertaken.

A Habitats Regulations Assessment is undertaken to assess the impacts of a land-use plan against the conservation objectives of European designated nature conservation sites (SPAs, SACs and also Ramsar sites) and to ascertain where the Plan would adversely affect the integrity of the site, and if so how to amend the plan to avoid any potentially damaging effects. The Habitats Regulations Assessment will form part of the evidence base for the development of the Minerals and Waste Local Plan Review.

4. What happens next?

a) This Initial Consultation (June/July 2018) This document is the first public consultation on Norfolk's Minerals and Waste Local Plan Review. It contains a draft vision and strategic objectives for minerals development and waste management facilities in Norfolk. This document contains proposed wording for policies to be used when determining planning applications for minerals extraction and associated development and waste management facilities, and policy alternatives where this is considered appropriate. This document also contains an initial assessment of the sites and areas that have been proposed for mineral extraction in Norfolk over the Plan period to 2036. This document is being published for consultation and the comments received will be entered into Norfolk County Council's e-consultation database and will be taken into account in the production of the Preferred Options consultation document.

b) Preferred Options consultation (December 2018) The Preferred Options version of the Minerals and Waste Local Plan Review will take into account the consultation responses received at the Initial consultation stage. It will contain a vision and strategic objectives for minerals development and waste management facilities in Norfolk. It will also contain proposed wording for policies to be used when determining planning applications for minerals extraction and associated development and waste management facilities. This document will also contain an assessment of the sites and areas that have been proposed for mineral extraction in Norfolk over the Plan period to 2036 and draft policy wording for those sites considered suitable to allocate. The document will be published for at least a six week consultation period and the comments received will be entered into Norfolk County Council's e-consultation database and will be taken into account in the production of the Pre-Submission version of the Minerals and Waste Local Plan Review.

c) Pre-Submission publication (September 2019) The Pre-Submission version of the Minerals and Waste Local Plan Review will be submitted to the Secretary of State and examined by a Planning Inspector. It will contain the policies detailing the requirements that planning applications for mineral extraction and associated development and waste management facilities will be determined against. The Pre-Submission document will also contain those specific sites and areas of search which are considered suitable for mineral extraction in Norfolk over the Plan period. The Pre-Submission document must be published for at least a six week period to enable representations to be made on whether or not the document is legally compliant and 'sound' (as explained in paragraph 182 of the National Planning Policy Framework)

d) Submission (December 2019) The representations received, in response to the publication of the Pre-submission document, will be entered into Norfolk County Council's e-consultation database and summarised. If there are no fundamental issues raised against the Minerals and Waste Local Plan Review, such as those raised by statutory bodies, the Council will submit the plan together with all the representations and the summary to the Secretary of State for Examination in Public.

e) Examination (March 2020) The Inspector appointed by the Secretary of State to examine the plan will consider all the representations made against the plan. The Inspector will consider the majority of representations by way of written representations received during the formal period. In some more complex cases representations may need to be presented at the public examination. It should be noted that written representations are treated with equal importance to examination appearances.

f) The Planning Inspector's Report (July 2020) Following the examination the Planning Inspector will decide whether or not the plan is legally compliant and 'sound'. In this decision the Inspector will take into account the representations received and consider the plan against the 'tests of soundness' detailed in the National Planning Policy Framework (paragraph 182). If the Inspector does not find the plan 'sound' and legally compliant then the Council will have to undertake the preparation of the plan again. The Inspector can recommend main modifications to the plan to make it legally compliant and 'sound' if required. If the Inspector does find the plan 'sound' and legally compliant then the Council can decide to adopt the plan.

g) Adoption (October 2020) Once the Council has received the Inspector's report and implemented any modifications required to the Plan, the Council will then make the decision whether to adopt the Plan or not. On adoption, the Council will produce an adoption statement that will be advertised in the local press and the adopted Plan, sustainability appraisal and adoption statement will be made available for inspection. The adopted Minerals and Waste Local Plan will form part of the Development Plan for Norfolk.

h) Planning Applications Developers wanting to extract mineral from specific sites or land within a preferred area or area of search allocated in the Minerals and Waste Local Plan Review will still need to apply for and be granted planning permission before mineral extraction can take place. Planning permissions are often granted subject to conditions to mitigate potential adverse impacts from site operations and permitted sites are monitored on a regular basis.

5. Norfolk Spatial Portrait

The purpose of this chapter is to set out the spatial context for the Minerals and Waste Local Plan Review by providing a summary of the characteristics of Norfolk that have an influence on waste arisings, how and where waste can be managed, the need for minerals and where minerals can be extracted and processed.

Within the County of Norfolk, the two-tier administrative system includes seven District Council areas, each of which is a Local Planning Authority. Overlaying parts of five of these areas is the Broads Authority, which is also a Local Planning Authority. Norfolk also contains 535 parishes. Norfolk adjoins the County of Suffolk to the south, and Cambridgeshire and Lincolnshire to the west; whilst Norfolk's north-west, north and eastern boundaries border the North Sea.

Population

The population of Norfolk was estimated to be 892,900 in 2016, compared with 857,888 in the 2011 census. Its area is 5,370 km² and the population density was 166 people per km² in 2016. Around 41 per cent of the County's population live in the four main urban areas of Norwich (224,000) Great Yarmouth (65,000), King's Lynn (48,000) and Thetford (27,000). Norfolk's population has a relatively elderly age profile; compared to England and Wales it has higher proportions of people aged 50 and over, and lower proportions in all the younger age groups.

By 2036 the population of Norfolk is expected to grow to over 1 million. Much of this growth is driven by net inward migration and an increase in the aging population.

Issues which could affect Norfolk's population from mineral extraction and associated development and waste management activities, include amenity problems such as noise, dust, odour, birds, litter and visual intrusion. Therefore the location, design and operation of minerals and waste management development is an important way to avoid and mitigate potential amenity impacts to local residents.

Households

The Objectively Assessed Need (OAN) for new housing in Norfolk for the 21 years from 2015-2036 is calculated to be over 83,000 homes. This equates to a need for approximately 4,000 new homes to be built each year in Norfolk. In addition to this OAN, Broadland, Norwich City and South Norfolk Councils will seek to deliver an additional supply of 5,228 homes within the Greater Norwich Local Plan to ensure the housing needs arising from the City Deal are met in full.

The settlement hierarchy is defined by the Local Planning Authorities in Norfolk. The settlement hierarchy ranks settlements according to their size, range of services and facilities, and their capacity for growth. The highest levels of housing growth are planned to be located in the settlements at the top of the hierarchy (urban areas and main towns). The urban areas in Norfolk are Norwich, King's Lynn (including West Lynn), Thetford, Attleborough, Great Yarmouth and Gorleston-on-Sea. The Norwich urban area includes the built up parts of the urban fringe parishes of Colney, Costessey, Cringleford, Trowse, Thorpe St Andrew, Sprowston, Old Catton, Hellesdon, Drayton and Taverham. The main towns in Norfolk are Aylsham, Cromer, Dereham, Diss, Downham Market, Fakenham, Harleston, Holt, Hunstanton, North Walsham, Swaffham, Watton, Wymondham.

Economy

Overall Norfolk has a relatively high level of self-containment as the vast majority of the resident workforce stay in Norfolk for work, although there are some strong functional cross-boundary linkages, in particular between Great Yarmouth and Lowestoft, and between King's Lynn and the Lincolnshire and Cambridgeshire Fens. Norfolk is a rural county and agriculture is the dominant land use. However, the majority of jobs in Norfolk are located in urban areas, with agriculture only accounting for less than 1 percent.

Overall Norfolk's economy is growing, although growth is stronger in some parts of the County than others. This growth is driven by certain sectors of the economy, mostly concentrated in specific geographic areas, where there are particular strengths and expertise, for example, offshore energy, advanced engineering, tech/digital, financial services, food, life sciences and tourism. Norfolk's overall employment rates have consistently remained above national levels over the past 10 years. However, this disguises substantial variation as the county includes some of the most deprived communities in the country.

In December 2013 the Greater Norwich City Deal was signed. The City Deal was expected to see 300 new businesses supported and secure an additional £100 million of private investment. The deal was also expected to create more than 19,000 jobs, including 6,000 construction jobs.

The minerals industry in Norfolk provides raw materials for the construction of buildings and roads and for glass manufacture. The provision of the steady and adequate supply of minerals and the management of waste produced by businesses and communities constitute essential infrastructure to support the economic development of the County.

Transport

Norfolk contains three trunk roads, the A11, A47 and A12. Norfolk's transport infrastructure has benefited from a number of significant improvements in recent years, including the dualling of the A11 which was completed in 2014. The Norwich Northern Distributor Road has opened in 2018 and is a key part of the Norwich Area Transport Strategy. The Highways England Roads Investment Strategy contains a number of improvement schemes for the A47 to take place from 2015 to 2020. The Long Stratton bypass on the A140 is expected to be underway by 2020. However, the majority of Norfolk's roads are B class or below and therefore it is important that minerals and waste management development are located in places where there is appropriate and safe highway access. Norfolk has two ports, at Great Yarmouth and King's Lynn. These ports can be used for the import and export of minerals and waste. Norfolk's railway lines can also be used for the movement of minerals and waste to and from the county. At the current time waste is not transported by rail in Norfolk, but silica sand is transported out of the county to glass manufacturers by rail and hard rock is imported to Norfolk by rail.

Environment

Norfolk is a county rich in important wildlife and designated landscapes. Norfolk contains a wide range of habitats including grasslands, woodlands, heathland, rivers and wetlands, farmland and coastal waters. The wider countryside also supports a considerable number of sites of local importance and has potential for habitat creation. Norfolk is home to numerous local, national, and international biodiversity designations and is an area of high landscape quality. There are seven Special Protection Areas (SPAs), twelve Special Areas of Conservation (SACs) and 162 Sites of Special Scientific Interest (SSSIs), as well as over 1,300 County Wildlife Sites. Significant habitats include the Wash, the Broads, The Brecks and the Fens.

Norfolk has 90 miles of coast and the Norfolk Coast Area of Outstanding Natural Beauty (AONB) runs, with a few breaks, from King's Lynn in the west along the coast to Winterton in the east, and covers 450 square km. Part of the Norfolk coast is also defined as a Heritage Coast which means that it is one of the best stretches of undeveloped coast in England. The Norfolk and Suffolk Broads covers 303 km² of Norfolk and Suffolk and has the status of a National Park.

Norfolk is nationally important for its geodiversity, particularly sites and features relating to the story of environmental change (including fauna, flora, climate and early human occupation) over the last two million years. Norfolk has important sites and features dating from the Cretaceous period, including the youngest chalk strata in Britain. It also has spectacular geomorphology, including the 40km stretch of coastal landforms on the north coast. Many of these sites and features have been designated as geological or geomorphological SSSIs.

Norfolk's countryside is predominantly agricultural in character. The areas to the east and north of Norwich contains generally excellent to very good soils. The area known as the Brecks surrounding

Thetford contains generally poor or very poor soils. The Fens, to the west of King's Lynn contains virtually entirely excellent or very good soils. The majority of the remaining soils in Norfolk are moderate to good quality.

Minerals extraction and associated development and waste management facilities should be located, designed and operated to ensure no unacceptable adverse impacts to the natural environment.

Air quality

Air quality throughout Norfolk is generally good and problems arise only on a localised basis. Norfolk currently (2018) contains four Air Quality Management Areas (AQMAs), one in Norwich, one in Swaffham and two in King's Lynn, which have all been declared for exceeding limits of nitrogen dioxide from traffic sources. Minerals extraction and associated development and waste management facilities should be located, designed and operated to ensure no unacceptable adverse impacts to air quality.

Historic Environment

Norfolk is an area of historical importance and has a rich and diverse history. Norfolk has over 280 conservation areas, more than 10,700 listed buildings, more than 430 scheduled monuments and more than 50 Registered Historic Parks and Gardens. Norfolk also contains a large number of areas in which either undesignated heritage assets or archaeological assets occur. Archaeological assets may either be known or unknown where the potential for assets is high but no field studies have been carried out. The Drainage Mills in the Broads and Fens are particularly important in these areas and the Broads Authority Executive Area is identified as an area of Exceptional Waterlogged Archaeology. Harm to the significance of a designated heritage asset should be avoided in the design and location of new minerals or waste management development.

Climate and Flood Risk

As Norfolk is low-lying, coastal and has a series of inland waterways and the Broads, flood risk is of particular concern throughout the county. Land within the fens area in west Norfolk and the Broads Authority Executive Area are at greatest risk of flooding from rivers and the sea. The effects of climate change are likely to increase these risks. Norfolk's Local Planning Authorities have produced Strategic Flood Risk Assessments for their areas, to assess the risk of flooding from all sources, now and in the future, taking account of the impacts of climate change. Sand and gravel extraction and silica sand extraction are 'water compatible' land uses which are appropriate in all flood zones. Carstone extraction and the majority of waste management facilities (except landfill and the management of hazardous waste) are 'less vulnerable' land uses and may be suitable in all flood zones except flood zone 3b (the functional flood plain), however, a sequential approach to the location of minerals and waste development should be taken to steer new development to areas with the lowest probability of flooding.

Minerals

Carstone is a type of sandstone that is quarried in west Norfolk. It has traditionally been used as a vernacular building material, although it is no longer used to any significant degree. Although it is classed as a 'hard rock' it is not used as a hard rock (e.g. road dressing), instead it is used primarily as fill (to raise the levels of land prior to construction) or in the formation of embankments. Therefore it is often used in the construction of roads.

Carstone deposits are located in very limited areas of west Norfolk. In 2017 there were two carstone extraction sites in Norfolk, located at Middleton and Snettisham.

Carstone production in Norfolk was 106,438 tonnes in 2016. The 10 year rolling average of carstone sales was 98,839 tonnes in the period 2007-2016. The 3 year rolling average of carstone sales was 77,982 tonnes in the period 2014-2016. The permitted reserves for carstone extraction sites in Norfolk were 2.05 million tonnes at the end of 2016. Based on the 10 year sales average, the permitted reserves provides a carstone landbank of permitted reserves of over 20 years.

Silica sand deposits are located in very limited areas of west Norfolk, a relatively narrow band which runs north to south just to the east of King's Lynn. The northern extent of the silica sand resource is at Heacham, and the southern extent around Hilgay. In Norfolk the silica sand resource is split into two broad categories, the Mintlyn Beds and the Leziate Beds; historically the Leziate Beds have been used principally for glass sand and the Mintlyn Beds for the production of foundry sand. Processing of sand for foundry use has stopped at Leziate and those parts of the process plant dedicated to their production have been removed. This reflects a general decline in the demand for foundry sand in England.

The deposit which is being worked at Leziate is one of two in England where silica sand of sufficient purity and grade for the manufacture of colourless flint (container) and float (window) glass is extracted. The other extraction site of silica sand of comparable quality is in Surrey.

Silica sand which is to be used for glass manufacture requires a significant amount of processing prior to being suitable for onward shipment to the glass manufacturers. This processing requires large and capital intensive plant such as the one operated by Sibelco UK Ltd which is located at Leziate. Consistency of material is an important consideration and this requires blending of sand from different areas of the working. The processing plant site includes a rail head to export the processed mineral for use by glass manufactures elsewhere. Norfolk is one of the most important sources of silica sand in Britain, accounting for 20 per cent of total output and approximately 60 per cent of silica sand production used for glass manufacture sourced in Great Britain in 2014.

Due to the cost and largely fixed nature of the processing plant and railhead, silica sand working has historically taken place in close proximity to the Leziate processing plant. However, this now means that the most accessible areas have either been worked or are in the process of being worked.

The 10 year rolling average of silica sand sales in Norfolk was 681,900 tonnes in the period 2007-2016. The 3 year rolling average of silica sand sales was 785,400 tonnes in the period 2014-2016. The permitted reserves for silica sand extraction sites in Norfolk were 2.62 million tonnes at the end of 2016. Based on the 10 year sales average, the permitted reserves provides a silica sand landbank of permitted reserves of over 3 years.

Sand and gravel resources are located throughout the County (with the exception of the Fens area in the far west and south-west of Norfolk). Sand and gravel is used in the construction of roads and buildings and it is a key ingredient in the production of concrete and mortar, asphalt coating for roads, as a drainage medium and in the construction of embankments and foundations. The distribution of sand and gravel sites throughout Norfolk is widespread with a relatively large number of small operators. In 2016 there were 30 permitted sand and gravel extraction sites in Norfolk operated by 14 different companies. There are, however, particular clusters of sand and gravel workings near to King's Lynn, in the north of Breckland District and around Norwich.

Sand and gravel production in Norfolk was 1.623 million tonnes in 2016. The 10 year rolling average of sand and gravel sales was 1.41 million tonnes in the period 2007-2016. The 3 year rolling average of sand and gravel sales was 1.47 million tonnes in the period 2014-2016. The permitted reserves for sand and gravel extraction sites in Norfolk were 16.53 million tonnes at the end of 2016. Based on the 10 year sales average, the permitted reserve provides a sand and gravel landbank of permitted reserves of 11 years.

Secondary and recycled aggregates are also sourced within Norfolk. The annual average quantity of inert and construction/demolition waste recovered at waste management facilities over the ten years from 2007-2016 was 435,900, however, some parts of this waste stream are unsuitable for use as a recycled aggregate (such as soil or timber). The data is not comprehensive because many operations, such as on-site recovery, are not recorded.

Marine aggregate dredging is carried out by companies on behalf of the Crown Estate and the sites are licensed by Defra; therefore Norfolk County Council does not have any planning involvement in marine aggregates and they do not form part of the Minerals and Waste Local Plan. Aggregates from marine dredging are not currently received at any ports of wharves in Norfolk. A

total of less than 500 tonnes of marine sourced aggregates was consumed in Norfolk in 2014 (the most recently available date).

Clay and chalk are also extracted in Norfolk. Clay is primarily used in the engineering of landfill sites and in flood protection schemes. Chalk is primarily used as a liming agent for farmland. In 2017 there was one active clay working at Middleton, and three active chalk workings located at Castle Acre, Caister St Edmund and Hillington. However, the resource for these minerals is considered to be abundant in Norfolk relative to the demand.

Waste management facilities

There are a number of waste management facilities within Norfolk. They include:

20 Household Waste Recycling Centres, provided by Norfolk County Council, which accepted nearly 76,000 tonnes of waste in 2016/17.

10 commercial composting facilities which received nearly 130,000 tonnes of waste in 2016/17, as well as a few small community composting facilities;

There are two metal recycling facilities at Lenwade and Great Yarmouth, one metal recycling facility at King's Lynn docks and a large number of small sites accepting scrap metal or end-of life vehicles. The metal recycling facilities received over 62,000 tonnes of waste in 2016/17;

61 operational sites for the treatment and/or transfer of waste (including municipal, commercial and industrial, hazardous, clinical, construction and demolition), which received over 1,570,000 tonnes of waste in 2016/17 and 24 sites for the treatment and transfer of inert waste (including construction and demolition waste) only, which received over 130,000 tonnes of waste in 2016/17;

There are two non-hazardous landfill sites (Blackborough End and Feltwell) in Norfolk, but they are currently inactive. These sites have a permitted void capacity (remaining landfill space) estimated to be 5.09 million cubic metres.

In 2016/17 over 350,000 tonnes of inert waste was received at inert landfill sites or used in the restoration of mineral workings.

There is a renewable energy plant operated by EPR at Thetford which received over 470,000 tonnes of waste in 2016/17. The waste received at this facility is poultry litter which is burned to produce energy.

Further detail on waste management capacity, movements, arisings and forecasts is provided in a separate Waste Management Capacity Assessment report.

6. The Strategy – Vision and Strategic Objectives

This chapter sets out the Plan Vision and Strategic Objectives for Norfolk up to 2036. The ‘Vision’ sets an aspiration for minerals and waste management development in Norfolk by the end of the Plan period. From the Vision a number of ‘Strategic Objectives’ have been defined. These are the issues and opportunities that must be addressed in order to achieve the Vision.

Minerals and Waste Local Plan Vision to 2036:

Norfolk will continue to be self-sufficient in the production of sand & gravel, whilst making an important contribution to the national production of silica sand. A steady and adequate supply of minerals to support sustainable economic growth will be planned for through allocating sufficient sites and/or areas in the Plan to meet the forecast need for sand and gravel, carstone, and silica sand.

Resources of sand and gravel, carstone and silica sand within defined Mineral Safeguarding Areas will be safeguarded from needless sterilisation by non-mineral development. Infrastructure for the storage, handling, processing and transportation of minerals will also be safeguarded from incompatible development.

All mineral workings will be covered by progressive restoration schemes and the enhancement of Norfolk’s biodiversity, and the creation of high quality, locally distinctive landscapes will be strongly supported.

Over the period to 2036, households, businesses, the public sector and voluntary organisations within Norfolk will be taking responsibility for waste prevention, re-use and recycling. The re-use, recycling and recovery of waste in Norfolk will increase, thereby reducing the quantity and proportion of waste arising in Norfolk that requires disposal.

Norfolk will aim to be net self-sufficient in waste management, where practicable. The Plan will enable sufficient waste management infrastructure to be provided for Norfolk to meet the existing and forecast amount of waste expected to arise over the Plan period. The Plan policies will offer flexibility whilst still maintaining a Plan-led approach to the delivery of waste management facilities, in accordance with the Waste Hierarchy.

New waste management facilities will be located in proximity to Norfolk’s urban areas and main towns. Defined waste management facilities and water recycling centres will be safeguarded from incompatible development.

Minerals development and waste management facilities will be located, designed and operated without adverse impacts on the amenity of local communities, the natural, built and historic environment, the landscape and townscape of Norfolk. Opportunities to enhance such features will be supported.

Minerals development and waste management within Norfolk will be undertaken in ways that minimise the impact on climate change, and will be designed and located to reduce the risk from climatic effects, such as flooding.

Question 1: ‘Minerals and Waste Local Plan Vision’ - Do you agree or disagree with the proposed Vision for the Minerals and Waste Local Plan? Do you have any comments or suggestions for alternative wording?

Draft Waste Management Strategic Objectives

WSO1. Support the prevention and minimisation of waste generation in line with the Waste Hierarchy, and where waste cannot be avoided, maximise the recovery value from waste.

WSO2. To support an increase in the proportion and the quantity of waste that is re-used, recycled and recovered within Norfolk.

WSO3. To safeguard and encourage opportunities to enhance existing waste infrastructure which provide an important contribution to waste management at sites that serve Norfolk.

WSO4. To achieve net self-sufficiency in waste management by 2036, where practicable.

WSO5. To make provision to meet the need for new waste management facilities through the inclusion of 'criteria-based' locational policies.

WSO6. To support the reduction of greenhouse gas emissions, primarily by moving waste up the hierarchy to minimise the need for landfill and by minimising waste transport and distance by locating new waste facilities as close as practicable to the origin of the waste.

WSO7. To ensure waste facilities and their proposed locations are sustainably designed, constructed and operated to reduce potential adverse effects on human health, amenity and the natural, built and historic environment.

WSO8. Recognise the importance of the waste sector in the local economy as a generator of employment and its provision of infrastructure which supports businesses and communities

The spatial strategy for waste management facilities is contained within Policy WP2 and illustrated on the key diagram.

Question 2: 'Waste Management Strategic Objectives' - Do you agree or disagree with the proposed strategic objectives for waste management? Do you have any further comments or suggestions for alternative strategic objectives?

Draft Minerals Strategic Objectives

MSO1. To provide a steady and adequate supply of aggregate minerals by identifying adequate mineral extraction sites/areas within Norfolk sufficient to meet the requirements of the Local Aggregate Assessment and safeguarding existing infrastructure.

MSO2. To provide a steady and adequate supply of industrial minerals by identifying adequate mineral extraction sites/areas within Norfolk sufficient to meet the forecast need and safeguarding existing infrastructure.

MSO3. To encourage the sustainable use of minerals by utilising secondary and recycled aggregates which will reduce the reliance on primary won aggregates and safeguarding existing infrastructure.

MSO4. To safeguard silica sand, carstone, and sand and gravel resources for future use. Avoiding unnecessary sterilisation by encouraging the extraction of minerals prior to other development taking place where practicable and using minerals in construction on the land from which they are extracted.

MSO5. To promote the sustainable transport of minerals by rail, road and water, including the safeguarding of railheads and wharfs for the import of minerals to and export of minerals from Norfolk.

MSO6. To ensure the sustainable and expedient delivery of mineral extraction while protecting people from harm, positively contributing to the natural, built and historic environments and mitigating against adverse cumulative impacts.

MSO7. To ensure potential impacts on the amenity of those people living in proximity to minerals development are effectively controlled, minimised and mitigated.

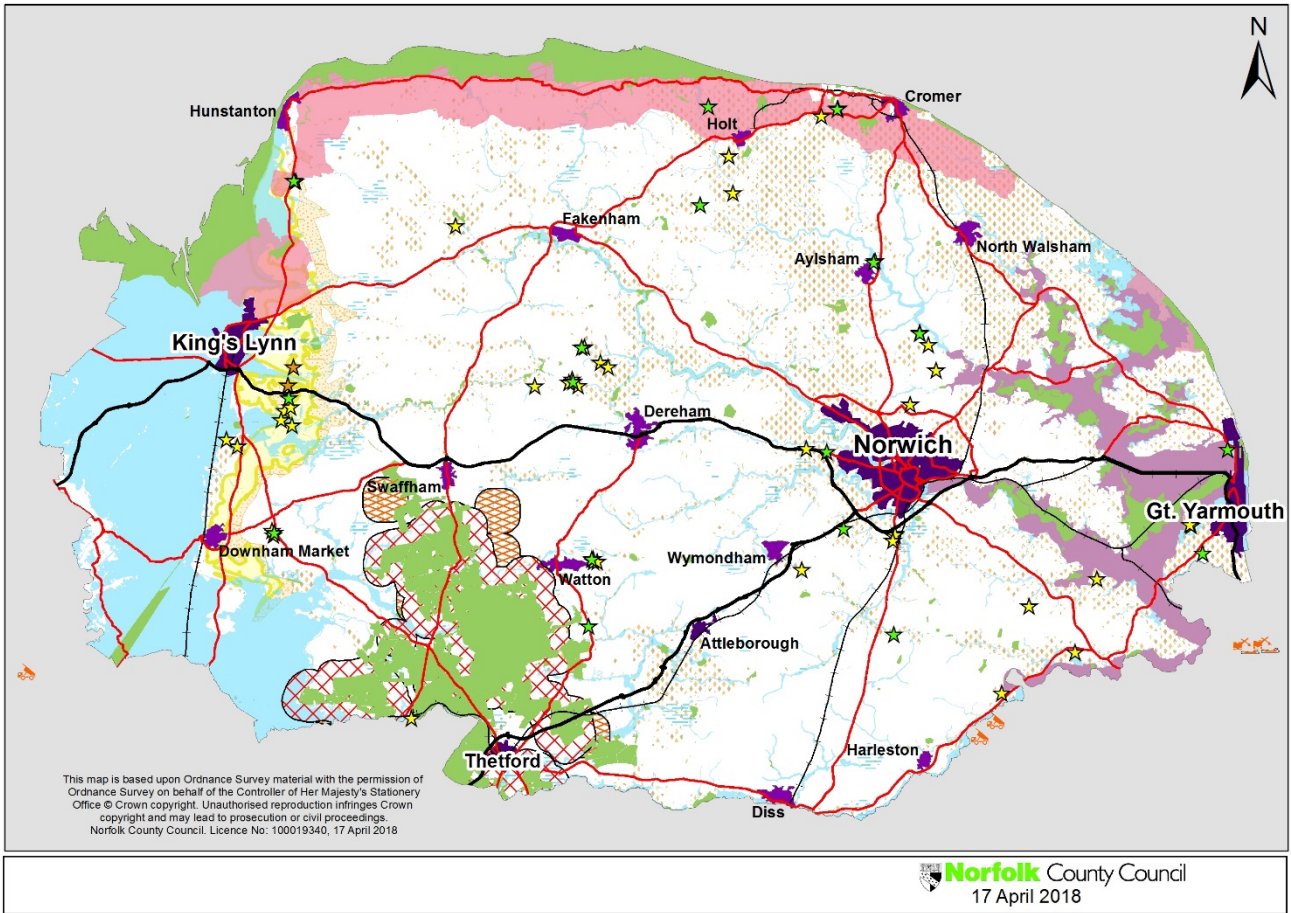
MSO8. To ensure that mineral development addresses and minimises the impacts it will have on climate change by: minimising greenhouse gas emissions during the winning, working and handling of minerals, providing for sustainable patterns of minerals transportation, and integrating features consistent with climate change mitigation and adaption into the design of restoration and aftercare proposals.

MSO9. To positively contribute to the natural, built and historic environments with high quality, progressive and expedient restoration to achieve a beneficial after use. The after use will protect and enhance the environment, including landscape and biodiversity improvements.

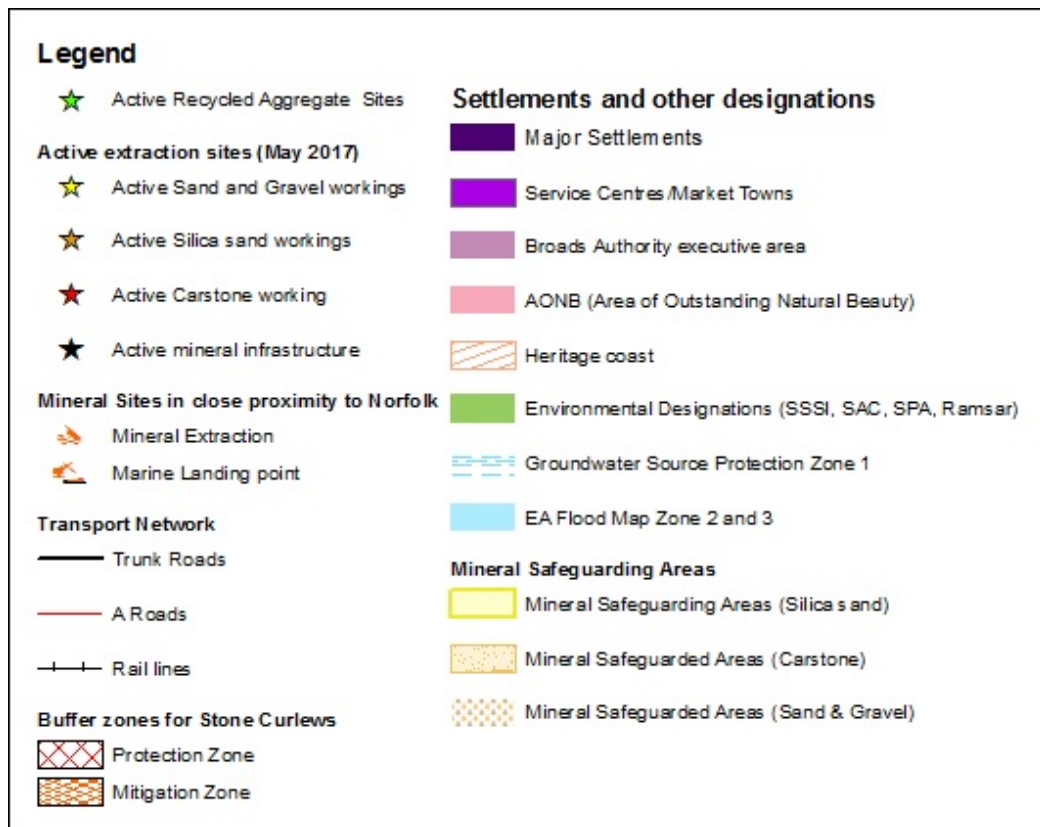
MSO10. To increase public access to the countryside and enhance biodiversity through enhancing the amenity value of land when restoring extraction sites.

The spatial strategy for mineral extraction is contained within Policy MP2 and illustrated on the Key Diagram.

Question 3: 'Minerals Strategic Objectives' Do you agree or disagree with the proposed strategic objectives for minerals? Do you have any further comments or suggestions for alternative strategic objectives?



Map 1: The Key Diagram



General Policies

7. Presumption in favour of sustainable development

At the heart of the National Planning Policy Framework (NPPF) is a 'presumption in favour of sustainable development' which should be seen as a golden thread running through both plan-making and decision-taking. The wording of the presumption is set out in paragraph 14 of the NPPF.

The NPPF explains the three dimensions of sustainable development (economic, social and environmental) and the roles of the planning system in contributing to the achievement of sustainable development.

An economic role – contributing to building a strong, responsive and competitive economy, by ensuring that sufficient land of the right type is available in the right places and at the right time to support growth and innovation; and by identifying and coordinating development requirements, including the provision of infrastructure;

A social role – supporting strong, vibrant and healthy communities, by providing the supply of housing required to meet the needs of present and future generations; and by creating a high quality built environment, with accessible local services that reflect the community's needs and support its health, social and cultural well-being; and

An environmental role – contributing to protecting and enhancing our natural, built and historic environment; and, as part of this, helping to improve biodiversity, use natural resources prudently, minimise waste and pollution, and mitigate and adapt to climate change including moving to a low carbon economy.

The policies in the Norfolk Minerals and Waste Local Plan will deliver what is considered to be sustainable development in Norfolk.

Paragraph 15 of the National Planning Policy Framework states that Local Plans should be based upon and reflect the presumption in favour of sustainable development with clear policies that will guide how the presumption should be applied locally.

The strategic policy below has been included to clarify the operational relationship between national policy in the NPPF and this Local Plan. The NPPF is a material consideration in the determination of planning applications.

Policy MW1: Presumption in favour of sustainable development

When considering development proposals, the Norfolk County Council will take a positive approach to minerals development and waste management development that reflects the presumption in favour of sustainable development contained in the National Planning Policy Framework. It will always work proactively with applicants and statutory consultees to find solutions which mean that proposals can be approved wherever possible and to secure development that improves the economic, social and environmental considerations of the area.

Planning applications that accord with the policies in this Local Plan will be approved without delay, unless material considerations indicate otherwise.

Where there are no policies relevant to the application or relevant policies are demonstrably out-of-date at the time of making the decision, then the Council will grant planning permission unless material conditions indicate otherwise - taking into account whether:

- Any adverse impacts of granting planning permission would significantly and demonstrably outweigh the benefits, when assessed against the policies in the National Planning Policy Framework taken as whole; or
- Specific policies in the National Planning Policy Framework indicate that development should be restricted.

Question 4: Policy MW1 ‘Presumption in favour of sustainable development’ - Do you agree or disagree with the proposed policy? Do you have any comments or suggestions for alternative policy wording?

8. Development Management Criteria

Minerals and waste developments can result in a range of potential benefits and operational impacts that need to be considered. The planning policy framework provided by this Plan is considered flexible enough to deal with a number of issues that may arise from different development, as well as take into account the local circumstances of each proposal.

National guidance is clear that Local Plans do not need to repeat or reformulate existing national or local policy or duplicate the existing pollution control regime.

The ‘Local List for Validation of Planning Applications’ adopted by the County Planning Authority provides guidance about the particular information that may be required to validate a planning application before it can be determined. Advice on the information to support an application should be sought on a case-by-case basis, normally through pre-application discussions with the County Planning Authority. For any proposal for minerals or waste management development that comes forward for determination, the impact of the proposal on the environment and amenity, as described below, will be carefully assessed and considered before a decision is made.

Where the impact of the proposal is unacceptable, and such impacts can’t be controlled, then planning permission could be refused. Specific measures can, however, be sometimes undertaken to mitigate any potential adverse impact to either local amenity or the environment. Such measures could include, for example, additional landscaping, sustainable drainage schemes, protection of historic assets, noise attenuation, the design of lighting (including avoidance of light pollution of the night sky), dust and vibration control, nature conservation, good building and site design and restrictions on working hours and lorry movements. The appropriate mitigation will depend on the characteristics of the proposal, the site and the surrounding area.

The production of waste is a natural result of economic and social activity by businesses and consumers. Wastes can also be an input to economic activity, either as a material or through energy recovery. The management of that waste has economic implications for productivity, government expenditure, and the environment. The waste industry contributes to the economy of Norfolk as an employer and businesses require effective waste management to offset costs associated with disposing of the waste it produces.

Minerals are essential to support sustainable economic growth and our quality of life. It is therefore important that there is a sufficient supply of material to provide the infrastructure, buildings, energy and goods that the country needs. The minerals industry contributes to the economy of Norfolk as an employer and providing raw materials for the construction of buildings and roads and for glass manufacture.

The provision of minerals and the management of waste are therefore important to the economic growth of Norfolk and this needs to be taken into consideration when assessing planning applications for minerals or waste management development.

The Development Management Criteria Policy MW2 details the issues that will be taken into account when reaching a decision on a particular planning application to ensure that permitted sites represent sustainable development.

Policy MW2: Development Management Criteria

Proposals for minerals development and/or waste management development will be permitted where it can be demonstrated that the development would not have an unacceptable impact (including cumulative impact in combination with other existing or permitted development) on:

- a. Local amenity and health (including noise levels, odour, air quality, dust, litter, light pollution and vibration);
- b. The quality of surface waterbodies and groundwater, with particular regard to preventing the deterioration of their existing status, and the quantity of water for resource purposes within water bodies;
- c. The capacity of existing drainage systems;
- d. Pluvial and fluvial flood risk;
- e. The best and most versatile agricultural land;
- f. Aircraft safety due to the risk of bird strike and/or building height and position;
- g. The safety and capacity of the road and any other transport network;
- h. The appearance, quality and character of the landscape, countryside and visual environment and any local features that contribute to its local distinctiveness;
- i. Public Open Space, the definitive Public Rights of Way network and outdoor recreation facilities;
- j. Land stability;
- k. The natural and geological environment (including internationally, nationally or locally designated sites and irreplaceable habitats);
- l. The historic environment, including heritage and archaeological assets and their settings; and
- m. The character and quality of the area, in which the development is situated, through poor design.

Where appropriate, enhancement of the environment would be sought, including, but not exclusively, the enhancement of the Public Rights of Way Network, creation of recreation opportunities and enhancement of the natural, historic and built environment and surrounding landscapes.

Question 5: Policy MW2 ‘Development Management Criteria’ - Do you agree or disagree with the proposed policy? Do you have any comments or suggestions for alternative policy wording?

Pollution and Local Amenity Impacts

“Local amenity impact” is usually understood to mean the effect of the proposed development on the existing visual and aural characteristics of the immediate neighbourhood, including the impact on any residential and non-residential uses in the vicinity. Impacts on amenity can cover a range of potential pollution and disturbance from, for example, light, noise, dust, and odour as well as concerns of the possible effects on human health from the development. When considering planning applications the County Planning Authority must be satisfied that those potential adverse impacts have all been satisfactorily investigated and addressed.

The National Planning Policy Framework states that “local planning authorities should focus on whether the development itself is an acceptable use of the land, and the impact of the use, rather than the control of processes or emissions themselves where these are subject to approval under pollution control regimes. LPAs should assume that these regimes will operate effectively.”

Detailed controls are exercised through specific pollution prevention and control regimes primarily regulated by the Environment Agency (EA) and Local Authority Environmental Health Officers (EHOs). However, potential pollution and health impacts can be ‘material considerations’ when determining applications and an assessment of the likely environmental impacts of a proposal could

be required. The EA and EHOs will be consulted on minerals and waste planning applications, where appropriate.

Levels of disturbance will vary according to the nature of the proposed development and the relationship to the surrounding area. Factors to be taken into account include:

- The proximity of proposed development to homes, schools and other sensitive and incompatible land-uses,
- The location and siting of plant and other ancillary development,
- The topography of the site and the surrounding area (including natural and man-made features which can reduce impacts, such as landscape features), and,
- The site's relationship with roads, railways and waterways.

Many potential pollution impacts can be overcome by using measures to remove or reduce emissions at source, or by adopting appropriate working practices. Examples of these measures include:

- Controlling working hours,
- Locating plant away from neighbouring developments,
- Housing machinery indoors or attaching silencers to plant,
- Using water sprinklers to reduce dust, installing wheel washing for lorries, and,
- Directing lighting downwards and away from properties.

If permission is granted, planning conditions may be imposed to help mitigate any impact on local amenity.

Biodiversity and Geological Conservation

There are numerous sites of biodiversity and geological interest in Norfolk and these will continue to be afforded strong protection. Norfolk has important international and national designations, namely Special Areas of Conservation, Special Protection Areas, Ramsar Sites, National Nature Reserves and Sites of Special Scientific Interest. There are also important areas of ancient woodland and areas of particular geological significance, some of which are designated as Local Geological Sites.

Within national planning policy, individual sites designated for their importance to biological or geological diversity at an international or national level receive statutory protection, whilst those designated at a local level gain protection through District, Borough or City Local Plans. The Plan seeks to ensure that there are no unacceptable adverse impacts on these important assets. Planning permission for minerals or waste management development affecting an international site (Natura 2000 site) will only be granted where the conclusions of a project-level Habitats Regulations Assessment (HRA), where one is required, demonstrate that the proposal will have no adverse impacts on the integrity of any site, either alone or in combination with other plans or projects.

Minerals or waste management development which impacts on Sites of Special Scientific Interest, National Nature Reserves and irreplaceable priority habitats such as ancient woodland and aged or veteran trees will only be permitted where the impact does not conflict with the wildlife or geological conservation interests of that asset. Locally designated sites form a significant and important part of Norfolk's natural resource, often contributing to ecological connectivity and landscape linkages. Minerals or waste management development that will impact on County Wildlife Sites, Local Geological Sites, Local Nature Reserves, other priority habitats and protected and priority species will only be permitted where it can be demonstrated that the proposal will not significantly harm the site or the benefits of the development outweigh any adverse effects and such effects can be satisfactorily mitigated or, as a last resort, compensated for, e.g. through offsetting. Proposals that can show a positive contribution to the restoration, creation, protection, enhancement and management of ecological networks at the landscape scale will be encouraged.

A baseline ecological survey will be necessary where biodiversity features are present on a proposed site. Such surveys are essential in identifying what exists on a proposed mineral or waste management site and establishing whether such features should be retained and managed.

Visual and Landscape Character Impacts

The character of Norfolk is important to residents and visitors alike. The visual impact experienced as a result of the development of minerals or waste management development on the landscape and townscape is a key consideration when deciding planning applications.

The Norfolk Coast Area of Outstanding Natural Beauty is a nationally important landscape. The north Norfolk coast from Holme-next-the-Sea to Salthouse is also defined as a Heritage Coast which means that it is one of the best stretches of undeveloped coast in England. The Norfolk and Suffolk Broads is Britain's largest protected wetland and has the status of a national park. There are also important areas of ancient woodland across Norfolk, often with veteran trees. Norfolk's river valleys are also distinctive landscape features. All of these landscape features will be strongly protected from any adverse impacts arising from minerals or waste management development.

Landscape Character Assessments have been carried by the Local Planning Authorities in for Norfolk and they consider where locally designated landscapes of importance are situated. Particular features that create local distinctiveness or character should be protected from future loss; this includes features such as topography, habitats that are unique to an area, geology (e.g. unique formations or preserved quarry geology) and historic landscapes (which may contain features such as ancient hedgerows and historic field boundaries). The intrinsic character of the Norfolk countryside should be recognised in preparing proposals for minerals or waste management development.

Mineral development in the countryside should pay particular regard to the local landscape and should aim to protect and enhance this, including through restoration and after-use. Impacts on the landscape can be avoided, reduced or overcome by a variety of measures including:

- Safeguarding local features (such as significant topography, woodland, veteran trees, hedgerows and viewpoints) to retain biodiversity networks and provide part of the framework for restoration,
- Using planting schemes and landscaped bunds and mounds to screen minerals development,
- Early design and planting of appropriate native species to enhance landscape character, support biodiversity networks and provide mature features to be later incorporated into restoration proposals,
- The careful siting of plant and machinery, including providing this at low level and using colour recessive paint.

Recreation

The Public Rights of Way (PROW) network provides an important means of accessing the countryside. Where relevant, applications for minerals or waste management development will be required to ensure that PROW remain usable at all times or provide satisfactory alternative routes. Alternative paths and any necessary diversions of existing paths will be required to be in place prior to the closure of the existing PROW. Restoration schemes should, in the first instance, be seen as an opportunity to enhance and upgrade PROW where possible, especially with regard to the provision of Bridleways as multiuser paths as part of any permission granted. In all cases, restoration schemes should provide for access which is at least as good as that existing before workings began.

The closure of a PROW, where no alternative route is provided, will not normally be acceptable.

Local recreation assets, including Public Open Space and other outdoor facilities such as country parks, are protected in District, Borough and City Local Plans. Open Access Land is designated through the Countryside and Rights of Way (CROW) Act 2000. Minerals and waste management proposals will be expected to mitigate any unacceptable impact on such designations.

Heritage assets

The historic environment contributes towards creating local distinctiveness and a sense of place by understanding our past. Heritage assets (and their setting) are an irreplaceable resource and should be conserved in a manner appropriate to their significance. Within the existing policy hierarchy,

individual heritage assets designated at an international or national level receive statutory protection (under specific heritage legislation, such as Scheduled Monuments, Listed Buildings, Conservation Areas, Registered Parks and Gardens, and Registered Battlefields) whilst others designated at a local level are subject to protection through District, Borough and City Local Plans.

Information on archaeological sites and material in Norfolk is held in the Historic Environment Record. However, not all archaeological remains are known about and recorded. To safeguard presently unknown remains, an archaeological assessment should be carried out by the developer if an area is likely to be of high archaeological potential (as implied by the Historic Environment Record). The assessment must be carried out before a planning application is submitted as this will help determine the suitability of the proposal, appropriate methods of working and suitable conditions if planning permission is granted.

Land and soil resources

The presence of the best and most versatile agricultural land (defined as land in grades 1, 2 and 3a of the Agricultural Land Classification) should be taken into account, alongside other sustainability considerations, when minerals development or waste management proposals affect such land. The NPPF states that “where significant development of agricultural land is demonstrated to be necessary, local planning authorities should seek to use areas of poorer quality land in preference to that of a higher quality”.

Minerals development is, in almost all cases, a temporary use of land, followed by restoration. Therefore, proposals for mineral working on higher grade agricultural land must protect these soils in order to enable the site to have the potential to revert back to productive agricultural use in the future. Top-soil and sub-soil should be carefully removed and handled with care and stored separately during the preparation and working of a mineral site. This will support later land restoration to agriculture and other beneficial uses. The overall integrity of land and soil should be protected during working and long-term use of the site once it is fully restored.

Measures must be taken to ensure the sides of mineral workings are stable and will not result in subsidence either on or off site. Surrounding areas and properties must not be adversely affected by the effects of subsidence or land slippage. Where mineral sites adjoin roads, railways, bridges, or energy transmission routes, appropriate land margins must be provided to ensure the continued structural integrity of this vital infrastructure.

The transport network

Most current minerals and waste sites in Norfolk are served by Heavy Goods Vehicles (HGVs) using the local road network, although Sibelco’s silica sand complex at Leziate exports around three-quarters of the processed silica sand by rail.

The movement of HGVs to and from minerals and waste sites can have significant effects on roads, other road users and the local community. Alternatives to road freight, such as rail and water-borne freight distribution of minerals and waste will be strongly encouraged, but in Norfolk the majority of bulk materials are likely to continue being transported by road as this is currently the most feasible mode of transport.

Much of Norfolk’s road network is made up of minor rural roads that are generally unsuitable for large vehicles and heavy traffic flows. A large proportion of Norfolk’s unclassified road network is of unsuitable construction and alignment to cater for significant HGV traffic and in addition there can be localised amenity impacts from HGV traffic.

An assessment of the impacts of transporting minerals and associated products to and from quarries, and the movement of waste is a key consideration in determining the acceptability of development proposals. As detailed in Policy MW3 ‘Transport’ it is anticipated that mineral and waste developments proposing reliance on the road network will be accompanied by a Transport Statement or Assessment. If planning permission is granted, it may be necessary to impose restrictions on the number of vehicle movements and the routes used, in order to mitigate against any potential impacts on the highway network and local amenity.

Flooding, water resources and water quality

The risk of flooding should be minimised for people, property and the natural environment. Development can increase surface water run-off to streams and rivers, through increasing built development in the local environment. To prevent or minimise this risk, proposals should incorporate effective surface water management, such as sustainable drainage systems, where necessary to ensure flood risk is not increased.

In general terms, waste treatment (excluding landfill or the management of hazardous waste) is defined as a 'less vulnerable' land-use in the NPPF; therefore, it may be appropriate in Flood Zones 2 and 3a. Sand and gravel extraction and silica sand extraction are defined as 'water compatible development' (potentially appropriate in all flood zones) whilst other mineral working and processing, including carstone extraction, is a 'less vulnerable' land use; therefore minerals development may be appropriate in Flood zones 2 and 3a. A 'sequential test', as set out in the NPPF, is applied to new developments to steer development to areas with the lowest probability of flooding.

As well as flood risk, the effect of minerals and waste management development on all water bodies should be addressed. This includes the quality and quantity of surface water and groundwater. A further consideration could be the protection of sources of drinking water, identified via designated Source Protection Zones. Development proposals must therefore prevent the pollution of surface water and groundwater by chemicals and other contaminants. Minerals development must also ensure there will be no significant change to groundwater or surface water levels, including careful monitoring of any 'dewatering' operations (whereby water is pumped out of a pit to allow dry working below the water table) to ensure no adverse impacts on surrounding water availability.

Potential hazard to aircraft from bird strike

Aerodrome safeguarding guidance is set out in the <https://www.gov.uk/government/publications/safeguarding-aerodromes-technical-sites-and-military-explosives-storageareas>.

The purpose of safeguarding aerodromes is to ensure that the operation and development of civil and military airfields is not inhibited by development that has the potential to increase the number of birds and the 'birdstrike' risk of aircraft damage or danger to life. The safeguarding area for potential bird hazards is a 13km radius from the centre point of civil and military aerodromes. Other potential risks to aerodromes include buildings and lighting affecting telecommunications and visibility, and tall structures affecting flightpaths.

Waste management facilities, especially non-hazardous landfill sites, have the potential to attract birds. Whilst the process of mineral extraction does not in itself attract bird populations, the restoration and after-use of workings may involve the creation of water features, nature reserves and berry producing plants all of which have the potential to attract flocks of birds.

A number of aerodromes and technical sites are located within Norfolk, or have consultation areas within Norfolk. Within Norfolk safeguarding areas have been established for Norwich Airport and RAF Marham, whilst the safeguarding areas around RAF Mildenhall, RAF Lakenheath and RAF Honington in Suffolk, extend into parts of West Norfolk and Breckland. There are smaller airfields in Norfolk used for business aviation and recreational flying where similar safeguarding considerations also apply. There are also safeguarding areas around the MoD technical sites at Neatishead, Trimingham and Weybourne. The boundary of the safeguarded area for each site is shown on the Policies Map. The location and boundary of a safeguarded site is determined by the consultee and is not a matter of discretion for the County Council.

Proposals for site working, restoration and after-use must give careful consideration to the form of working and landscaping, planting and water features if located within an airport/ aerodrome/ or military safeguarding area.

Cumulative impacts

It is appropriate to consider the cumulative impact of any proposed mineral or waste management development especially upon amenity, the economy, the natural and built environment and the local road network.

In determining an application for new mineral or waste management development, account will normally be taken of the potential cumulative impact with other development within the locality and in particular the area's capacity to absorb that change.

Cumulative impacts from mineral development could arise if mineral sites in proximity to one another were worked at the same time, or if working in a particular area was to continue over a long period of time. Potential applicants should consider what other existing and proposed development will take place under their control, or otherwise, in the area when formulating their own proposals to avoid unacceptable cumulative impacts. The MPA will normally require a primary site to have extraction completed and be undergoing restoration before a new extension area is prepared for extraction.

Where cumulative impacts have not been, or are unable to be satisfactorily addressed through the application, the County Planning Authority could have grounds to refuse permission for that development.

9. Transport

Norfolk's 3rd Local Transport Plan 2011-2026 identifies six priorities: maintaining and managing the highway network, delivering sustainable growth, enhancing strategic connections, reducing emissions, improving road safety and improving accessibility.

Most current minerals and waste sites in Norfolk are served by Heavy Goods Vehicles (HGVs) using the local road network, although Sibelco's silica sand complex at Leziate exports around three-quarters of the processed silica sand by rail.

The movement of HGVs to and from minerals and waste sites can have significant effects on roads, other road users and the local community. Alternatives to road freight, such as rail and water-borne freight distribution of minerals and waste will be strongly encouraged, but in Norfolk the majority of bulk materials are likely to continue being transported by road as this is currently the most feasible mode of transport.

Much of Norfolk's road network is made up of minor rural roads that are generally unsuitable for large vehicles and heavy traffic flows. The impact of HGV traffic on unsuitable roads can be significant in terms of physical damage. A large proportion of Norfolk's unclassified road network is of unsuitable construction and alignment to cater for significant HGV traffic and in addition there can be localised amenity impacts from HGV traffic.

One of the aims of the Highway Authority is to keep commercial vehicles away from areas where their presence would result in danger/unacceptable disruption to the highway or cause irreparable damage.

Highways England is responsible for managing the trunk roads in Norfolk (the A11, A47 and A12). The County Council has, of many years, designated every non-trunk road in Norfolk as a category within the Route Hierarchy. In declining order of appropriateness, the Route Hierarchy is: Principal Roads (generally A roads), Main Distributor Roads (generally B roads), Local Access Roads, HGV access Roads, Tourist Access Roads (generally C roads) and Other Roads (normally C or unclassified roads). The intention for new minerals and waste sites is to ensure that HGVs take the shortest practicable route (avoiding inappropriate junctions and travel through settlements where possible) to the nearest Principal Road or Main Distributor Road.

An assessment of the impacts of transporting minerals and associated products to and from quarries, and the movement of waste is a key consideration in determining the acceptability of development proposals.

Road improvements by, or on behalf of a developer, may be required to mitigate any potential adverse transport impacts. Any improvements must be in accordance with the standard for HGV routes in Norfolk County Council's latest guidance on the Route Hierarchy. In cases where a highways improvement scheme has been identified by the County Highway Authority or Highways England, developers will be required to make an appropriate financial contribution to the scheme.

When determining planning applications for minerals and waste development, it may be necessary to use planning conditions to impose restrictions on the number of vehicle movements and to secure acceptable routing of HGVs when this is considered necessary to minimise highways and amenity impacts from HGV transport.

Policy MW3: Transport

All proposals for minerals development or waste management facilities must assess and consider positively the potential for non-HGV transportation of materials to and from the facilities, principally by rail or water.

The County Council will consider minerals and waste development proposals to be satisfactory in terms of access where anticipated HGV movements, taking into account any mitigation measures proposed, do not generate:

- a) Unacceptable risks to the safety of road users and pedestrians;
- b) Unacceptable impacts on the capacity and/or efficiency of the highway network (including the trunk road network);
- c) Unacceptable impacts on air quality (particularly in relation to any potential breaches of National Air Quality Objectives and impacts on any Air Quality Management Areas);
- d) Unacceptable physical impacts on the highway network (e.g. road or kerbside damage).

Planning applications for new minerals development or waste management facilities, or proposals that generate an increase in traffic movements or traffic impact, must be accompanied by a Transport Statement or Transport Assessment that demonstrates:

- Suitable highway access and egress in accordance with published highway design guidance;
- A suitable route to the nearest major road (trunk road or principal road or main distributor road), which may need to be incorporated in a formal Routing Agreement;
- Consideration of other road users, including cyclists, horse riders and pedestrians; and
- Measures to reduce car travel to the site by workers and visitors and encourage walking, cycling and use of public transport.

Question 6: Policy MW3 'transport' - Do you agree or disagree with the proposed policy? Do you have any comments or suggestions for alternative policy wording?

10. Climate change mitigation and adaption

There is a need to reduce the contribution to climate change from minerals development and waste management facilities, while also adapting to its potential effects.

Norfolk is one of the driest counties in the UK and there is a need to minimise demands on potable water resources, particularly in the context of climate change. Large parts of Norfolk are at risk from flooding, particularly coastal and river localities, and particularly from surface water run-off after storm events; again an issue that will be compounded by climate change. The design and siting of new development can contribute to mitigation and adaption to climate change. New minerals development and waste management facilities should therefore include appropriate measures to ensure mitigation and adaption to climate change.

Minerals and waste developments have the potential to generate renewable energy (e.g. through solar panels, wind turbines, ground source heat pumps etc.) which could meet some of their electricity needs. Applicants should endeavour to generate 10 per cent of the energy used on site from decentralised and renewable or low carbon sources. Given the rural location of mineral sites, it is not considered practicable to seek a higher minimum threshold than this. It is recognised that in some cases it may not be practicable to meet the 10 per cent minimum, perhaps because of financial reasons, site size, physiographical constraints of a site, environmental or landscape impacts. If the applicant considers that this is the case, the policy requires evidence to be provided to the County Planning Authority.

Policy MW4 provides the framework for the County Council's determination of minerals and waste development proposals in relation to climate change issues:

Policy MW4: Climate change mitigation and adaption

New minerals sites and waste management facilities (including extensions to existing sites) should, through their construction and operation, minimise their potential contribution to climate change through reducing carbon and methane emissions, incorporate energy and water efficient design strategies and be adaptable to future climatic conditions.

Proposals for new minerals and waste developments (including extensions to existing sites) should:

- a) take account of landform, layout, building orientation, massing and landscaping to minimise energy consumption, including maximising cooling and avoiding solar gain in the summer,
- b) be planned so as to minimise carbon dioxide and methane emissions;
- c) endeavour to generate a minimum of 10 per cent of the energy used on site from decentralised and renewable or low-carbon sources. Where it is not considered practicable to meet this 10 per cent minimum, evidence must be provided to the County Planning Authority;
- d) demonstrate the use of sustainable drainage systems, water harvesting from impermeable surfaces and layouts that accommodate waste water recycling;
- e) take account of potential changes in climate including rising sea levels and coastal erosion;
- f) not result in an unacceptable risk of flooding on site or an increase in flood risk elsewhere, as demonstrated by a Flood Risk Assessment, where required by the National Planning Policy Framework, and;
- g) incorporate proposals for sustainable travel, including travel plans where appropriate.

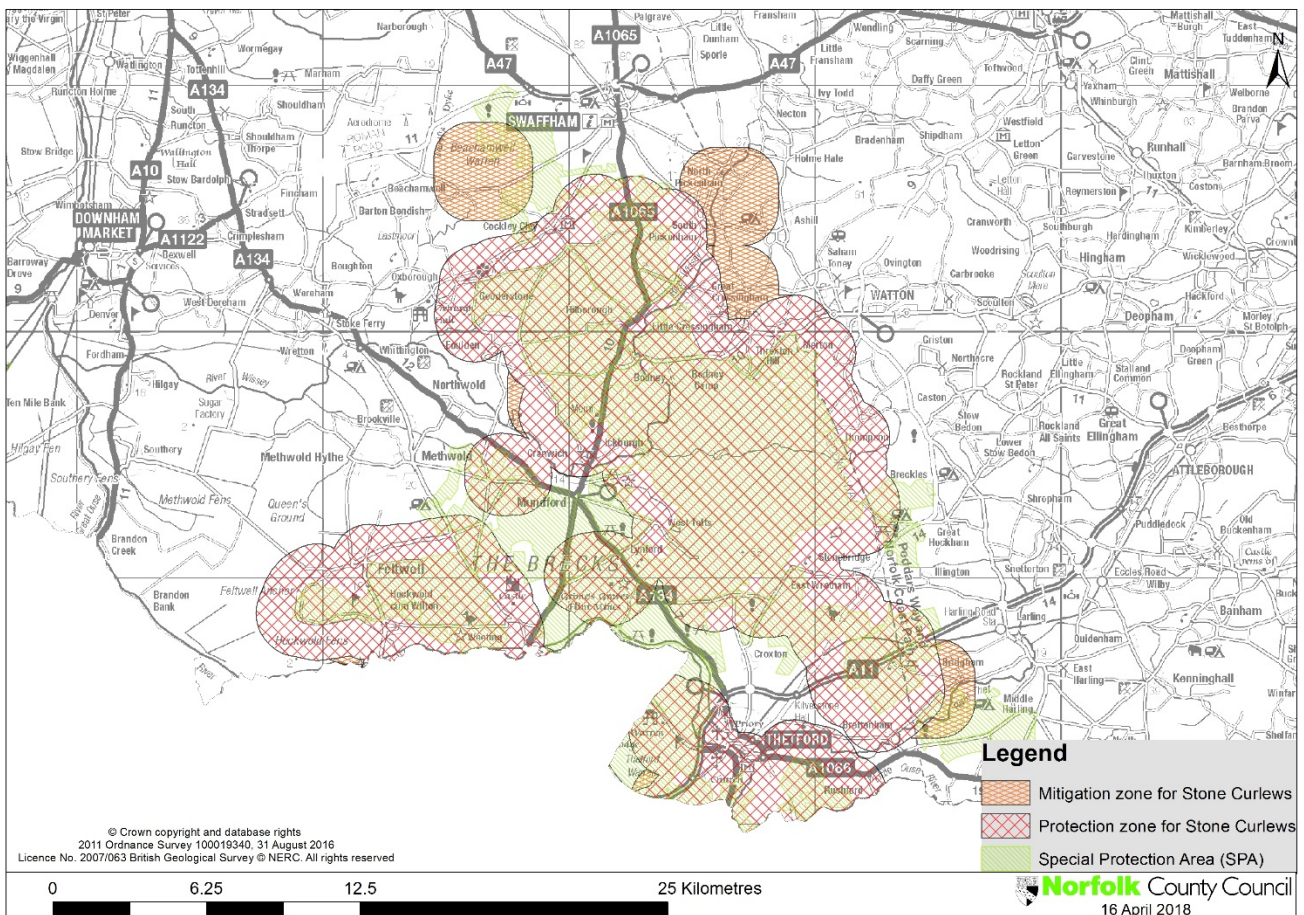
Question 7: Policy MW4 'climate change mitigation and adaption' - Do you agree or disagree with the proposed policy? Do you have any comments or suggestions for alternative policy wording?

11. The Brecks Protected Habitats and Species

Covering 39,141ha of heathland, forest and arable farmland, The Brecks is of International and European value to birdlife. Designated in 2006 as a Special Protection Area (SPA) under the European Council's Directive on the Conservation of Wild Birds, The Brecks habitat is important for a range of ground-nesting birds, including the Stone Curlew, Woodlark and Nightjar. The East of England supports 65% of the UK's breeding pairs of Stone Curlew where most breeding is located within The Brecks. The rich biodiversity of The Brecks is also recognised through other statutory conservation designations including four Special Areas of Conservation (SACs), numerous SSSI and National Nature Reserves (NNR). SSSIs and NNRs make up 40% of the total area.

Evidence used to support the adoption of the Breckland Core Strategy in 2009 included research to inform the Habitats Regulations Assessment (HRA) of the Breckland Core Strategy which examined the effects of housing and roads on the distribution of the Stone Curlew in The Brecks. The adopted mitigation policy required that any new built development which may impact on the SPA must be subject to Appropriate Assessment. New built development is not permitted within 1,500m of the edge of the SPA unless it can be demonstrated by an appropriate assessment that the development would not adversely affect the integrity of the SPA. Such circumstances may include the use of existing buildings and development where completely masked from the SPA by existing development.

Stone Curlews are also found outside the SPA; these birds are clearly part of the SPA population and functionally linked. Accordingly, areas have been identified where there are concentrations of Stone Curlew (using data gathered over the periods 1995-2006, and 2007-2015).



Map 2: Stone Curlew buffer zones

In 2013 a "Further Assessments of the Relationship between Buildings and Stone Curlew Distribution" study was carried out by Footprint Ecology on behalf of Breckland Council to update

previous work on the effect of buildings and roads on Stone Curlews in The Brecks. Including new analysis and using additional survey data, this study report focused on the effects of buildings on the distribution of breeding Stone Curlew in The Brecks. The report provides strong support for the continuation of a 1,500m zone around the areas capable of supporting Stone Curlews. Within this zone additional built development is likely to have a significant effect on the SPA.

The 2013 research also suggests that the planting of woodland/screening as a mitigation measure is unlikely to be effective and that the effect of nest density is strongest as a result of the amount of buildings rather than type. One of the key aims of the research was to differentiate the effects of nest density due to different building classes. Due to the sample size and number of buildings identified there needs to be an element of caution applied to the results, however, the research indicates that there was no evidence of a negative impact of agricultural or commercial buildings. As such, the analysis suggests that project level HRA for non-residential development in the SPA buffer zones may be able to demonstrate that adverse effects can be ruled out.

Policy MW5: The Brecks Protected Habitats and Species

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

Stone Curlew

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

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

Built development within the SPA boundary, or located less than 1,500m away from the SPA boundary or identified areas that have a functional link (see Map 2) will not normally be permitted.

Where a proposed building is outside the SPA but within 1,500m of the SPA boundary or identified areas that have a functional link (see Map 2), there may be circumstances where a project level Habitats Regulations Assessment is able to demonstrate that the proposal will not adversely affect the integrity of the SPA.

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

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

Woodlark and Nightjar

Built development within 400m of the SPA that support, or are capable of supporting Woodlark and/or Nightjar will not normally be permitted.

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

Question 8: Policy MW5 ‘The Brecks Protected Habitats and Species’ - Do you agree or disagree with the proposed policy? Do you have any comments or suggestions for alternative policy wording?

12. Agricultural soils

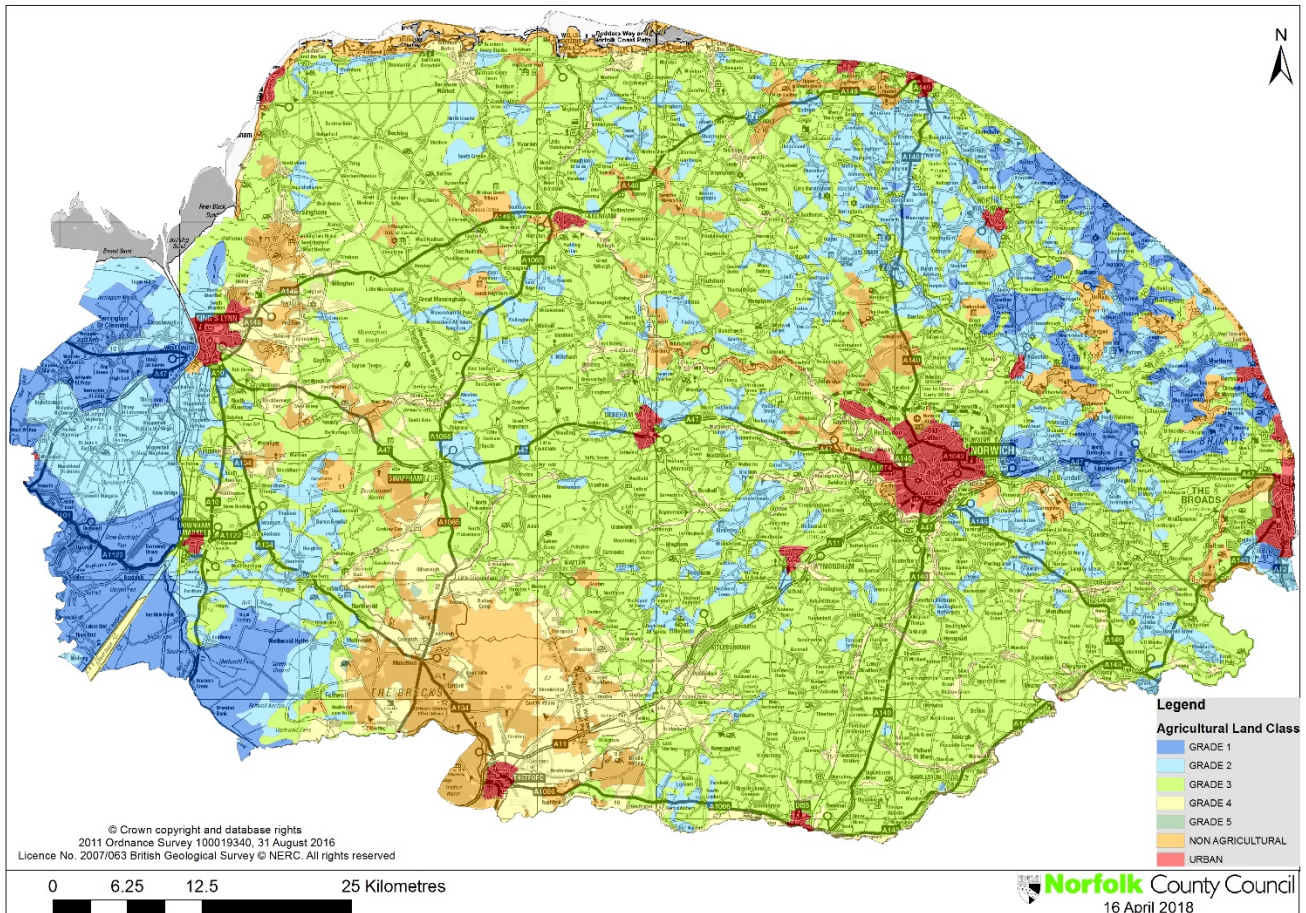
Norfolk is predominately rural in nature and agriculture plays a significant role in the local economy and heritage. Continuing to preserve good quality agricultural land is important as it will benefit the economy as well as Norfolk’s landscape. Agricultural land is divided into five grades as follows:

- Grade 1 – excellent quality
- Grade 2 – very good quality
- Grade 3 – good to moderate quality
- Sub-grade 3a – good quality
- Sub-grade 3b – moderate quality
- Grade 4 – poor quality
- Grade 5 – very poor quality

The Best and Most Versatile (BMV) Agricultural Land consists of grades 1, 2 and 3a. The NPPF states that “where significant development of agricultural land is demonstrated to be necessary, local planning authorities should seek to use areas of poorer quality land in preference to that of a higher quality”. However, minerals development is, in almost all cases, a temporary use of land, followed by restoration. It is therefore normally possible to remove and store topsoils and subsoils during an operational phase, and then to replace them afterwards to bring a site back into agricultural use, if appropriate.

Grade 1 soils are a vital national resource and Norfolk contains some significant areas of Grade 1 land, particularly in the peaty soils of the Fenland area and the Broads. Grade 2 soils are distributed more widely across the county, albeit in smaller patches, but Grade 3 soils make up the majority of Norfolk’s agricultural land, with smaller areas of Grade 4 land, located mainly in the drier and more free-draining Brecks.

Given their nature, most waste management facilities will tend to be suitably located on previously developed land and industrial locations and it is not expected that there will be a great need to locate such uses on agricultural land. However, some waste developments, particularly composting, may be more appropriate on agricultural land as opposed to in industrial areas. Where a waste management facility is proposed on BMV agricultural land, policy MW6 will still apply.



Map 3: Agricultural land grades

Policy MW6: Agricultural soils

Where development is proposed on agricultural land, the County Council has a clear preference for locating new mineral extraction and associated activities, and composting facilities, on land of agricultural grades 3b, 4 and 5.

Development proposals affecting Grade 1 agricultural land will only be permitted in exceptional circumstances, where it is demonstrated that there are no alternative locations for the development.

In addition to the above, when minerals development, particularly extraction, is proposed on agricultural land of grades 1, 2 or 3a it will only be permitted where:

- Provision is made for high standards of soil management that would enable restoration to a condition at least as good as its previous agricultural quality. To demonstrate this, soil and land quality surveys, and soil handling and replacement strategies (based upon Defra's 'Good Practice Guide for Handling Soils') must be submitted to the County Planning Authority; or
- The benefit of restoring the land to another after-use can be shown to outweigh the loss of the agricultural use of the land.

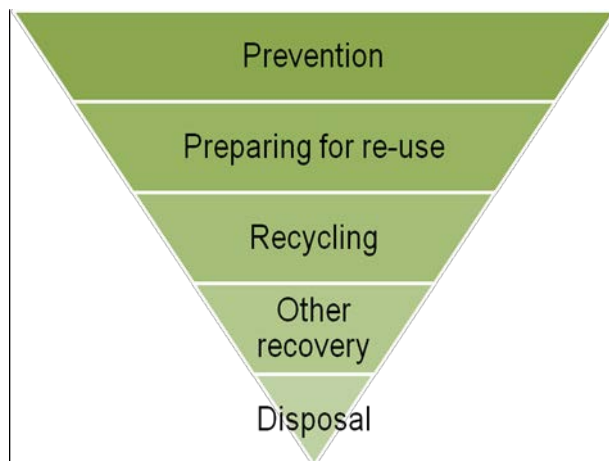
Question 9: Policy MW6 'agricultural soils' - Do you agree or disagree with the proposed policy? Do you have any comments or suggestions for alternative policy wording?

WASTE MANAGEMENT SPECIFIC POLICIES

National Planning Policy for Waste

National Planning Policy for Waste requires that Waste Planning Authorities should identify sufficient opportunities to meet the identified needs for their area for the management of waste streams.

A significant element of the planning policy context for waste is the Waste Hierarchy. The intention is that, in making decisions about waste management, greater weight should be attributed to those waste management methods that are at the top of the hierarchy. In order of preference the waste hierarchy is:



In terms of planning this has meant a change from planning for new temporary landfill sites in former quarries and instead the emphasis is now on permanent fixed facilities in employment areas or other suitable sites. This Plan is mainly concerned with recycling, other recovery and disposal because these are the stages of the waste hierarchy where waste management facilities are required.

The other key element of National Planning Policy for Waste is the principle of self-sufficiency in waste management capacity. This is the concept of providing enough waste management capacity to handle the forecast amount of waste arising in Norfolk. Therefore the County Council aims to plan for sufficient capacity to manage an amount of waste equal to that arising in Norfolk, whilst acknowledging that waste is transported between different areas of the Country. It is recognised that there may be certain waste streams for which the complexity of the waste management process, and/or the volumes of waste in each area so low that it would be unviable for a full range of waste management facilities to exist in every area.

Article 16 of the Waste Framework Directive recognises this; '*The principles of proximity and self-sufficiency shall not mean that each Member State has to possess the full range of final recovery facilities within that Member State.*'

Discussions with other Waste Planning Authorities take place as part of the Duty to Cooperate, to ensure adequate capacity exist both inside and outside Norfolk to manage such waste.

Waste types

Waste is classified into different types depending on the nature and source of the material; these are referred to as waste streams. The different waste streams that arise within Norfolk are defined in the glossary and are:

- Local Authority Collected Waste (LACW)
- Commercial and Industrial waste (C&I)
- Construction, Demolition and Excavation waste (CD&E)
- Hazardous waste

- Radioactive waste
- Wastewater (sewage)
- Agricultural waste

Waste reduction and prevention

The Norfolk Waste Partnership is an organisation which promotes waste reduction and prevention, members include all eight local authorities in Norfolk. The partnership has four strategic objectives:

- Reduce the amount of waste generated per household
- Increase the availability of waste reduction, reuse, repair and recycling activities
- Ensure residents and businesses understand the importance of waste as a resource and the range of opportunities for waste reduction, repair, reuse and recycling
- Reduce the overall system cost of dealing with Norfolk's household waste.

The targets set out in the Waste Management Plan for England (2013) are key drivers for the partnership. Norfolk does not have a Joint Waste Management Strategy which covers the whole of the Plan period, the existing document has an end date of 2020. The requirement for Waste Disposal Authorities to produce such strategies was removed by Defra in 2010.

The recycling rate for Norfolk's household waste in 2016/17 was 46.7%, compared to a household waste recycling rate for England of 44.9%. There is a target within the Waste Management Plan for England for 50% of household waste to be recycled by 2020. All local authority areas in Norfolk that collect waste from households made improvements in their recycling rates for 2016/17 compared with those in 2015/2016. However, there are disparities between individual authority's recycling rates, with the highest recycling rate in Norfolk being 50.9% and the lowest 33.3%. National household waste recycling rates for England have remained steady over the last five years at just below 45%.

Initiatives to reduce waste, and improve recycling are largely outside the scope of this Plan, these being aligned with the aims of the Waste Collection and Waste Disposal Authorities through their membership of the Norfolk Waste Partnership. The Plan will provide an approach that ensures suitable areas for sustainable waste management facilities are identified and that there is a flexible approach to waste technologies so that innovation within the market is encouraged, while still providing appropriate safeguards.

Existing Waste Management Capacity

Norfolk currently has a wide range of waste management facilities, which manage both waste arising within Norfolk and some types of waste arising in other Waste Planning Authority areas. These facilities include composting, recycling, household waste recycling centres, anaerobic digestion, transfer stations and treatment facilities. Assessment of the maximum recorded throughputs for a range of waste management sites in Norfolk has indicated that approximately 2.25mt of capacity per annum exists for the treatment and processing of waste.

Waste management was previously dominated by landfill as a final destination for residual waste, but there has been a significant shift away from this situation over the last few years. Nationally, the majority of residual waste is now either consumed directly in Energy from Waste plants (usually incinerators) which produce electricity and/or heat as part of the process; or processed into Refuse Derived Fuel (RDF), and then transported to Energy from Waste plants. There has been rapid growth in RDF exports to such plants on continental Europe and beyond over the last few years. These plants generally have lower fees for accepting waste than was the case for landfill sites; this has led to the closure of landfill sites. In Norfolk, at the current time, there are no operational non-hazardous landfill sites, although there are two mothballed sites which still contain significant voidspace of over 5 million cubic metres. While, Norfolk does not have any final treatment or recovery facilities for residual LACW or Commercial & Industrial waste, there are a number of facilities which provide treatment and processing (for example, into RDF) before it is transported to such facilities.

Inert waste recycling takes place using mobile plant at construction sites as well as waste management facilities. It is recognised nationally that figures for inert waste recycling are less robust than for other waste streams, as there is no requirement for data to be provided for mobile plant operating under exemptions from the Environment Agency. Many inert waste recycling facilities operate at mineral workings as part of the wider commercial undertaking and the processed waste is sold as a recycled aggregate. Inert material unsuitable for reuse as a result of recycling is often used in the restoration of mineral workings.

Norfolk contains a number of specialised facilities which deal with hazardous waste, mainly florescent tubes, waste electronic and electrical equipment and end-of-life vehicles. These sites receive waste from a wide area, including nationally for some sites, due to the nature of the waste stream. The facilities in Norfolk manage a greater quantity of waste than arises within the county.

Existing waste movements

The waste management industry is market driven, and as such operators seek to find the most efficient way of managing waste. The disposal of waste is expensive, and therefore separation of waste for which a recycling or reprocessing market exists is a widely accepted business model. As waste is separated into more and more homogenous streams, so the technology and processing complexity required generally increases, with final reprocessing often requiring a large scale industrial plant. As transport is a cost to business, a commercial operator will not move waste further than is necessary to make a given return. Waste from Norfolk travels nationally and internationally to appropriate waste management facilities, and Norfolk waste management sites receive some wastes from other areas nationally.

13. Waste management capacity to be provided

In order to plan for future waste arisings, national planning policy guidance states that growth projections should be produced. The Environment Agency's Waste Data Interrogator includes data on Household, Industrial and Commercial, Inert, and Hazardous waste streams. Growth projections have therefore been produced for the following waste streams:

Local Authority Collected Waste (LACW): The data on arisings is considered to be robust and national guidance suggests that forecasts for population growth and household formation should be used as a basis for the waste arisings forecasts. Population and household projections are produced by the Office for National Statistics. Local Planning Authorities often use these projections as a basis for producing Strategic Housing Market Assessments which often augment these projections by taking into account local factors. Norfolk County Council has produced a LACW forecast for this Plan using a growth scenario where the current arisings of waste per household are multiplied by the household projections contained in Norfolk's Strategic Housing Market Assessments. This growth scenario forecasts an annualised growth rate of just under 1%. Therefore LACW is forecast to grow in line with a growth in households.

Commercial and Industrial waste: Forecasting future arisings for Commercial and Industrial waste is recognised as being less robust due to the lack of data on quantities of waste arising. However, the Environment Agency's Waste Data Interrogator contains data on the quantities of household, industrial and commercial (HIC) waste received at waste management facilities with an Environmental Permit. Therefore the arisings of C&I waste have been calculated by taking the arisings of Household, Commercial and Industrial Waste in the Waste Data Interrogator and subtracting the quantity of Local Authority Collected Waste arisings from the total. Therefore all remaining HIC waste has, for the purpose of this Plan, been considered to be C&I waste (although it is recognised that it will also include some Construction & Demolition and agricultural waste).

Defra carried out a number of surveys to estimate C&I waste arisings (the last of these was in 2009). We have taken the business sectors used in the Defra Survey; and equated these to the GVA (Gross Value Added) growth forecasts for certain business sectors within the East of England Economic Forecasting Model (EEFM), to produce a growth forecast for C&I waste for the Plan period of an annual growth rate of just over 1.5%. Therefore C&I waste is forecast to grow in line with economic growth.

Inert waste: National guidance advises that Waste Planning Authorities should start from the basis that net arisings of construction and demolition waste will remain constant over time as there is likely to be a reduced evidence base on which forward projections can be based for C&D waste. Therefore this plan has taken the inert waste arisings in Norfolk from the Environment Agency's Waste Data Interrogator 2016 and assumed that the arisings will remain constant in each year of the Plan period. Any C&D waste arisings that are not inert will already be included within the figures for Commercial and Industrial waste arisings and forecasts for this waste stream over the Plan period, which assume an increase in waste arisings.

Hazardous waste: National guidance states that data returns for hazardous waste should be considered robust due to the need for facilities dealing with this waste to have an Environmental Permit and therefore submit waste returns to the Environment Agency. National guidance states that time series data should be used to forecast quantities of hazardous waste for the Plan period. Analysis of the Environment Agency's Waste Data Interrogator data shows that hazardous waste in Norfolk has been declining since 2009. The time series has been taken with 2009 as a base year because data prior to that does not reflect the current regulatory environment with regard to regulations on Waste Electrical and Electronic Equipment and End-of-Life Vehicles, and it is considered that the current decline in hazardous waste arisings is likely to continue through the Plan period. Using the time series data on hazardous waste arisings in Norfolk since 2009 quantities of hazardous waste are forecast to reduce (from arisings of 64,845 tonnes in 2016) by an average of 6.6% a year throughout the Plan period.

Summary

The waste forecasts do not take into account potential improvements in waste reduction and prevention. Analysis of the way the waste management industry in Norfolk operates indicates that existing sites are likely to modify the methods they use in order to adapt to such changes rather than large numbers of operators entering or leaving the market.

Using the growth forecasts above, total waste arisings for Norfolk of LACW, C&I, inert and hazardous waste will increase from just under 2.976mt per annum in 2016 to approximately 3.431mt per annum in 2036.

The maximum existing waste capacity of operational sites in Norfolk is calculated to be 2.25 million tonnes per annum. This is based on the maximum recorded throughputs at sites between 2012 and 2016; and these may not represent absolute maximums, with many sites having higher maximum volumes set out in their Environmental Permits. However, in addition to the 2.25 million tonnes per annum capacity at existing facilities, Norfolk also has a number of mineral extraction sites that will be restored using imported inert material and it is considered that these sites will meet the capacity requirements for the inert waste arisings that are unsuitable for recycling, over the Plan period. Norfolk also has two non-hazardous landfill sites that are not currently receiving waste but have a remaining void capacity of 5.09 million cubic metres.

Further detail on waste management capacity, movements, arisings and forecasts is provided in a separate Waste Management Capacity Assessment report.

The following policy indicates the levels of waste management development that is expected over the Plan period to 2036. These figures are not limits, but are indicative.

Planning for net self-sufficiency in waste management recognises that there will be some cross-boundary movement of waste, as it is sometimes more sustainable to take waste to a facility out of Norfolk where the source of waste arisings is close to an administrative boundary. Therefore, the premise is to provide for the equivalent of waste forecast to arise within Norfolk, irrespective of where it actually arises.

Policy WP1: waste management capacity to be provided

The strategy for waste management is to provide, through the policies for specific waste management facility types, for sufficient waste management capacity to meet the expected arisings of Local Authority Collected Waste (LACW), commercial & industrial waste (C&I), and inert waste. Appropriate handling, transfer and management capacity will also be provided for hazardous waste, while recognising that due to the quantities of such waste it is unlikely to be feasible for Norfolk to have a full range of facilities, and that Norfolk may have certain specialist facilities which receive waste from other Waste Planning Authorities.

Provision will be made to manage the quantities of waste set out in Appendix 9. New facilities or changes to existing facilities which help to achieve the targets for recycling, composting, reuse and recovery set out in the Waste Management Plan for England (2013) will be encouraged.

During the plan period, there is a need to ensure that capacity exists to manage at least the following quantities of waste. Sufficient capacity currently exists to meet the growth forecast.

	LACW	C&I	Inert	Hazardous
2016-2021	427,000	1,284,000	1,311,000	46,000
2022-2026	446,000	1,388,000	1,311,000	33,000
2027-2031	465,000	1,499,000	1,311,000	23,000
2032-2036	484,000	1,620,000	1,311,000	16,000

Question 10: Policy WP1 ‘waste management capacity to be provided’ - Do you agree or disagree with the proposed policy? Do you have any comments or suggestions for alternative policy wording?

Alternative options:

Local Authority Collected Waste: The growth forecast in Policy WP1 for LACW is based on a household projection produced for the Norfolk Strategic Housing Market Assessments which takes into account some additional local factors in relation to the formation of small households. This results in a growth rate of just under 1% per annum. An alternative is to base the household growth projection figure purely on past household growth (from 1998/99-2015/16), which would result in a growth rate of over 1.5% per annum. The projection based on past household growth was not used because it results from a change in the age structure of the Norfolk population (the ‘baby boom’ generation reaching retirement age) and changes in society which resulted in an increase in the rate of formation of small households. It is considered that these pressures would be unlikely to continue at the past rate and that the growth forecast in the Norfolk SHMAs is more realistic.

The Office of National Statistics projection for household growth is lower than the growth projection in the Norfolk SHMAs, at 0.88% per annum, and would result in a lower LACW arisings over the Plan period. The ONS projection does not take into account local factors, in relation to the formation of small households. However, an alternative option would be to forecast LACW growth over the Plan period at 0.88% per annum (in accordance with the ONS) instead of 0.97% per annum (in accordance with the Norfolk SHMAs).

Question 10a: Do you consider that an alternative growth scenario should be used for forecasting LACW growth?

Commercial and Industrial Waste: The forecast in Policy WP1 for Commercial and Industrial (C&I) waste is based on growth of 1.5% per annum, in accordance with economic growth in the East of England Forecasting Model (EEFM). This is based on growth estimates of Gross Value

Added (GVA) for selected business sectors, to approximate with those sectors used by the previous Defra C&I waste survey. However, the latest Defra estimate of C&I economic growth for England is slightly lower, at 1.4% per annum. Therefore, an alternative option would be to forecast C&I waste growth over the Plan period at 1.4% per annum instead of 1.5% per annum.

Question 10b: Do you consider that an alternative growth rate should be used for forecasting C&I waste growth?

14. Spatial Strategy for waste management facilities

The Key Diagram and Policy WP2, set out the spatial strategy for the location of new waste management facilities within Norfolk. The following factors have been considered in the spatial strategy for waste management facilities:

- a) in the past temporary sites for the disposal of waste by landfill followed minerals extraction, whereas waste is increasingly being managed at permanent facilities that are located with suitable highways access in proximity to centres of population and sources of waste;
- b) the Norfolk Route Hierarchy provides a recognised hierarchy of roads. HGVs should take the shortest practicable route (avoiding inappropriate junctions and travel through settlements where possible) to access the strategic highway network at the earliest appropriate point;
- c) significant areas of the County are within the statutory landscape designations of the Norfolk & Suffolk Broads, and the Norfolk Coast Area of Outstanding Natural Beauty;
- d) significant areas of the County are within the statutory ecological designations of Ramsar, Special Protection Areas, Special Areas of Conservation and Sites of Special Scientific Interest;
- e) the production of waste is likely to be concentrated in the county's larger settlements; these settlements will also be the locations of greatest housing and employment growth in Norfolk during the Plan period.

The settlement hierarchy is defined by the Local Planning Authorities in Norfolk. The urban areas and main towns are as follows:

Urban Areas: Norwich, King's Lynn (including West Lynn), Thetford, Attleborough, Great Yarmouth and Gorleston-on-Sea

The Norwich urban area includes the built up parts of the urban fringe parishes of Colney, Costessey, Cringleford, Trowse, Thorpe St Andrew, Sprowston, Old Catton, Hellesdon, Drayton and Taverham.

Main Towns: Aylsham, Cromer, Dereham, Diss, Downham Market, Fakenham, Harleston, Holt, Hunstanton, North Walsham, Swaffham, Watton, Wymondham

The landscape designations of the Norfolk Coast AONB and the Broads Authority Executive Area are shown on the Key Diagram and the Policies Map along with the national and international ecological designations of Ramsar sites, SPAs, SACs and SSSIs. Some of these landscape and ecological designations occur in proximity to Norfolk's urban areas and main towns.

Policy WP2: Spatial Strategy for waste management facilities

New or enhanced waste management facilities should be located within five miles of at least one of Norfolk's urban areas or main towns (detailed the supporting text) and be accessible via appropriate transport infrastructure.

However, due to their characteristics, the following types of facilities will be acceptable in locations more distant from the urban areas or main towns, if they are close to the source of the waste, or the destination of the recovered waste material, and are in compliance with the landuses in Policy W3 and the development management criteria set out in Policy MW2:

- agricultural waste treatment facilities
- windrow (open-air) composting facilities
- community composting facilities
- small scale local facilities (including "bring" sites for the collection of recyclables).

Water recycling centres and pumping stations can normally only be located on or adjacent to watercourses, so they will normally only be acceptable in such locations.

Question 11: Policy WP2 'spatial strategy for waste management facilities' - Do you agree or disagree with the proposed policy? Do you have any comments or suggestions for alternative policy wording?

Alternative options:

1. Policy WP2 states that waste management facilities should be located within five miles of at least one of Norfolk's urban areas or main towns. An alternative option would be to also include settlements in a lower tier of the settlement hierarchy within the policy criteria. Settlements in the next tier in the settlement hierarchy are usually described as Key Service Centres. Including Key Service Centres within the policy would increase the number of potential locations for waste management facilities. However, it is considered that the policy already provides for sufficient locations and that it is not necessary to also include Key Services Centres.
2. Another alternative option would be to increase the distance at which waste management facilities could be located from urban areas or main towns, from 5 miles to 10 miles. Increasing the distance to 10 miles would increase the number of potential locations for waste management facilities. However, it is considered that the policy already provides for sufficient locations and that it is not necessary to increase the distance.
3. Policy WP2 currently treats virtually all waste management facilities the same, regardless of scale. An alternative option would be to have different locational criteria depending on the throughput of a site. For example sites over 75,000 tonnes would need to be within 10 miles of an urban area, whilst smaller facilities would need to be within 10 miles of an urban area or a main town. It is considered that this could complicate the implementation of the policy, but it is a potential alternative.

Question 11a: Do you consider that Policy WP2 should be amended in line with any of the alternative options?

15. Land uses potentially suitable for waste management facilities

Modern waste management facilities can require purpose designed buildings and structures which, in most instances, are suited to industrial areas. Most types of enclosed waste facilities, regardless of the technology used or waste type being processed, have similar locational requirements due to their potential to impact on local amenity and the environment. Such facilities are therefore directed towards specific suitable locations where these impacts can be more easily accommodated. Opportunities for integrated waste management will be encouraged, where various waste management operations can be co-located to reduce transport requirements and assist improved levels of waste recovery close to the source of the waste.

Waste management facilities that deal with waste in the open air can give rise to specific impacts such as noise and dust which can influence where such development should take place. Open air waste operations include aggregate recycling facilities and open windrow composting.

Aggregate recycling facilities are often temporary and are likely to be best located on mineral extraction sites or close to the source of waste, to minimise transport distances. Policy WP4 specifically applies to aggregate recycling facilities.

Open windrow composting facilities are likely to be suitable in more rural locations due to their similarity to other agricultural developments (e.g. farms). They can produce odours because of the biodegrading process and therefore, rural, less populated locations are more appropriate for these facilities. Any particular requirements for minimising adverse effects on residential amenity and rural character will be expected to be demonstrated through a planning application. Policy WP8 specifically applies to composting facilities.

Policy WP3: Land uses potentially suitable for waste management facilities

Waste management facilities (other than landfill sites and water recycling centres) will be acceptable only on the following types of land:

- a) land in existing waste management use;
- b) land in existing general industrial use (B2 use class) or in existing storage or distribution use (B8 use class) (excluding open air composting);
- c) land allocated for B2 and B8 uses in a local plan or development plan document (excluding open air composting);
- d) within or adjacent to agricultural and forestry buildings;
- e) previously-developed (brownfield) land (excluding open air composting);
- f) former airfields (open air composting only);
- f) water recycling centres (composting and anaerobic digestion only);

Proposals for waste management facilities at existing mineral workings and landfill sites may be considered acceptable on a temporary basis. Any temporary planning permission will be restricted to the cessation date for the mineral operation or landfill activities on site.

Proposals must also comply with the development management criteria set out in Policy MW2.

Question 12: Policy WP3 'land uses potentially suitable for waste management facilities' - Do you agree or disagree with the proposed policy? Do you have any comments or suggestions for alternative policy wording?

Alternative options:

The National Planning Policy for Waste states that “Waste Planning Authorities should identify, in their Local Plans, sites and/or areas for new and enhanced waste management facilities in appropriate locations.”

The Waste Site Specific Allocations DPD was adopted in 2013 and allocated 29 sites for waste management facilities. However, as none of the allocated sites for waste management have been delivered since the adoption of the Waste SSA, whilst unallocated sites have been approved, we consider that it is more appropriate for the M&WLPR to contain criteria based policies to determine planning applications for waste management facilities instead of allocating specific sites. Policy WP3 identifies suitable land use types for the location of waste management facilities, whilst further details are provided in the following policies that would apply to particular types of waste management facilities. Appendix 3 of this document lists all of the sites allocated in the Waste SSA and how the policies in this M&WLPR would apply to them.

However, an alternative option would be to continue to allocate specific sites for waste management facilities. A ‘call for sites’ would be required to enable specific sites to be proposed and the sites would then need to be assessed for their suitability in planning terms.

Question 12a: Do you consider that specific sites should be allocated for waste management facilities as well as criteria based policies?

16. Recycling or transfer of inert and construction, demolition and excavation waste

The recycling of construction, demolition and excavation waste makes a significant contribution to meeting aggregates demand and to reduce pressure on land won and marine dredged sources of aggregate. Therefore, the recycling of these wastes provides a sustainable source of aggregates. Potential environmental and amenity impacts from the recycling of inert and CD&E wastes include noise and dust.

Policy WP4: Recycling or transfer of inert and construction, demolition and excavation waste

Proposals for recycling or transfer of inert and construction, demolition and excavation waste may be acceptable on land within the uses identified within Policy WP3.

At mineral sites, planning permission will be limited to the life of the mineral operation.

Proposals for such facilities at landfill sites may be considered acceptable on a temporary basis whilst landfilling and restoration is taking place on site.

On land suitable for general industrial use (B2 use class) or storage & distribution use (B8 use class), activities shall take place within purpose-designed facilities.

Proposals must also comply with the development management criteria set out in Policy MW2.

Question 13: Policy WP4 ‘Recycling or transfer of inert and construction, demolition and excavation waste’ - Do you agree or disagree with the proposed policy? Do you have any comments or suggestions for alternative policy wording?

17. Waste transfer stations, materials recycling facilities, end of life vehicle facilities and waste electrical and electronic equipment recovery facilities

The main function of a waste transfer station is to facilitate the efficient transportation of waste by sorting loads from small collection vehicles such as skip lorries and reloading onto much larger lorries including articulated lorries for onward transportation. Waste transfer stations sort mixed waste to separate out the recyclable materials as well as bulking up waste into larger loads for onward transportation to recycling, recovery or disposal facilities.

Materials recycling facilities are where recyclable wastes are separated into their different types for onward transportation to recyclers (such as paper/card, glass, metal and plastic). The remaining waste, called residual waste, is either sent to landfill or a treatment facility for recovery.

End of life vehicle facilities remove potential pollutants from vehicles, remove the usable parts and send the scrap items off to recyclers.

Waste electronic and electrical equipment (WEEE) recovery facilities carry out the disassembly of WEEE and the separated parts and materials can then be either reused, recycled, recovered or disposed of at other waste management facilities. The exact treatment of WEEE can vary significantly according to the category of the waste and the technology that is used. As the treatment of WEEE is a specialised activity, often receiving waste from a large area, other facilities carry out the storage and transfer of WEEE before onward transportation to a treatment facility.

Policy WP5: Waste transfer stations, materials recycling facilities, end of life vehicle facilities and waste electrical and electronic equipment recovery facilities

Waste transfer stations, material recycling facilities, end of life vehicle facilities and waste electrical and electronic equipment recovery facilities may be acceptable within purpose designed or suitably adapted facilities on land within the uses identified within Policy WP3.

Proposals must also comply with the development management criteria set out in Policy MW2.

Question 14: Policy WP5 'Waste transfer stations, materials recycling facilities, end of life vehicle facilities and waste electrical and electronic equipment recovery facilities' - Do you agree or disagree with the proposed policy? Do you have any comments or suggestions for alternative policy wording?

18. Transfer, storage, processing and treatment of hazardous waste

There are many different types of hazardous waste and five main categories of hazardous waste are:

- Construction and demolition waste, including asbestos, contaminated soils and treated wood
- Oily wastes, batteries and accumulators, and end-of-life-vehicles
- Chemical processing wastes and marine wastes
- Waste water treatment and water industry wastes
- Waste electrical and electronic equipment, including televisions and florescent tubes.

Applications for facilities for the transfer, storage and treatment of waste electronic electrical and electronic equipment (WEEE) and end-of-life vehicles (ELV) will be determined in accordance with Policy WP5. Applications for other types of hazardous waste management facilities will be determined in accordance with Policy WP6 below.

Hazardous wastes usually require specialised treatment and disposal facilities, and given the relatively small quantities of waste produced (compared to other waste streams), the catchment area of such facilities is often wider than a single county. Hazardous waste therefore travels considerable distances to specialised facilities across the Country.

Policy WP6: Transfer, storage, processing and treatment of hazardous waste

Facilities for the transfer, storage, processing and treatment of hazardous waste may be acceptable within purpose designed or suitably adapted facilities on land:

- a) in existing general industrial use (B2), in storage and distribution use (B8), or
- b) identified for B2 or B8 uses in a local plan or development plan document, or
- c) on brownfield land, or
- d) integrated within an establishment producing much of the waste that will be dealt with.

Facilities for the transfer and short-term storage of hazardous waste will also be acceptable on existing waste management sites identified as having potential for non-hazardous waste transfer where hazardous waste will only represent up to 5% of waste managed on site.

Proposals must also comply with the development management criteria set out in Policy MW2.

Question 15: Policy WP6 'Transfer, storage, processing and treatment of hazardous waste' - Do you agree or disagree with the proposed policy? Do you have any comments or suggestions for alternative policy wording?

19. Household Waste Recycling Centres

The County Council has a statutory duty, as Waste Disposal Authority, to provide Household Waste Recycling Centres (HWRCs) for householders within Norfolk to dispose of their waste. There are 20 HWRCs in the county in 2017.

A number of the HWRCs can at times suffer from constraints such as size restrictions and peak-time queues. Modern sites offer an improved recycling service, and the County Council would wish to consider the potential for upgrading more of its current sites, or construct new replacements sites, to these higher standards when opportunities emerge.

Significant housing and employment growth is planned for Norfolk over the next twenty years. In the light of future housing growth and the desire to improve some existing sites, the County Council will continually be reviewing the current distribution, adequacy and number of HWRCs in the county. Improvements to existing sites and/or new sites may be required as the major housing growth planned for Norfolk is delivered.

It is important to note that the upgrading of current HWRC sites and the construction of new sites is dependent on both the County Council finding suitable sites and securing necessary finance to purchase or lease the land, and to construct/improve the site. However, as relatively little capital funding is currently available for major HWRC improvement works, all potential opportunities to secure suitable sites and/or section 106 planning gain through the planning system will be explored.

Although most potential HWRC improvements or new HWRC locations will be consistent with Policy WP3, there may be cases where there is a demand for a HWRC in a certain area, but no suitable sites are available. In these cases, Policy WP7 will allow an appropriate proposal to be determined positively.

Policy WP7: Household Waste Recycling Centres

Household waste recycling centres may be acceptable within purpose designed or suitably adapted facilities on land within the land uses identified within Policy WP3.

Where it can be demonstrated that no suitable sites consistent with Policy WP3 are available within the area to be served by the household waste recycling centre, household waste recycling centres may be acceptable on other sites provided these are consistent with the development management criteria set out in Policy MW2 and are accessible to the public.

Where justifiable, an appropriate level of developer contributions from new developments will be sought towards the provision of improvements to the Household Waste Recycling Centre network. This will normally be in the form of financial contributions, but in certain locations - particularly the major growth locations identified in adopted Local Plans – suitable sites for new Household Waste Recycling Centres could be requested.

Question 16: Policy WP7 ‘Household Waste Recycling Centres’ - Do you agree or disagree with the proposed policy? Do you have any comments or suggestions for alternative policy wording?

20. Composting

Composting is a natural process that involves the breakdown of organic material in the presence of air (aerobically). It creates a product that can be applied to land to improve soil structure and enrich the nutrient content of soil. Potential environmental and amenity impacts from composting include bio-aerosols, odour and dust.

Open-air composting involves green waste (vegetation) which is shredded and placed outdoors in elongated heaps, which are kept at specific moisture and oxygen levels. The windrows are turned and re-mixed on a regular basis to maintain their aerobic state, until the active composting period is finished and the final product is ready. This form of composting can require a large site.

In-vessel composting facilities promote aerobic degradation of organic waste including green waste and/or food waste within either an enclosed building or other form of containment that have forced air pumped into and extracted out of them and then discharged to the atmosphere via bio-filters that remove odours. The main advantage of this system over open-air composting is that it can take food waste, including meat, because the required temperature can be reached and maintained so that harmful bacteria can be neutralised. In-vessel composting often also requires some form of outdoor maturation.

Policy WP8: Composting

Composting facilities may be acceptable on land within the uses identified in Policy WP3.

Proposals for open air composting or in-vessel composting will not be approved unless they are accompanied by a site-specific risk assessment which shows that bio-aerosol levels can be maintained throughout the life of the operations, at appropriate levels at dwellings or workplaces within 250m of a facility. Appropriate schemes for the management of odours and dust will also be required.

Proposals must also comply with the development management criteria in Policy MW2.

Question 17: Policy WP8 ‘composting’ - Do you agree or disagree with the proposed policy? Do you have any comments or suggestions for alternative policy wording?

21. Anaerobic digestion

Anaerobic digestion facilities promote anaerobic degradation of organic wastes such as animal wastes, energy crops, and vegetable tailings. Anaerobic digestion is an enclosed process and can operate at a range of scales (from the very small to the very large). The process involves introducing the feedstock into a tank of bacteria rich slurry. This process produces methane gas that is normally used to drive a diesel generator and export the electricity to the grid. The organic waste is converted into a nutrient rich digestate (which can be used as a fertiliser if produced from source segregated biodegradable waste). The main advantage of anaerobic digestion over composting is the electrical power is produced.

Policy WP9: Anaerobic digestion

Anaerobic digestion facilities may be acceptable on land:

- a) within the uses identified in Policy WP3; or
- b) integrated with water recycling centres

Proposals must also comply with the development management criteria in Policy MW2.

Question 18: Policy WP9 ‘Anaerobic digestion’ - Do you agree or disagree with the proposed policy? Do you have any comments or suggestions for alternative policy wording?

22. Residual waste treatment facilities

Residual waste is the waste that is not re-used, recycled or composted. There are various types of residual waste treatment facilities, which range in size from very big to very small. Residual waste treatment facilities fall into two main categories:

- Thermal treatment – involving some form of combustion of the waste
- Mechanical Biological Treatment (MBT) – where the waste is stabilised through some form of biological treatment after, and/or before, mechanical separation of the non-organic material.

Within these broad categories there is a wide range of residual waste treatment technologies, which Policy WP10 would apply to:

Direct Energy from Waste in which the waste is combusted and used to generate electricity and also potentially to supply a Combined Heat and Power (CHP) Scheme.

Advanced Thermal Treatment including gasification and pyrolysis, in which the waste is charred in low or zero levels of oxygen and the resulting gases are recovered for combustion to generate electricity or CHP.

Refuse Derived Fuel (RDF) and Solid Recovered Fuel (SRF) is produced from the waste, sometimes as part of an MBT process, and then used as a fuel at another facility to generate electricity or CHP.

Autoclave/Mechanical Heat Treatment in which the waste is subjected to heat and steam to break down the organic fibres and aid separation of the recyclable/combustible material.

Mechanical and Biological Treatment (MBT) in which the recyclable and/or readily combustible waste is separated from the remaining organic/lower grade waste. The remaining waste is then either stabilised by in-vessel composting or anaerobic digestion. The composting or AD process has the effect of significantly reducing the volume of the waste and reducing the biodegradable potential of the residue. The residue is either landfilled or processed further to make a refuse derived fuel.

Policy WP10: Residual waste treatment facilities

Residual waste treatment facilities may be acceptable where the proposed facility is:

- a) on land within the land-uses set out in Policy WP3, and;
- b) the proposals meet the development management criteria set out in Policy MW2.

The treatment of waste that could practicably be recycled or composted will not be acceptable. Conditions will be placed on planning permissions to ensure that only residual source-separated or pre-sorted waste is treated. Facilities that include thermal treatment of waste must provide for the recovery of energy and, where practicable, heat; and the use of combined heat and power will be encouraged.

Question 19: Policy WP10 ‘Residual waste treatment facilities’ - Do you agree or disagree with the proposed policy? Do you have any comments or suggestions for alternative policy wording?

23. Disposal of inert waste by landfill

Many inert wastes can be reused or recycled. Although landfill is the least preferred option within the waste hierarchy, there may be a need for the disposal of inert material to landfill if no other waste management method is practicable. In particular, inert waste can be used to enable the restoration of former mineral workings to a satisfactory landform and afteruse. This may be considered a recovery operation rather than a disposal operation if the Environment Agency considers that the proposal meets one of two recovery tests: Is there a statutory obligation to undertake the work (i.e. has a regulator imposed a legal requirement for the restoration of a site to be completed in accordance with an approved restoration plan), or would it be financially viable for the scheme to be completed using non-waste materials (i.e. the waste is being used as a substitute for non-waste materials)?

In 2017 Norfolk had two inert waste landfill sites. One site is at Cantley and is only for the disposal of waste soils from the sugar beet processing factory; the site is not currently receiving waste as the waste soils are being recycled instead. The other inert landfill site is located at Blackborough End. In addition to these two inert landfill sites, there are a number of mineral extraction sites in Norfolk that are being restored with inert waste.

Any proposals for additional inert waste landfill voidspace would be determined in accordance with Policy WP11 below.

Policy WP11: Disposal of inert waste by landfill

Additional void space for the disposal of inert waste may be acceptable where:

- a) the importation of inert waste is required for restoration of a former mineral extraction void;
- b) there is no acceptable alternative form of waste management further up the waste hierarchy that can be made available to meet the need; and
- c) the proposals comply with the development management criteria set out in Policy MW2, and;
- d) the proposals demonstrate that, on restoration, there will be improvements to biodiversity, landscape, and/or amenity.

The landfilling of inert waste that could practicably be recycled will not be acceptable. Conditions will be placed on planning permissions to ensure that only pre-sorted wastes are landfilled.

Question 20: Policy WP11 ‘Disposal of inert waste by landfill’ - Do you agree or disagree with the proposed policy? Do you have any comments or suggestions for alternative policy wording?

24. Non-hazardous and hazardous waste landfill

Landfill sites are facilities where waste is disposed of mainly below ground level. Modern landfill practice requires a significant degree of engineering in order to contain the waste, control emissions and minimise potential environmental effects. The primary by-products of landfilling, where biodegradable materials are disposed of, are landfill gas and leachate (a liquor resulting from water passing through the waste mass) and much landfill engineering is geared towards dealing with these substances. As such, landfill sites require containment lining systems and abstraction systems for both landfill gas and leachate.

Norfolk does not have any hazardous waste landfill capacity. In 2017 Norfolk had an estimated 5.09 million cubic metres of void capacity for non-hazardous waste landfill which was in two sites located in west Norfolk. However, neither of these landfill sites were receiving waste in 2017. Feltwell landfill site has been inactive since 2012 and Blackborough End landfill site has been inactive since April 2016. Feltwell landfill site is currently required to be restored by 2041 and Blackborough End landfill site is required to be restored by the end of 2026.

Most of Norfolk has unsuitable geology for the location of new non-hazardous or hazardous waste landfill sites; these are areas of Major Aquifers and Minor Aquifers that have high vulnerability and intermediate vulnerability. In particular, new non-hazardous or hazardous waste landfill sites would not be suitable within groundwater Source Protection Zones 1 and 2. The land west of the River Ouse is an area of Norfolk that is not an aquifer, however, this area is at high risk of flooding and therefore would also not be a suitable location for a new non-hazardous or hazardous waste landfill site.

Any proposals for additional non-hazardous or hazardous waste landfill voidspace would be determined in accordance with Policy WP12 below.

Policy WP12: Non-hazardous and hazardous waste landfill

Additional landfill void space for the disposal of non-hazardous waste or hazardous waste may be acceptable if:

- a) it could be designed, built, operated and restored without unacceptable risk to groundwater quality and air quality;
- b) it would accept only pre-treated wastes (except where pre-treatment is not feasible or necessary, e.g. for asbestos);
- c) it would not prejudice the movement of waste up the waste hierarchy by providing excessive landfill capacity;
- d) the proposals comply with the development management criteria set out in Policy MW2; and
- e) the proposals demonstrate that, on restoration, there will be improvements to biodiversity, landscape, and/or amenity.

The landfilling of waste that could practicably be recycled, composted or recovered will not be acceptable. Conditions will be placed on planning permissions to ensure that only residual source-separated or pre-sorted waste is landfilled. Proposals for landfill gas energy recovery will be required.

Question 21: Policy WP12 ‘Non-hazardous and hazardous waste landfill’ - Do you agree or disagree with the proposed policy? Do you have any comments or suggestions for alternative policy wording?

25. Landfill Mining and Reclamation

Historically the options for waste management were limited to what would be called ‘final disposal’ today with little or no recycling or reuse of materials. Over time, uncontrolled landfilling has been phased out, and more stringent regulatory requirements were imposed to ensure the environment and human health were effectively managed. Landfill is now recognised as the least preferred form of waste management through the waste hierarchy and legislative drivers such as the incrementally increasing landfill tax are acting to reduce the viability of landfilling as a means of managing waste. However, Norfolk has a legacy associated with historic mining operations, with approximately 300 historic landfills of various types located across Norfolk.

As resources become scarcer, the value in previously disposed wastes is being increasingly recognised. With the notion of the circular economy gaining momentum, attention is turning towards the potential resource and energy value that could be recovered through extracting material from historic landfills, through a process known as Landfill Mining and Reclamation.

At present, landfill mining schemes are little more than trials, as it is not yet considered to be cost effective at a significant scale¹. In 2012, Zero Waste Scotland, commissioned Ricardo-AEA to undertake a Scoping Study ‘Feasibility and Viability of Landfill Mining and Reclamation in Scotland’. This identified more barriers than drivers to this process at present, although this may change towards the latter parts of this Plan period. In order for this Minerals and Waste Local Plan to be able to respond to any technological advancement in landfill mining, there is a requirement to set out a policy stance.

Landfill mining and reclamation may be required in Norfolk for reasons not linked to purely economic concerns. Examples could include where the historic landfill site suffers from poor engineering, or if it is currently the cause of significant pollution, environmental or health impacts which justifies its reopening.

However, the mining or excavation of waste has the potential to give rise to significant environmental issues. In the case of putrescible waste, this could potentially result in the rapid increase of leachate, landfill gas and odours. Therefore, any proposal will need to demonstrate mitigation of any impact on the local environment and amenity in accordance with other policies in this Plan. Further, landfills are normally a temporary use of land which is subsequently returned to its former, or an alternative use, such as agriculture or biodiversity and the excavation of landfilled waste may disturb previously restored sites or delay the final restoration of sites. Therefore, there are only certain circumstances where it is considered that landfill mining or excavation is justified.

¹ The only significant landfill mining project in Europe was projected to commence in 2017 (following the acquisition of relevant permits, expected in 2015) at the Remo Milieubeheer landfill in Belgium. This would look to recover materials for recycling and to capture and generate 75MW to 100MW of electricity from the residual waste by way of gasification technology developed by a company based in the UK

Policy WP13: Landfill Mining and Reclamation

Proposals for the mining or excavation of landfill sites will be permitted where:

- a. The site (without intervention) is demonstrated to pose a significant risk to human health or safety, and/or;
- b. The site (without intervention) is demonstrated to pose a significant risk to the environment or;
- c. Removal of the waste is required to facilitate a major infrastructure project and it is demonstrated that there are no other locations which are suitable for the infrastructure;
- d. The waste is demonstrated to be suitable for recovery and/or the waste will be captured for fuel/energy as part of the mining operation; and
- e. The proposals include detailed information upon how the types of waste deposited within the landfill are to be managed; and
- f. The proposals comply with the development management criteria set out in Policy MW2.

Proposals will be considered in terms of their impact on the restored use, and whether there would be an unacceptable impact on any development which has taken place since the closure of the old landfill.

Question 22: Policy WP13 'Landfill mining and reclamation' - Do you agree or disagree with the proposed policy? Do you have any comments or suggestions for alternative policy wording?

26. Water Recycling Centres

Water Recycling Centres treat waste water and sewage; they are a vital part of community infrastructure and are necessary to protect human health and water quality. Existing Water Recycling Centres will be safeguarded through the application of Policy WP17.

With increasing populations and water quality standards there is continuing investment being made into waste water treatment. Although changes to permitted development rights have sought to remove the need for planning applications for very small developments there are still applications that will need to be determined.

Policy WP14: Water Recycling Centres

New or extended Water Recycling Centres may be acceptable where such proposals aim to:

- a) treat a greater quantity of wastewater; and/or
- b) improve the quality of discharged water; and/or
- c) reduce the environmental impact of operation.

The applicant will be required to demonstrate that the proposal can be located without giving rise to unacceptable environmental impacts. Proposals must also comply with the development management criteria set out in Policy MW2.

Question 23: Policy WP14 'Water Recycling Centres' - Do you agree or disagree with the proposed policy W11? Do you have any comments or suggestions for alternative policy wording?

27. Whitlingham Water Recycling Centre

Whitlingham Water Recycling Centre, located to the south of Norwich (in South Norfolk District) is the largest such plant in Norfolk. It handles sewage from Norwich and the surrounding rural area and also takes in sewage waste (such as sludge cake and liquors) for treatment from a wider area (including from outside Norfolk). Whitlingham WRC is therefore a vital piece of infrastructure for the implementation of the growth planned in the Norwich Policy Area. Based on Anglian Water's landholdings, there is room for Whitlingham WRC to expand to meet any increased future needs for both water quality improvements and volumetric (capacity) increases.

However, whilst future development on the site will be necessary to better treat waste waters, there is the potential for the site to cause amenity impacts to local residents, particularly from HGV movements, noise and odour. The site's location close to the Broads also raises landscape and flood risk concerns. Recent years have seen a series of developments on the site, some of which have been permitted development, and others requiring planning permission. In the absence of a longer-term masterplan or vision for the future development of the site it is not easy to assess the significance of individual proposals or the cumulative impact of a number of separate, but linked, proposals.

It is acknowledged that Anglian Water's strategic budget is set by OFWAT through the Asset Management Planning (AMP) process in five-yearly tranches, with the current period (AMP 6) running from 2015 to 2020. But the company does not know how much money it will have to spend on improvements during the remaining of the plan period to 2036 which will fall within AMP 7, AMP 8 and AMP 9. There is no public information as to how much money will be spent at Whitlingham.

It is proposed that the existing Whitlingham Local Liaison Group, which debates ongoing operational matters and allows Anglian Water to discuss its future plans for the site, should be expanded, with meetings taking place on a regular basis (perhaps quarterly or six-monthly).

Anglian Water is encouraged to discuss and agree a longer-term masterplan/ vision/ implementation strategy for the site with the local authorities of the Greater Norwich Growth Board and the Environment Agency so that the strategic importance and cumulative impact of individual development proposals at Whitlingham WRC can be most effectively understood and assessed.

The policy sets out the considerations for future development of the site, with the aim of minimising the impact on nearby dwellings and the Broads area whilst recognising the strategic significance of Whitlingham WRC for housing and employment growth in the Norwich Policy Area.

Policy WP15: Whitlingham Water Recycling Centre

Whitlingham Water Recycling Centre is one of Anglian Water's strategic works of particular significance for Norfolk in general, and the Greater Norwich area in particular (with a wider sub-regional role also recognised). Future improvements, whether to increase the physical capacity or to increase the treatment standard of waste waters, will be vital to successful delivery of the planned growth in Greater Norwich and as such are supported in principle.

However, future improvements will need to be planned carefully to minimise adverse environmental and amenity impacts, particularly on the Broads area and nearby residents.

Anglian Water is strongly encouraged to develop and agree a longer-term vision for Whitlingham WRC in collaboration with the constituent authorities of the Greater Norwich Development Board and the Environment Agency.

Anglian Water is strongly encouraged to invite the following parties to the Local Liaison Group: Kirby Bedon Parish Council, Trowse Parish Council, local residents, Anglian Water, the Environment Agency, Norfolk County Council, South Norfolk Council and the Broads Authority. The Local Liaison Group should continue to meet regularly to discuss operational issues and planned site improvements.

The County Council will work closely with Anglian Water, the Environment Agency, South Norfolk Council and the Broads Authority to ensure that development proposals at Whitlingham WRC will:

- a) Minimise the effect on the amenity of local residents, with particular emphasis on noise and odour;
- b) Route all HGV movements to and from the site via the C202 Kirby Road and the A146 Loddon Road, with the routing of HGV movements to be controlled through planning conditions or Section 106 Legal Agreement as appropriate;
- c) Not affect adversely the landscape setting of the Broads by insensitively locating and/or designing equipment or buildings on the site; and
- d) In line with the requirements of the NPPF and National Planning Practice Guidance, choose preferentially locations within Flood Zone 1, and where locations in Flood Zone 2 or 3 are proposed, adequate measures to control pollution and manage sewage during flooding events are put in place, to be controlled by either a Section 106 Legal Agreement or planning condition(s) as appropriate.

Question 24: Policy WP15 'Whitlingham Water Recycling Centre' - Do you agree or disagree with the proposed policy? Do you have any comments or suggestions for alternative policy wording?

28. Design of waste management facilities

The National Planning Policy Framework states that “good design is a key aspect of sustainable development, is indivisible from good planning, and should contribute positively to making places better for people”. Waste management facilities are often permanent development and therefore their design is just as important as the design of any other development type.

The layout and design of waste management facilities can help to reduce potential impacts, create positive impacts with regard to the public perception of such activities, improve safety and security, as well as increasing operational and/or energy efficiency.

Strategic site layout can also allow for greater opportunities to incorporate elements of visual interest, reflect local identity in the design or provide for effective buffers. Visual design elements of such developments can either seek to facilitate integration into the surrounding landscape or townscape, or create visual interest and highlight innovation.

This policy sets out the criteria for the consideration of the design of waste management facilities.

Policy WP16: Design of waste management facilities

Waste management facilities will be considered favourably where they incorporate:

- a) designs of an appropriate scale, density, massing, height and materials;
- b) safe and convenient access for all potential users;
- c) schemes for the retention of existing and provision of new landscape features;
- d) measures which will protect, preserve and where practicable enhance the natural, built, and historic environment including the setting of heritage assets; and
- e) comply with Policy MW4 (climate change adaptation and mitigation)

Question 25: Policy WP16 ‘Design of waste management facilities’ - Do you agree or disagree with the proposed policy? Do you have any comments or suggestions for alternative policy wording?

29. Safeguarding waste management facilities

The safeguarding of waste management facilities is necessary to protect them from other forms of development which might either directly or indirectly impact upon the waste management facility. Therefore, applications for new development in proximity to existing safeguarded waste management facilities or water recycling centres should take into account any potential conflicts. Local Planning Authorities are therefore requested to consult the Waste Planning Authority if a proposed development is within the consultation area of a safeguarded facility. The safeguarded waste management facilities and water recycling centres will be identified on the Policies Map and are listed in Appendices 7 and 8.

Decisions on whether a proposed development would prevent or prejudice the continued use of a safeguarded facility, and would therefore raise an objection from the Waste Planning Authority, will be made on a case by case basis. Each decision will take into account the particular use of the safeguarded site, the nature of the proposed development, their compatibility and, where appropriate, any mitigation which could address any adverse impacts.

Policy WP17: Safeguarding waste management facilities

The County Council will safeguard existing and permitted waste management facilities, within the following categories:

- Waste management facilities with a permitted input of over 20,000 tonnes per annum;
- Key water recycling centres (listed in Appendix 8);
- Waste water pumping stations;

Consultation areas are delineated on the Policies Map and extend to 250 metres from each safeguarded waste management facility, and 400 metres from each safeguarded water recycling centre. The Waste Planning Authority should be consulted on all development proposals within these consultation areas, except for the excluded development types set out in Appendix 4.

Development proposals within the defined consultation areas around safeguarded facilities should demonstrate that they would not prevent or prejudice the use of those facilities. The County Council will oppose development proposals which would prevent or prejudice the use of safeguarded facilities for those purposes unless suitable alternative provision is made.

In addition, any development proposed within 50 metres of a pumping station (as identified through the planning application) will be subject to consultation with the relevant waste water management company by the planning authority responsible for determining the application.

Question 26: Policy WP17 ‘Safeguarding waste management facilities’ - Do you agree or disagree with the proposed policy? Do you have any comments or suggestions for alternative policy wording?

MINERALS SPECIFIC POLICIES

30. Provision for minerals extraction

The NPPF states that Mineral Planning Authorities should plan for a steady and adequate supply of aggregates. The aggregates that are extracted within Norfolk are sand and gravel and carstone.

Sand and gravel requirements and shortfall

The average sand and gravel production in Norfolk over the last 10 years (2007–2016) was 1.41 million tonnes per annum.

The NPPG suggests the use of 3 year average figures to indicate recent trends in sales. The average sand and gravel production in Norfolk over the last three years (2014-2016) was 1.47 million tonnes per annum and shows a recent upward trend and production levels above the 10 year average.

Average sand and gravel production over the last 20 years was 1.98 million tonnes per annum.

The NPPG suggests that the 10 year rolling average, 3 year rolling average and the sub-national guidelines should all be considered in order to establish a broad understanding of current and future mineral demand, especially during reviews of planned provision. The sub-national guidelines are for Norfolk to produce 2.57 million tonnes of sand and gravel a year. However, in the last 10 years (2007-2016) this has not been reflected in the actual sand and gravel production in Norfolk, which was an average of only 1.41 million tonnes per annum.

It is considered that planning to provide the 20 year average annual production figure would enable a sufficient quantity of sand and gravel resources to be available over the 20 year plan period and would take into account potential fluctuations in the economy.

Over the 20 year plan period to 2036, using the 20 year average of 1.98 million tpa, 39.6 million tonnes of sand and gravel resources would be needed in total. Taking into account the existing permitted reserve, the remaining need for allocated sites is 23.06 million tonnes of sand and gravel.

The current permitted reserve of sand and gravel at 31/12/2016 is 16,536,440 tonnes. The permitted reserve therefore currently provides a landbank of more than 7 years' worth of sand and gravel production as required by the NPPF.

A	Forecast need for sand and gravel from 2017-2036 (1,980,000 tonnes per year x 20 years)	39,600,000 tonnes
B	Sand and gravel permitted reserve at 31/12/2016	16,536,440 tonnes
C	Total shortfall (A-B) and therefore minimum quantity to be allocated	23,063,560 tonnes
The total shortfall of 23,063,560 tonnes is equivalent to a need for 11.6 years' further supply over the period of the Minerals and Waste Local Plan Review.		

In addition to land won aggregates, secondary and recycled aggregates are also sourced within Norfolk. Data for the production of recycled and secondary aggregates is limited, and less reliable than for other types of aggregate. The annual average quantity of inert and construction/demolition waste recovered at waste management facilities over the ten years from 2007-2016 was 435,900, however, some parts of this waste stream are unsuitable for use as a recycled aggregate (such as soil or timber). The data is not comprehensive because many operations, such as on-site recovery, are not recorded. Therefore it is not proposed to make any adjustments to the mineral requirement figures based on recycled and secondary aggregate provision due to the quality of the data.

A total of less than 500 tonnes of marine sourced aggregates was consumed in Norfolk in 2014 (the most recently available date) and represents such a small percentage of the total aggregates used in Norfolk it is not proposed to make any adjustments to the mineral requirement figures due to marine sourced aggregates.

Carstone requirement and shortfall

The NPPG suggests that the 10 year rolling average, 3 year rolling average and the sub-national guidelines should all be considered in order to establish a broad understanding of current and future mineral demand, especially during reviews of planned provision. The sub-national guidelines are for Norfolk to produce 200,000 tonnes of carstone a year. However, in the last 10 years (2007-2016) this has not been reflected in the actual carstone production in Norfolk, which was an average of 98,839 tonnes per annum.

The average carstone production over the last 20 years was 126,500 tpa.

The average carstone production in Norfolk over the last three years (2014-2016) was 77,982 tonnes per annum. The production of carstone in Norfolk is concentrated into relatively few workings and the production fluctuates significantly from year to year dependent on individual construction projects that require significant fill material. These fluctuations mean that the three year rolling average can also vary significantly year to year; this means that it is of less value in helping to identify production trends for carstone.

Therefore, it is considered that planning to provide the 20 year average annual production figure would enable a sufficient quantity of carstone resources to be available over the 20 year plan period and would take into account potential fluctuations in the economy.

The current permitted reserve of carstone, at 31/12/2016 is 2,050,000 tonnes. The permitted reserve therefore currently provides a landbank of more than 10 years' worth of carstone production, as required by the NPPF.

Over the 20 year plan period to 2036, using the 20 year average of 126,500 tpa, a total of 2,530,000 tonnes of carstone resources would be needed. Taking into account the existing permitted reserve, the remaining need for allocated sites is 480,000 tonnes.

A	Forecast need for carstone from 2017 – 2036 (126,500 tonnes per year x 20 years)	2,530,000 tonnes
B	Carstone permitted reserve at 31/12/2016	2,050,000 tonnes
C	Total shortfall (A-B) and therefore minimum quantity to be allocated	480,000 tonnes
The total shortfall of 480,000 tonnes is equivalent to a need for 3.8 years' further supply over the period of the Minerals and Waste Local Plan Review.		

Silica sand requirement and shortfall

The NPPF states that Minerals Planning Authorities should plan for a steady and adequate supply of industrial minerals. The industrial mineral that is extracted in Norfolk is silica sand which is used for the manufacture of glass. The silica sand is processed at an existing plant site, operated by Sibelco UK Ltd, which is located at Leziate. The processing plant site includes a rail head to export the processed mineral for use by glass manufacturers elsewhere.

The NPPF states that the supply of silica sand should be planned as years' worth of production for the plant within a Mineral Planning Authority's area. The stock of permitted reserves of silica sand should be at least 10 years' production for individual silica sand sites, and if significant new capital is required, then stocks for at least 15 years production should be planned for.

The average silica sand production in Norfolk over the last 10 years (2007-2016) was 696,500 tonnes per annum.

The average silica sand production in Norfolk over the last 3 years (2014-2016) was 785,400 tonnes per annum, which had dropped from the previous two years.

A 20 year average production figure is not available for silica sand, however, based on the information available for 10 year and 3 year production averages (provided since 2013 and 2009 respectively), it is considered appropriate to continue to plan for an annual production of 750,000 tonnes per annum.

The current permitted reserve of silica sand, at 31/12/2016 is 2,620,000 tonnes. The permitted reserve therefore provides a landbank of less than 10 years' worth of silica sand production, which is below the level required by the NPPF. However, the permitted reserve is dependent upon the submission of suitable planning applications and the most recent planning application for a new silica sand extraction site in Norfolk was determined and granted in 2007.

A	Forecast need for silica sand from 2017-2036 (750,000 tonnes per year x 20 years)	15,000,000 tonnes
B	Silica sand permitted reserve at 31/12/2017	2,620,000 tonnes
C	Total shortfall (A-B) and therefore minimum quantity to be allocated	12,380,000 tonnes
The total shortfall of 12,380,000 tonnes is equivalent to a need for 16.5 years' further supply over the period of the Minerals and Waste Local Plan Review.		

Other minerals

Clay and chalk are also extracted in Norfolk. However, the resource for these minerals is considered to be abundant in Norfolk relative to the demand.

There is no national policy requirement to maintain a landbank for clay or chalk and therefore it is considered that there is no need to allocate additional sites for these minerals over the plan period. Any planning applications coming forward for clay or chalk extraction will be considered on their merits.

The NPPF states that Local Plans should not identify new sites or extensions to existing sites for peat extraction.

Policy MP1: Provision for minerals extraction

The strategy for minerals extraction is to allocate sufficient sites to meet the forecast need for both sand & gravel and hard rock (carstone).

For **sand and gravel**, specific sites to deliver at least **23,063,560 tonnes** of resources will be allocated. The sand and gravel landbank will be maintained at between 7 and 10 years' supply (excluding any contribution from borrow pits for major construction projects).

For **carstone**, a site or sites to deliver at least **480,000 tonnes** of resources will be allocated. The landbank for carstone will be maintained at 10 years' supply.

For **silica sand**, sufficient sites and/or areas to deliver at least **12,380,000 tonnes** of silica sand will be allocated. The landbank for silica sand will be maintained at 10 years' supply where practicable.

Question 27: Policy MP1 'Provision for minerals extraction' - Do you agree or disagree with the proposed policy? Do you have any comments or suggestions for alternative policy wording?

Alternative options:

The proposed policy for sand and gravel and carstone is to allocate sufficient sites to meet the forecast need over the plan period based on the average production figures over the last 20 years. The alternative options would be to use the average production figures for the last 10 years, or to use the sub-national guidelines, as follows:

1. An alternative option would be to use the **average production figures from the last 10 years** to forecast the quantity of sand and gravel and carstone to be planned for. The 10 year average production for sand and gravel is 1,406,800 tpa and the 10 year average production figure for carstone is 98,840 tpa.

Sand and gravel

A	Forecast need for sand and gravel from 2017-2036 (1,406,800 tonnes per year x 20 years)	28,136,000 tonnes
B	Sand and gravel permitted reserve at 31/12/2016	11,599,600 tonnes
C	Total shortfall (A-B) to be allocated	16,536,400 tonnes

Using the 10 year sales average for sand and gravel would mean that sites for 16,536,400 tonnes of sand and gravel extraction would need to be allocated over the plan period. This is a lower requirement than contained in Policy MP1.

Carstone

A	Forecast need for carstone from 2017 – 2036 (98,840 tonnes per year x 20 years)	1,976,800 tonnes
B	Carstone permitted reserve at 31/12/2016	2,050,000 tonnes
C	Total shortfall (A-B) to be allocated	0 tonnes

Using the 10 year sales average for carstone would mean that no additional carstone extraction sites are required to be allocated over the plan period. This is a lower requirement than contained in Policy MP1. However, the current permitted reserve is only around one year higher than the forecast need based on the 10 year sales average, and this is not considered to provide sufficient flexibility. Therefore, it is considered that for the plan to be positively prepared, a site for carstone extraction should be allocated.

In addition, the NPPF states that other relevant local information and an assessment of all supply options should also be taken into account when planning for a steady and adequate supply of aggregate. As the plan period covers 20 years, until 2036, it is considered that the twenty year sales average is a more appropriate figure to use than the ten year average because it covers both growth and recession periods in an economic cycle. Using the average sales figures from the last 10 years mainly covers a recession period in the economic cycle and is therefore considered to be less appropriate to use.

2. The second alternative option would be to use the **sub-national guidelines** to forecast the quantity of sand and gravel and carstone to plan for. The existing policy CS1 (in the Minerals and Waste Core Strategy adopted in 2011) uses the sub-national guidelines. The sub-national guideline for sand and gravel is 2.57 million tpa and the sub-national guideline for carstone is 200,000 tpa.

Sand and gravel

A	Forecast need for sand and gravel from 2017-2036 (2,570,000 tonnes per year x 20 years)	51,400,000 tonnes
B	Sand and gravel permitted reserve at 31/12/2016	11,599,600 tonnes
C	Total shortfall (A-B) to be allocated	39,800,400 tonnes

Using the sub-national guidelines for sand and gravel would mean that sites for 39,800,400 tonnes of sand and gravel extraction would need to be allocated over the plan period. This is a higher requirement than contained in Policy MP1. However, production of sand and gravel has not met the sub-national guidelines at any time in the last 10 years. During the last 10 years sand and gravel production has only been between 39% and 77% of the sub-national guidelines. Therefore, the sub-national guidelines for sand and gravel are considered to be too high and not a reasonable alternative for the plan. In addition, the sub-national guideline figures only covered the period 2005-2020 and have not been updated, making these figures increasingly obsolete.

Carstone

A	Forecast need for carstone from 2017 – 2036 (200,000 tonnes per year x 20 years)	4,000,000 tonnes
B	Carstone permitted reserve at 31/12/2016	2,050,000 tonnes
C	Total shortfall (A-B) to be allocated	1,950,000 tonnes

Using the sub-national guidelines for carstone would mean that sites for 1,950,000 tonnes of carstone extraction would need to be allocated over the plan period. This is a higher requirement than contained in Policy MP1. However, production of carstone has only met the sub-national guidelines once in the last 10 years, in 2008. Over the last eight years carstone production has only been between 19% and 59% of the sub-national guidelines. Therefore, the sub-national guidelines for carstone are considered to be too high and not a reasonable alternative for the plan. In addition, the sub-national guideline figures only covered the period 2005-2020 and have not been updated, making these figures increasingly obsolete.

Silica sand

There are no sub-national guidelines for silica sand extraction and therefore this is not an alternative forecasting option. As there is no requirement for the silica sand extraction companies to provide annual figures of silica sand production we do not have a twenty year sales average figure to use and this is not an alternative forecasting option. Therefore the ten year and three year sales averages which have been provided to Norfolk County Council have been used to determine an appropriate figure to use to forecast the future need for silica sand extraction over the plan period, as contained in Policy MP1.

31. Spatial strategy for minerals extraction

The Key Diagram and Policy MP2 below set out a spatial strategy for minerals development within Norfolk. These following factors have been considered in the spatial strategy for minerals:

- a) minerals can only be worked where they occur;
- b) crushed rock is imported, primarily by rail from outside of the County via rail heads located at Norwich, Snetterton and Brandon;
- c) marine borne crushed rock is landed at a wharf at Great Yarmouth for onward transport by road;
- d) the nearest location where marine dredged sand and gravel aggregates are landed is at Ipswich docks in Suffolk;
- e) aggregates recycling facilities should be located with suitable access to the road network and in proximity to centres of population and therefore sources of waste;
- f) the Norfolk Route Hierarchy provides a recognised hierarchy of roads. HGVs should take the shortest practicable route (avoiding inappropriate junctions and travel through settlements where possible) to access the strategic highway network at the earliest appropriate point;
- g) significant areas of the County are within the statutory landscape designations of the Norfolk & Suffolk Broads, and the Norfolk Coast Area of Outstanding Natural Beauty;
- h) significant areas of the County are within statutory ecological designations of Ramsar, Special Protection Areas, Special Areas of Conservation and Sites of Special Scientific Interest;
- i) the county's larger settlements will be the locations of greatest housing and employment growth in Norfolk during the Plan period
- j) the existing processing plant for silica sand is located at Leziate.

Mineral deposits can only be extracted where they occur, so the spatial strategy for mineral extraction is prescribed to a large extent by the geological distribution of mineral resources within Norfolk. The Norfolk Mineral Resources Map, published by the British Geological Survey (BGS), as amended by the BGS DiGmapGB-50 dataset, includes a breakdown of mineral types and distribution. The key diagram shows the location of the sand and gravel, carstone and silica sand resources in Norfolk; it also shows the location of currently operational mineral extraction sites.

The key diagram shows that sand and gravel resources are abundant and located widely in Norfolk, with the exception of the Fens area in west Norfolk, although the ratio of sand to gravel varies significantly. Carstone and silica sand deposits are located in very limited areas of Norfolk, with both resources only occurring in a north/south band in west Norfolk. Specific site allocations, preferred areas and/or areas of search for future mineral extraction will be identified based on these resource areas.

Silica sand is mostly exported out of Norfolk for glass production elsewhere and therefore the spatial preference for new silica sand extraction sites is for sites which would be able to access the existing processing plant and railhead at Leziate via conveyor, pipeline or off-public highway routes.

Sand and gravel is used in the construction of roads and buildings and is a key ingredient in the production of concrete and mortar, asphalt coating for roads, as a drainage medium and in the construction of embankments and foundations. Norfolk's urban areas and main towns are the locations where there will be the greatest need for a supply of aggregate for new housing developments and associated infrastructure.

The settlement hierarchy is defined by the Local Planning Authorities in Norfolk. The urban areas and main towns are:

Urban Areas: Norwich, King's Lynn (including West Lynn), Thetford, Attleborough, Great Yarmouth and Gorleston-on-Sea

The Norwich urban area includes the built up parts of the urban fringe parishes of Colney, Costessey, Cringleford, Trowse, Thorpe St Andrew, Sprowston, Old Catton, Hellesdon, Drayton and Taverham.

Main Towns: Aylsham, Cromer, Dereham, Diss, Downham Market, Fakenham, Harleston, Holt, Hunstanton, North Walsham, Swaffham, Watton, Wymondham

The landscape designations of the Norfolk Coast AONB and the Broads Authority Executive Area are shown on the Key Diagram and the Policies Map along with the national and international ecological designations of Ramsar sites, SPAs, SACs and SSSIs. Some of these landscape and ecological designations occur in proximity to Norfolk's urban areas and main towns.

The National Planning Practice Guidance states that mineral planning authorities should plan for the steady and adequate supply of minerals in one or more of the following ways (in order of priority):

- a) designating Specific Sites – where viable mineral 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;
- b) designating Preferred Areas, which are areas of known mineral resources where planning permission might reasonably be anticipated. Such areas may also include essential operations associated with mineral extraction; and/or
- c) designating Areas 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.

Designating specific sites in minerals plans provides the most certainty on when and where development may take place. The better the quality of data available to Mineral Planning Authorities, the better the prospect of a site being designated as a Specific Site.

Due to the need to address a predicted shortfall in the quantity of allocated silica sand extraction sites, four areas of search for silica sand extraction were designated as part of the Single Issue Silica Sand Review of the Minerals Site Specific Allocations DPD, which was adopted in December 2017. In addition to allocating specific sites and/or preferred areas for silica sand extraction, we propose to continue to designate the same four areas of search for future silica sand extraction as part of the Minerals and Waste Local Plan Review. The areas of search are large areas within which planning permission for silica sand extraction may be granted on a smaller area of land. The methodology used to define the areas of search is included in Policy MP2 and explained in the following paragraphs.

Areas of Search for silica sand extraction, of at least 20 hectares in size, will be defined from within the Leziate Beds silica sand resource, excluding the following planning constraints:

a. Norfolk Coast Area of Outstanding Natural Beauty: The Norfolk Coast AONB is a statutory national designation with the purpose of the conservation and enhancement of natural beauty. The NPPF (paragraph 116) states that "Planning permission should be refused for major developments in these designated areas except in exceptional circumstances and where it can be demonstrated they are in the public interest." It is therefore not considered appropriate for the areas of search to include the AONB.

b. ancient woodland sites and 250 metres around them: The NPPF classifies ancient woodland as an irreplaceable habitat and states (in paragraph 118) that: "*planning permission should be refused for development resulting in the loss or deterioration of irreplaceable habitats, including ancient woodland and the loss of aged or veteran trees found outside ancient woodland, unless the need for, and benefits of, the development in that location clearly outweigh the loss*".

An area of 250 metres surrounding each ancient woodland site has also been excluded from the areas of search. This distance has been used because uncontrolled dust can have a significant effect on ancient woodland habitats and it is considered that 250 metres would allow for the mitigation of dust with the minimum of controls. A planning application may be able to provide information to support an acceptable distance closer than this, but 250 metres is considered appropriate for an Area of Search. It is recognised that impacts on local hydrology from mineral extraction may occur at a distance greater than 250 metres from an ancient woodland, and any subsequent planning application within an area of search will need to address this.

c. SSSIs and 250 metres around them: All NNRs, SPAs, SACs and Ramsar sites are also SSSIs. Therefore, excluding all SSSIs and 250 metres around them, means that all NNRs, SPAs, SACs and Ramsar sites have also been excluded from the areas of search. SSSIs are designated and protected at a national level. Paragraph 118 of the NPPF states that: “Proposed development on land within or outside a SSSI likely to have an adverse effect on a Site of Special Scientific Interest (either individually or in combination with other developments) should not normally be permitted”.

An area of 250 metres around each SSSI has been excluded from the areas of search because at this it is considered that this distance would allow for the mitigation of dust and noise with the minimum of controls. However, it is recognised that the special biological or geological features of interest for which each SSSI has been notified will vary from site to site and the vulnerabilities of these features will also vary. This variation means that the impacts from mineral extraction, including the distance at which an impact may occur, will differ between each SSSI. A number of the SSSIs which occur within 5km of the silica sand resource are vulnerable to changes in water flow and levels. Any subsequent planning application within an area of search will need to assess the impact of mineral extraction on SSSIs.

d. 1km around The Wash SSSI

The Wash is designated as a SSSI, SAC, SPA and Ramsar site. Therefore this site is protected at national, European and international level from development that would be likely to have a significant effect on their important interest features. Potential adverse impacts from mineral extraction could be dust emissions, noise and visual disturbance, physical habitat loss, physical damage, impacts to water quality, and the loss of functional habitat used by the designated bird species of The Wash for foraging. Some of these impacts could be mitigated through the design and operation of a mineral extraction operation. However, it is considered that by excluding land within 1km of The Wash SSSI, mineral extraction would be unlikely to have an adverse effect on the integrity of the SPA, SAC or Ramsar site. Any subsequent planning application within an area of search located within the Impact Risk Zone for The Wash SSSI will need to assess the impact of mineral extraction on The Wash SSSI, SAC, SPA and Ramsar site.

e. The hydrological catchment around Roydon Common SSSI and Dersingham Bog SSSI:

Roydon Common and Dersingham Bog are designated as SSSIs, NNRs, SAC and Ramsar sites. Therefore these sites are protected at national, European and international level from development that would be likely to have a significant effect on their important interest features. Roydon Common and Dersingham Bog are sensitive and vulnerable to changes in water flow and levels and water chemistry. Natural England therefore recommend avoiding the hydrological catchment areas for Roydon Common and Dersingham Bog when defining areas of search.

f. Registered Common Land: Legislation protects the activities which can and cannot be carried out on registered common land. Therefore it would not be appropriate for common land to be included with the areas of search for mineral extraction.

g. Designated heritage assets (Listed Buildings, Scheduled Monuments, registered historic parks and gardens, Conservation Areas) and 250 metres around each heritage asset: Listed Buildings, Scheduled Monuments and registered historic parks and gardens are designated at a national level by Historic England. Conservation Areas are designated by the local planning authority and usually contain a number of Listed Buildings within them. The NPPF (paragraph 132) states that “substantial harm to or loss of a grade II listed building, park or garden should be exceptional. Substantial harm to or loss of designated heritage assets of the highest significance

(notably scheduled monuments, grade I and II* listed buildings, grade I and II* registered parks and gardens) should be wholly exceptional”.

An area of 250 metres around designated heritage assets has been excluded from the areas of search. This 250 metre area is not intended to be the setting of the heritage asset and it is recognised that the extent of the setting of each heritage asset will be different and may extend more or less than 250 metres from the heritage asset. The setting of a heritage asset contributes to the significance of the heritage asset. The 250 metre stand-off is considered as a starting point for the consideration of setting. Any subsequent planning application within an area of search would need to provide a Heritage Statement if the proposal could potentially impact upon a heritage asset or its setting, which would provide the necessary detail.

h. Sensitive receptors to amenity impacts (residential dwellings, educational facilities, workplaces, healthcare and leisure facilities) and 250 metres around each sensitive receptor:

An area of 250 metres around sensitive receptors has been excluded because this represents a distance at which amenity impacts (such as noise and dust) could be mitigated to acceptable levels with the minimum of controls. A planning application may be able to provide information to support mineral extraction closer than 250 metres from a sensitive receptor, but 250 metres is considered appropriate for an area of search.

i. Agricultural land grades 1 and 2: Grades 1 and 2 are defined nationally as the highest quality agricultural land and the NPPF (paragraph 112) contains requirements to ensure that the Best and Most Versatile (BMV) agricultural land is safeguarded. “Where significant development of agricultural land is demonstrated to be necessary, local planning authorities should seek to use areas of poorer quality land in preference to that of higher quality”. Grade 3 agricultural land has not been excluded from the areas of search because only subgrade 3a is classified as BMV agricultural land. The subgrades of 3a and 3b are not mapped and therefore it is not possible to differentiate between them when defining the areas of search.

j. Allocated, current and restored mineral extraction sites: Additional silica sand resources will not be found within sites where mineral extraction has already been completed.

The purpose of defining areas of search for future silica sand extraction is to provide sufficient locations suitable for the production of glass sand, as required by the existing processing facility at Leziate. The majority of previous extraction of silica sand for glass manufacture has taken place from the Leziate Beds and this deposit has the highest probability of providing deposits of a suitable quality and grade for this use.

Based on planning permissions for previous extraction sites, it is considered unlikely that a commercial silica sand extraction operation would take place on less than 20 hectares of land. Therefore areas of search below 20 hectares in size are unlikely to be deliverable.

Sites and/or areas for the extraction of sand and gravel, carstone, and silica sand during the Plan period to 2036 will be allocated as part of the Minerals and Waste Local Plan Review process. Developers wanting to extraction mineral from specific sites or land within an area of search allocated in the Minerals and Waste Local Plan Review will still need to apply for and be granted planning permission before mineral extraction can take place.

Policy MP2: Spatial Strategy for mineral extraction

Within the resource areas identified on the key diagram, specific sites for sand and gravel or carstone extraction should be located within 10 miles of one of Norfolk's urban areas or main towns (detailed in the supporting text) and/or be well-related to one of Norfolk's urban areas or main towns via appropriate transport infrastructure.

Within the resource areas identified on the key diagram, specific sites or preferred areas for silica sand extraction should be located where they are able to access the existing processing plant and railhead at Leziate via conveyor, pipeline or off-public highway routes.

Areas of Search for silica sand extraction, of at least 20 hectares in size, will be defined from within the Leziate Beds silica sand resource, excluding the following planning constraints:

- a. Norfolk Coast Area of Outstanding Natural Beauty
- b. ancient woodland sites and 250 metres around them
- c. SSSIs and 250 metres around them
- d. 1km around The Wash SSSI
- e. The hydrological catchment around Roydon Common SSSI and Dersingham Bog SSSI
- f. Registered Common Land
- g. Designated heritage assets (Listed Buildings, Scheduled Monuments, registered historic parks and gardens, Conservation Areas) and 250 metres around each heritage asset
- h. Sensitive receptors to amenity impacts (residential dwellings, educational facilities, workplaces, healthcare and leisure facilities) and 250 metres around each sensitive receptor
- i. Agricultural land grades 1 and 2
- j. Allocated, current and restored mineral extraction sites

The designated areas of search for silica sand extraction will be 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.

Question 28: Policy MP2 'Spatial strategy for minerals extraction' - Do you agree or disagree with the proposed policy? Do you have any comments or suggestions for alternative policy wording?

32. Borrow pits

A 'borrow pit' is a temporary mineral working to supply material for a specific construction project. Major construction projects, especially road schemes, can demand considerable quantities of aggregate, particularly low grade fill material. In some cases this can be sourced near to major construction projects, which can have advantages over established extraction sites, by reducing the impact of concentrated flows of heavy goods traffic on the public highway. A proposal of this nature must be able to demonstrate that it represents the most appropriate source of mineral to meet the additional demand.

Policy MP3: Borrow pits

Borrow pits will be permitted so long as it is demonstrated that:

- The pit will only be used in connection with a major construction project with which it is associated; and
- The pit is the most appropriate source of mineral to meet the additional demand; and
- The pit can be accessed from the construction project site either directly or via a short length of suitable highway; and
- It will be worked and be restored within the same timescale as the related construction project; and
- Extraction from the site causes less environmental damage than would result from using material from an established source of supply.

Question 29: Policy MP3 'Borrow Pits' - Do you agree or disagree with the proposed policy? Do you have any comments or suggestions for alternative policy wording?

33. Agricultural or potable water reservoirs

Proposals for new reservoirs, or extensions to existing reservoirs with incidental mineral extraction, involving removal of sand and gravel off-site, will need to demonstrate that there is a proven need for the proposal at the given location. Such need could be demonstrated by, for instance, the Environment Agency agreeing that a proposal for a winter-fill agricultural reservoir or potable water reservoir is justifiable and acceptable.

Policy MP4: Agricultural or potable water reservoirs

Proposals for agricultural reservoirs, potable water reservoirs with incidental mineral extraction involving off-site removal of minerals will be permitted, subject to applicants demonstrating that there is a proven need for the proposal at the given location and it complies with the development management criteria set out in Policy MW2.

Question 30: Policy MP4 'Agricultural or potable water reservoirs' - Do you agree or disagree with the proposed policy? Do you have any comments or suggestions for alternative policy wording?

Policy MP5: Core River Valleys

Minerals development will only be permitted in Core River Valleys (as shown on the Policies Map) where the applicant demonstrates that the development will:

- enhance the form, local character and local distinctiveness of the landscape; and
- enhance the biodiversity of the river valley (either immediately or on restoration); and
- not impede floodplain functionality.

An assessment of any impacts from mineral development will include:

- consideration of the potential impacts or enhancement of the landscape and natural environment, both during and after working;
- the duration of any adverse impacts, and mitigation and/or compensatory measures, as appropriate, to replace losses; and
- the provision of any long term asset enhancement through restoration proposals.

Question 31: Policy MP5 ‘Core River Valleys’ - Do you agree or disagree with the proposed policy? Do you have any comments or suggestions for alternative policy wording?

35. Cumulative impacts and phasing of workings

Minerals can only be worked where they occur. Where viable mineral deposits are present, sometimes more than one mineral company may wish to exploit them at sites which are closely located. This can increase the impacts of operations to an extent that they become unacceptable. It is therefore important to ensure that, where there are a number of sites proposed close together or new sites proposed close to existing operations, the potential cumulative impacts are considered fully and satisfactorily mitigated.

Mitigating measures might include such measures as the phasing of extraction operations so that one site is completed before a second commences, a restriction on the number of HGV movements or the timetabling of such movements, undertaking pre-extraction landscaping works to reduce cumulative visual impacts and addressing needed junction improvements.

This policy aims to provide clarity as to how the County Council will consider such circumstances.

Policy MP6: Cumulative impacts and phasing of workings

Where a proposed mineral extraction site is considered acceptable (in its own right) but the cumulative impact of a proposal in conjunction with other existing, permitted or allocated minerals extraction sites in the proximity is considered unacceptable, the proposal may be considered acceptable if:

- phased so that one site follows the completion of the other, or
- the applicant can demonstrate that the adverse cumulative impacts can be adequately mitigated.

Question 32: Policy MP6 ‘Cumulative impacts and phasing of working’ - Do you agree or disagree with the proposed policy? Do you have any comments or suggestions for alternative policy wording?

36. Progressive working, restoration and after-use

Proposals for new mineral working areas can be extensive, reflecting the industry's need to be able to plan a number of years in advance. It is normal practice to work medium and larger sites in phases and to progressively restore each phase. Progressive working and restoration can lessen the overall impact of mineral working on the environment and minimise loss of agricultural production. The direction of working can be particularly relevant to the impact on residential and local amenity, and working arrangements that significantly impact on a restored phase or prevent restoration of a worked-out phase should be avoided.

Suitable restoration and after-use must therefore be considered for minerals extraction sites. Once a phase of operation is complete, or use of a whole site has ceased, there are often different opportunities for restoration and after-use of sites. Where possible, restoration should be focused on providing multiple benefits of landscape, geodiversity and biodiversity enhancement through restoration with public amenity value. However, it may be decided that a site, wholly or partly, would be better suited to being restored to agriculture, to leisure and recreational development, or to water storage, which could provide benefits for flood alleviation or water supply. Applicants should note that ecological interest can be incorporated into most schemes that are primarily for another after-use.

Planning obligations and/or conditions will be used to ensure that progressive restoration and commencement of after-use takes place within an appropriate time-frame during the site's operations or after completion of working phases. Any site restored to "public amenity" must provide appropriate access to the general public. Planning conditions and/or obligations may be used to determine the required duration of aftercare of restored sites and an agreement for management of such sites in the long term, where appropriate.

Upon cessation of working and restoration of a minerals site, the removal of some local road improvements may be required to meet the provisions outlined in Policy MP7. This will mainly relate to the lower designated, rural routes in the route hierarchy, securing for example the removal of kerbed site accesses and visibility splays, in the interests of landscape and local amenity.

Policy MP7: Progressive working, restoration and after-use

Proposals for new mineral workings must be accompanied by a scheme for the phased and progressive working and restoration of the site throughout its life.

Restoration and after-use of mineral extraction sites and associated development will be determined on a case-by-case basis, prioritising the most appropriate after-use(s) for each site. Restoration and after-use proposals may include agriculture, forestry, ecology, reservoirs, amenity or flood alleviation.

Preference will be given to after-uses and restoration that:

- enhance Norfolk's biodiversity (focussing on priority habitats and species in Norfolk),
- contribute positively to identified Green Infrastructure corridors, and
- create high-quality, locally distinctive landscapes.

The after-use and restoration proposal must demonstrate that:

- The appropriate restoration and after-use is both feasible and achievable in the proposed time scales.
- Due consideration has been given to opportunities to improve public access, particularly to implement the County Council's Rights of Way Improvement Plan.
- Due consideration has been given to supporting the aims of the Green Infrastructure Strategy.
- Any important geology or geomorphology on the site will be retained in sample exposures for study purposes.

Question 33: Policy MP7 ‘Progressive working, restoration and after-use’ - Do you agree or disagree with the proposed policy? Do you have any comments or suggestions for alternative policy wording?

37. Aftercare

Where the proposed restoration of a mineral extraction site is to an agriculture, forestry, amenity or ecology after-use, the outline aftercare strategy sets the general parameters of the proposed action required to bring the restored land up to the required standard for the intended after-use. For example, for agricultural after-use this can entail a particular pattern of cultivation over the five-year aftercare period.

During the five-year period annual reports are submitted for the approval of the Mineral Planning Authority following a site meeting to established any further action that is required, such as the installation of land drainage etc.

Policy MP8: Aftercare

Where the proposed restoration is to an agriculture, forestry, amenity or ecology after-use following minerals extraction, an outline aftercare strategy for five years or more is required prior to the determination of the planning application. The outline strategy should set out the land management proposed to bring the restored land up to the required standard for the proposed after-use.

Planning conditions and/or longer term planning obligations will be used to ensure that a detailed annual management scheme is provided, and to include the measures required following the annual aftercare inspection and the subsequent submission of a finalised version of the annual aftercare report detailing the actions required.

Question 34: Policy MP8 ‘Aftercare’ - Do you agree or disagree with the proposed policy? Do you have any comments or suggestions for alternative policy wording?

38. Concrete batching and asphalt plants

Minerals can only be worked where they occur, which is normally within the open countryside. Ancillary development such as concrete batching plants and asphalt plants would not normally be allowed in the open countryside in the absence of adjacent mineral workings and therefore should be removed once mineral extraction has ceased.

Policy MP9: Concrete batching and asphalt plants

Proposals for concrete batching plants or asphalt plants at sand and gravel workings must stipulate the proportion of indigenous sand and gravel that will be used in the production of ready mixed concrete or asphalt.

At sand and gravel workings, planning permission will be limited to the end date of the quarry permission or to when the indigenous material is no longer being used, whichever is the sooner.

Any proposals for concrete batching plants or asphalt plants that are County matters must also comply with the development management criteria set out in Policy MW2.

Question 35: Policy MP9 ‘concrete batching and asphalt plants’ - Do you agree or disagree with the proposed policy? Do you have any comments or suggestions for alternative policy wording?

39. Safeguarding of port and rail facilities, and facilities for the manufacture of concrete, asphalt and recycled materials

It is important to safeguard existing, planned or potential infrastructure for the storage, handling, processing and distribution of minerals from incompatible development which may prevent or prejudice the use of these facilities.

The safeguarding of minerals infrastructure is necessary to protect it from other forms of development which might either directly or indirectly impact upon these facilities. Therefore, applications for new development in proximity to existing safeguarded minerals infrastructure should take into account any potential conflicts. Local Planning Authorities are therefore requested to consult the Minerals Planning Authority if a proposed development is within the consultation area of a safeguarded facility.

Decisions on whether a proposed development would prevent or prejudice the continued use of a safeguarded facility, and would therefore raise an objection from the Minerals Planning Authority, will be made on a case by case basis. Each decision will take into account the particular use of the safeguarded site, the nature of the proposed development, their compatibility and, where appropriate, any mitigation which could address any adverse impacts.

The Policies Map will indicate the location of all known safeguarded facilities. Railheads and wharfs handling minerals are listed in Appendix 5.

Policy MP10: safeguarding of port and rail facilities, and facilities for the manufacture of concrete, asphalt and recycled materials

The County Council will safeguard:

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

Development proposals within 250 metres of the above minerals related facilities should demonstrate that they would not prevent or prejudice the use of those facilities.

The Mineral Planning Authority should be consulted on all development proposals within Minerals Consultation Areas, except for the excluded development types set out in Appendix 4.

The County Council will oppose development proposals which would prevent or prejudice the use of safeguarded sites for those purposes unless suitable alternative provision is made, or the applicant demonstrates that those sites no longer meet the needs of the aggregates industry.

Question 36: Policy MP10 ‘Safeguarding of port and rail facilities, and facilities for the manufacture of concrete, asphalt and recycled materials’ - Do you agree or disagree with the proposed policy? Do you have any comments or suggestions for alternative policy wording?

40. Minerals Safeguarding Areas and Minerals Consultation Areas

The NPPF states that in preparing local plans, local authorities should: “define Minerals Safeguarding Areas and adopt appropriate policies in order that known locations of specific mineral resources of local and national importance are not needlessly sterilised by non-mineral development, whilst not creating a presumption that resources defined will be worked; and define Minerals Consultation Areas based on these Minerals Safeguarding Areas”.

Minerals are a finite natural resource and can only be worked where they exist. The safeguarding of mineral extraction sites has a number of benefits, both in terms of protecting sources for construction purposes and maintaining a supply of building stone for conservation purposes. Norfolk County Council will therefore safeguard existing, permitted and allocated mineral extraction sites from incompatible development proposals.

The purpose of safeguarding existing and proposed sites is not necessarily to prevent other forms of development from taking place in proximity to those sites, but to ensure that issues of compatibility across the differing forms of development are taken into account in the planning process.

Therefore, applications for new development in proximity to existing safeguarded mineral extraction sites should take into account any potential conflicts. Local Planning Authorities are requested to consult the Mineral Planning Authority if a proposed development is within the consultation area of a safeguarded site. The Minerals Consultation Area will extend 250 metres around each safeguarded mineral extraction site. The safeguarded sites will be identified on the Policies Map and are listed in Appendix 6.

Decisions on whether a proposed development would prevent or prejudice the continued use of a safeguarded site and would therefore raise an objection from the Mineral Planning Authority, will be made by on a case by case basis. Each decision would take into account the particular use of the safeguarded site, the nature of the proposed development, their compatibility and, where appropriate, any mitigation which could address any adverse impacts.

Norfolk County Council will also define Minerals Safeguarding Areas (MSAs) and Mineral Consultation Areas (MCAs) to safeguard specific mineral resources. The primary evidence base for defining mineral resources as Mineral Safeguarding Areas is the Norfolk Mineral Resources Map 2004, produced by the British Geological Survey (BGS), as amended by the BGS DiGmapGB-50 dataset. Deposits of aggregates (sand and gravel) are widely distributed across Norfolk and there are very considerable resources. To ensure that the Mineral Safeguarding Areas are proportionate, the area covered by the MSA will include only those deposits which are most likely to be commercially viable. This will normally be those deposits with the highest proportion of gravel.

The table overleaf shows the superficial geology types which have been included within the indicative sand and gravel Minerals Safeguarding Areas. There are two main types of geology; bedrock and superficial. In Norfolk, chalk is the main bedrock material, along with younger crag (sand and gravel) and other sedimentary deposits in some areas. The superficial geology is made up of more recent deposits generally of a sedimentary nature from either ancient river system or as a result of glacial activity, during the Quaternary Period (the most recent geological period).

Superficial geology types

BGS superficial geology classifications in Norfolk	Included in sand and gravel Minerals Safeguarding Area
calcareous tufa	No
clay and silt	No
clay, silt and sand	No
clay, silt, sand and gravel	No
diamicton	No
gravel	Yes
gravel, sand and silt	Yes
gravel, sand, silt and clay	Yes
peat	No
sand	Yes
sand and gravel	Yes
sand and silt	No
sand with clay and gravel	No
sand, silt and clay	No
sediment, shall	No
shelly mudstone	No
unknown lithology	No

In addition to the sand and gravel resource, silica sand and carstone resources will also be safeguarded. Silica sand is scarce both nationally and in Norfolk and it is defined as an important resource in the NPPF, therefore it is appropriate for the entire resource to be safeguarded as part of the MSA. Carstone is also a scarce resource in Norfolk and therefore it is appropriate for the entire carstone resource to be safeguarded as part of the MSA. The Minerals Safeguarding Areas will be identified on the Policies Map. The map on page 79 also identifies the Minerals Safeguarding Areas.

Demand for chalk and clay is relatively low in comparison to the extent of the resource in Norfolk and therefore it is not considered necessary to safeguard these deposits. The National Planning Policy Framework states that planning permission must not be granted for peat extraction from new or extended sites and therefore the peat deposit will not be safeguarded as a mineral resource.

For safeguarding mineral resources, the Mineral Planning Authority has determined that the Minerals Consultation Area (MCA) is the same defined area as the Minerals Safeguarding Area (MSA). Local Planning Authorities are required to consult the County Planning Authority on applications for any form of development received within the MCA/MSA, which are likely to affect or be affected by mineral working and meet the criteria outlined in Appendix 4.

The inclusion of land in a MSA/MCA does not necessarily mean that planning permission would be granted for mineral extraction and there may be sound planning reasons why proposals would be rejected. Designation of these areas is intended to ensure that mineral interests are taken into account at the appropriate time. For example, circumstances may arise where it is appropriate to undertake mineral extraction in advance of development. The NPPF states that planning authorities should “encourage the prior extraction of minerals, where practicable and environmentally feasible, if it is necessary for non-mineral development to take place”.

Policy MP11: Minerals Safeguarding Areas and Minerals Consultation Areas

The County Council will safeguard existing, permitted and allocated mineral extraction sites from inappropriate development proposals. Minerals Consultation Areas are delineated on the Policies Map and extend to 250 metres from each safeguarded site. Development proposals within 250 metres of a safeguarded site should demonstrate that they would not prevent or prejudice the use of the safeguarded site for mineral extraction. The County Council will object to development proposals which would prevent or prejudice the use of safeguarded sites for mineral extraction.

The County Council will safeguarding Norfolk's silica sand, carstone, and sand and gravel mineral resources, within the Minerals Safeguarding Areas identified on the Policies Map, from inappropriate development proposals. For mineral resources the Minerals Consultation Area is the same defined area as the Mineral Safeguarding Area.

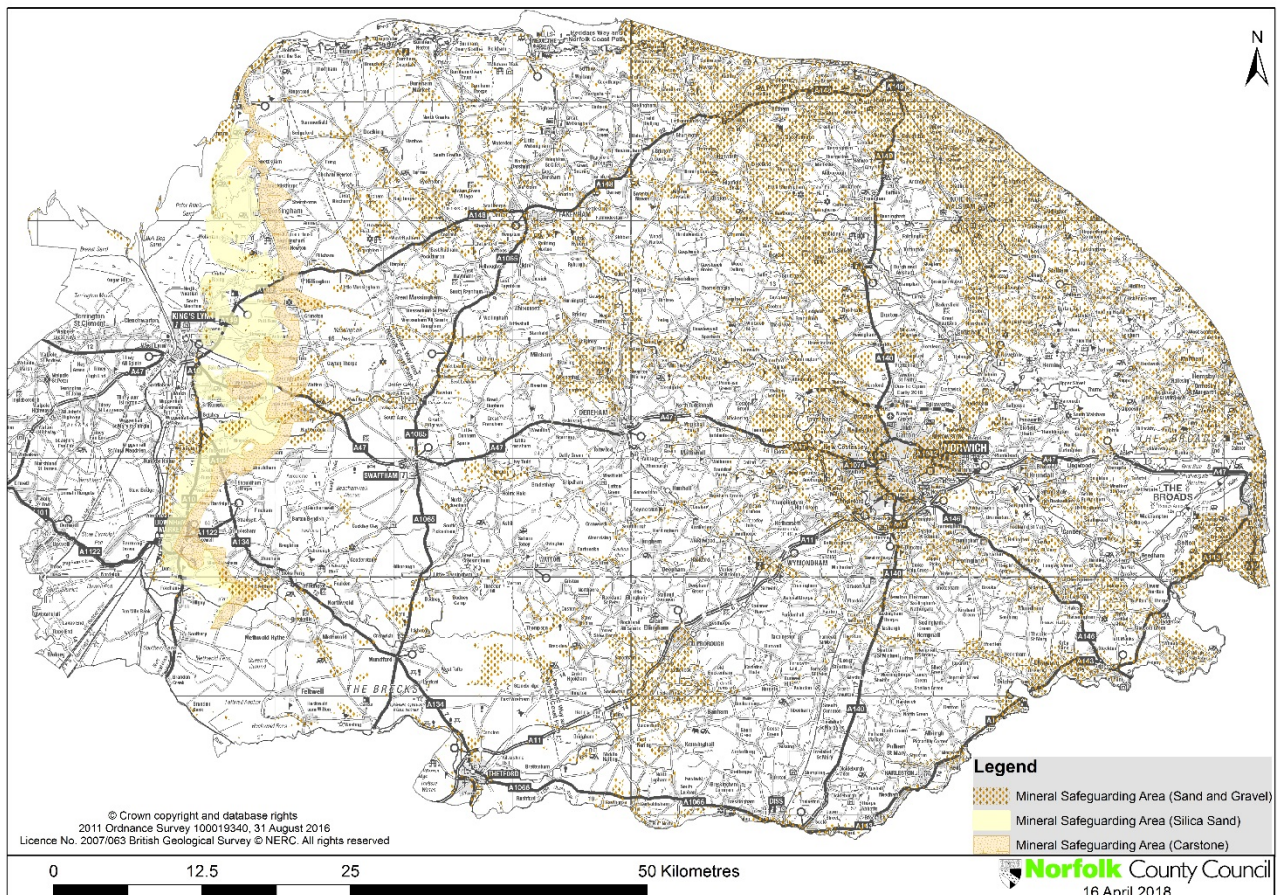
The Mineral Planning Authority should be consulted on all development proposals within Minerals Consultation Areas, except for the excluded development types set out in Appendix 4.

For relevant development proposals located within a Minerals Safeguarding Area the Mineral Planning Authority will expect to see appropriate investigations carried out to assess whether any mineral resource there is of economic value, and if so, whether the mineral could be economically extracted prior to the development taking place.

The conservation benefits of carstone will be a consideration in safeguarding resources.

In line with the NPPF, the Mineral Planning Authority will object to development which would lead to the sterilisation of the mineral resource and it would be for the relevant Local Planning Authority to decide whether there are compelling planning reasons for over-riding this safeguarding objection.

Question 37: Policy M11 'Mineral Safeguarding Areas and Mineral Consultation Areas' - Do you agree or disagree with the proposed policy? Do you have any comments or suggestions for alternative policy wording?



41. Energy minerals

Energy minerals include coal, oil and gas. These hydrocarbon resources underpin key aspects of modern society, supplying energy to power industry and heat homes, fuel for transport to carry goods and people all over the world, and raw materials to produce everyday items. The importance of energy security increases the significance of energy supply, and the efficient use of domestic (energy mineral) resources.

Developing domestic supplies of oil and gas is seen as a valuable step in reducing our reliance on imports. Reflecting this, there is an increasing interest from industry and central government in developing onshore supplies that would contribute toward the country's energy security.

Onshore oil and gas supplies can be accessed via the sinking of boreholes, also known as 'wells'. This has taken place in the UK and worldwide for many years.

Background

The National Planning Policy Framework states that when planning for on-shore oil and gas development, including unconventional hydrocarbons, Mineral Planning Authorities should include criteria based policies for each of the exploration, appraisal and production phases of hydrocarbon extraction.

Planning permission is one of the main regulatory requirements that operators must meet before drilling a well for both conventional and unconventional hydrocarbons. However, exploration for oil, gas and other hydrocarbons can only take place in areas which have been licensed by the Oil and Gas Authority.

The County Council is responsible for granting permission for the location of any wells and well pads within licensed areas, and will impose conditions to ensure that the impact on the land is acceptable. However, it is not the only regulatory body that permission for extraction is required from. Others include:

The Department for Business, Energy and Industrial Strategy (BEIS) - manages the release of Petroleum Exploration and Development Licences (PEDLs) through the Oil and Gas Authority. These licences are put out for tender in rounds; the latest round took place in 2014 (14th round), with the previous round in 2007. As at 2018, although licence blocks in Norfolk were offered in the 14th round, no licences were applied for in Norfolk. Therefore, as at 2018, there are currently no PEDL licence in Norfolk. At the current time a decision on the timing of the next round of PEDL licences administered by BEIS has not been made.

A company that gains a successful exploration licence has exclusive consent to carry out exploration, within the licence block. Exploration may include test drillings once other permissions (including planning permission) and approvals are in place. The Oil and Gas Authority also has responsibility for assessing the risk of, and monitoring seismic activity, as well as granting consent to flaring or venting;

Environment Agency – protects water resources (including groundwater aquifers), ensures appropriate treatment and disposal of mining waste, emissions to air and suitable treatment and management of any naturally occurring radioactive materials;

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

Introduction

The BGS has records of exploratory drilling for oil and gas in Norfolk in the 1960's and 1970's. However, all of these exploratory drills are recorded as being dry and abandoned. In the 1980's there was a renewed campaign of seismic testing for oil and gas deposits in Norfolk, but again no potential prospects were identified. While significant oil and gas fields were identified and exploited in the Southern North Sea, the landward extension of the reservoir basin for these deposits occurs

in the East Midlands. The East Midlands has been the site of productive oil and gas fields since the beginning of the Second World War. No such equivalent prospective site occurs within Norfolk, as the BGS defines the county of Norfolk as an unprospective area for oil and gas, in that the lack of suitable geology means that a prospect likely to result in commercial quantities of oil and gas does not occur.

Unconventional hydrocarbons are gas obtained from reservoirs made up from rocks other than sandstone and limestone (conventional reservoirs). There are four main unconventional routes to hydrocarbon exploitation:

- Abandoned Mine Methane (AMM), where methane generated in old coal workings is recovered
- Coal Mine Methane (CMM), where methane is captured from active coal workings
- Coal Bed Methane (CBM), where Methane is recovered from coalbeds which have not been subject to mining by drilling into the bed
- Recovering methane by drilling into mudstones and shales; these have traditionally been considered to be too impermeable for commercial production of gas.

Norfolk does not have any onshore coalbeds, although a concealed coal bed occurs slightly offshore. However, this is located at a depth greater than can currently be exploited for CBM, that is, more than 1200m below the surface.

Shale deposits do occur along the western boundary of the county. However, the BGS have assessed that the most likely prospective areas for shale gas recovery in England are within basin settings in the Pennines, northern England, the Midlands, and Wessex and Cleveland basins. Methane recovered from shales is sub-divided into two types dependent on the method of formation. Biogenic methane is generated by the initial breakdown of organic matter at or near the surface. Thermogenic methane is generated as a product of the breakdown of organic material as a result of depth and pressure as the material is progressively buried. Thermally mature basins have the greatest prospect for commercially viable quantities of shale gas. No shale deposits within Norfolk occur within such basins. Biogenic methane has not yet been shown to have occurred in any deposits in the UK, although it has been significant in the rest of the world.

In conclusion, while oil and gas recovery has occurred relatively close to the boundaries of Norfolk, there is no evidence that any prospects underlie the county.

The phases of unconventional hydrocarbon development

In the event that proposals do come forward, Norfolk County Council will require the submission of a new planning application for each key stage of a proposal for oil and gas development. The NPPF outlines three main phases for on-shore oil and gas development, namely: exploration; appraisal; and production.

Based on the information available at the time of writing the Minerals and Waste Local Plan, the Council notes that it is not always possible to distinguish a discrete “appraisal” stage.

Nonetheless, mindful of the need to distinguish different phases where possible (in particular separating the production phase from exploration and/or appraisal) the Council will ensure that unconventional oil and gas development is managed carefully in a phased manner.

For example, if the appraisal of targeted areas post-exploration phase requires additional boreholes to be sunk or horizontally drilled, without entering the production phase, this may require different planning conditions and a further review of the risks involved. In such circumstances it is likely that such appraisal will be considered as a distinct phase of the development and will require separate planning permission.

Effective continuous dialogue between operators and the Mineral Planning Authority is vital to ensure each step is carefully considered.

Planning applications for oil and gas development

On receipt of a planning application for oil and gas development, the main planning issues that Norfolk County Council, as Minerals Planning Authority (MPA), must address are broadly similar to other types of mineral development and thus would be considered with reference to the relevant policies in this Plan.

Guidance on the planning application process, including a summary of the key regulators for hydrocarbon extraction and issues that mineral planning authorities can leave to other regulatory regimes is provided in the National Planning Practice Guidance.

Norfolk County Council's policy on oil and gas is presented in MP12, which differentiates between the different stages of development. Exploration and appraisal operations should be for an agreed, temporary length of time. All of the criteria in policy MP12 applicable to the exploration and appraisal stages will also be applicable to production.

The applicant will be required to provide information on how the site has been selected and the extent of the geographical area of search for the oil or gas. The area of search is defined as the area within which the exploration or appraisal will take place in relation to the wider reservoir (the source of the oil or gas). It should be demonstrated that the site selection process has had regard to designations of local, regional and/or national importance. In addition sites of European importance and areas that ecologically support the integrity of these must be considered. It should also be demonstrated that facilities are located to minimise adverse impacts on landscape and visual amenity and offer the best opportunity for the appropriate and adequate mitigation and/or compensation of any adverse impacts.

All proposals for oil and gas development must assess environmental risk to establish the nature and extent of any adverse impacts and identify appropriate mitigation measures. To facilitate this it is important to ensure that all environmental assessments submitted at the planning stage are as complete and up-to-date as possible. For shale gas applications that involve hydraulic fracturing this will include reference to an Environmental Risk Assessment (ERA) completed as best practice under guidance from BEIS.

The application must demonstrate that the proposed location and development is consistent with the 'Onshore Hydraulic Fracturing (Protected Areas) Regulations 2015' (or subsequent regulations) in relation to the Norfolk Coast AONB and the Broads.

The application must demonstrate that drilling at the proposed location will not generate unacceptable adverse impacts on the integrity of the underlying geological structure. As necessary, Norfolk County Council will seek expert advice (for example, from BGS) to verify that all geological data bearing on the application has been considered and that sufficient data are available to make an informed decision. Advice will also be sought from Natural England with regard to ecological data relating to geological features.

In common with all types of mineral development, the Mineral Planning Authority will refer to the Development Plan as a whole when considering any application.

When preparing a proposal for production, as well as covering criteria a-d in as much detail as possible (i.e. revisiting and expanding information submitted during the exploration stages), operators would also be asked to provide information on the outcomes of the appraisal stage (showing that production will be viable), a development framework for the site, and detailed consideration of the economic impacts of the proposal.

All applications will be considered against Environmental Impact Assessment Regulations 2017 (or subsequent regulations). Consideration of cumulative impacts will form an important part of this process.

Appropriate planning obligations and conditions will be sought to ensure that the proposal adheres to the Development Plan.

Community engagement is important for oil and gas development and applicants will be encouraged to engage with both the communities and the Authorities (through pre-application advice). For complex cases, the use of a planning performance agreement will be sought. There is also a 'Community Charter' which the oil and gas industry has committed to for communities that host unconventional oil and gas development.

Policy MP12: Conventional and unconventional oil and gas development

Proposals for the exploration and/or appraisal of oil and gas resources in Norfolk will be permitted subject to the application demonstrating that:

- a) well sites and associated facilities represent an acceptable environmental option in comparison to other deliverable alternative sites from which the target reservoir can be accessed, taking into account impacts from on-site and off-site activities including HGV movements;
- b) the proposed development will not generate unacceptable adverse impacts on the environment and local communities;
- c) drilling at the proposed location will not generate unacceptable adverse impacts on the integrity of the underlying geological structure; and
- d) measures will be taken to mitigate to acceptable levels adverse impacts on the environment and local communities.

Proposals for the production of oil and gas in Norfolk will be permitted if the proposal:

- e) adheres to criteria a-d above;
- f) includes a full appraisal programme for the oil and/or gas resource, completed to the satisfaction of the Mineral Planning Authority; and
- g) includes a development framework for the site, incorporating or supplemented by justification for the number and extent of the proposed production facilities and an assessment of the proposal's economic impacts.

Question 38: Policy MP12 'conventional and unconventional oil and gas development' - Do you agree or disagree with the proposed policy? Do you have any comments or suggestions for alternative policy wording?

42. Implementation, Monitoring and Review

The Policies, Specific Site Allocations and Areas of Search included in the Plan will mainly be implemented through the Development Management function of Norfolk County Council. However, some of the policies will be implemented through on-going dialogue with the Local Planning Authorities within Norfolk, which takes place through established work practices.

Implementation of the Minerals and Waste Local Plan will be monitored and captured in the Annual Monitoring Reports or Local Aggregate Assessment as appropriate. If the monitoring identifies any significant divergence from a trend or target required, some intervention by Norfolk County Council may be required. Proposed targets and trigger points for further consideration / action will be detailed in the Preferred Options Consultation document, the table below just contains two example indicators. Monitoring will seek to establish the reason (s) for the divergence from the target, and as a consequence, an intervention may be required. Intervention could include a review of the evidence base, a specific policy or the Plan as a whole and will be reported in the Annual Monitoring Report.

The format for the table of indicators for the implementation, monitoring and review of the Minerals and Waste Local Plan is shown below, containing two examples of indicators. The full table will contain indicators relevant to both minerals and waste developments.

Indicator	Related Policy / strategic objective	Target	Agencies responsible	Implementation mechanism	Data Source	Trigger Level
Landbank for sand and gravel, carstone and silica sand	S01 & S02 Policies MP1 and MP2	Maintenance of at least a 7 year landbank for S&G and carstone, and 10 years for silica sand based on previous 20 years' sales average	NCC and mineral operators	Allocations of specific sites and/or areas in the M&LPR Development management decisions taken on planning applications	Mineral industry survey returns	Landbank falls below 7 years for S&G and carstone, or below 10 years for silica sand.
Annual production of sand and gravel, carstone and silica sand	S01 & S02 Policies MP1 and MP2	To maintain a steady and adequate supply of aggregate and industrial minerals	NCC and mineral operators	Allocations of specific sites and/or areas in the M&LPR Development management decisions taken on planning applications	Mineral industry survey returns	Annual production in the LAA is significantly above or below the forecast

Question 39: 'Implementation, monitoring and review' - Do you have any suggestions for indicators and targets?

APPENDICES TO THE POLICIES

APPENDIX 1 – Existing Core Strategy and Development Management Policies

Minerals and Waste Core Strategy Policy	Proposed change
Policy CS1 – Minerals extraction	This policy would be replaced by the ‘Provision for minerals extraction’ Policy MP1
Policy CS2 - General locations for mineral extraction and associated facilities	This policy would be replaced by the ‘Spatial strategy for minerals extraction’ Policy MP2
Policy CS3 – Waste management capacity to be provided	This policy would be replaced by the ‘new waste management capacity to be provided’ Policy WP1
Policy CS4 – New waste management capacity to be provided	This policy would be replaced by the ‘new waste management capacity to be provide’ Policy WP1
Policy CS5 – General locations for waste management facilities	This policy would be replaced by the ‘spatial strategy for waste management facilities’ Policy WP2
Policy CS6 – General waste management considerations	This policy would be replaced by the ‘land uses potentially suitable for waste management facilities’ Policy WP3
Policy CS7 - Recycling, composting, anaerobic digestion and waste transfer stations	This policy would be replaced by five separate policies – one on recycling and transfer of inert and CD&E waste (Policy WP4), one on transfer stations, MRF, ELV and WEEE facilities (Policy WP5), one on transfer and treatment of hazardous waste (Policy WP6), one on composting (Policy WP8), and one on anaerobic digestion (Policy WP9)
Policy CS8 – Residual waste treatment facilities	This policy would be replaced by the ‘Residual waste treatment facilities’ Policy WP10
Policy CS9 – Inert waste landfill	This policy would be replaced by the ‘inert waste landfill’ Policy WP11
Policy CS10 – Non-hazardous and hazardous waste landfill	This policy would be replaced by the ‘non-hazardous and hazardous waste landfill’ Policy WP12
Policy CS11 – waste water / sewerage infrastructure and treatment facilities	This policy would be replaced by the ‘water recycling centres’ Policy WP14
Policy CS12 – Whitlingham waste water treatment works	This policy would be replaced by the ‘Whitlingham WRC’ Policy WP15
Policy CS13 – Climate change and renewable energy generation	This policy would be replaced by the ‘climate change adaption and mitigation’ Policy MW4
Policy CS14 – Environmental protection	This policy would be replaced by the ‘Development Management Criteria’ Policy MW2 and the ‘Breckland SPA’ Policy MW5
Policy CS15 - Transport	This policy would be replaced by the Transport Policy MW3
Policy CS16 – Safeguarding mineral and waste sites and mineral resources	This policy would be replaced by three policies – safeguarding mineral infrastructure (Policy MP10), safeguarding mineral resources (Policy MP11), and safeguarding waste management facilities (Policy WP17)
Policy CS17 – Use of secondary and recycling aggregates	This policy would be replaced by the ‘Recycling or transfer or inert and CD&E waste’ Policy WP4

Minerals and Waste Development Management Policy	Proposed change
Policy DM1 – Nature conservation	This policy would be replaced by the ‘Development Management Criteria’ Policy MW2
Policy DM2 – Core river valleys	This policy would be replaced by the ‘Core River Valleys’ Policy MP5
Policy DM3 – Groundwater and surface water	This policy would be replaced by the ‘Development Management Criteria’ Policy MW2
Policy DM4 – Flood Risk	This policy would be replaced by the ‘Development Management Criteria’ Policy MW2
Policy DM5 - Borrow pits and agricultural or potable water reservoirs	This policy would be replaced by two separate policies – one for borrow pits (Policy MP3) and one for reservoirs (Policy MP4)
Policy DM6 – Household Waste Recycling Centres	This policy would be replaced by the ‘Household Waste Recycling Centres’ Policy WP7
Policy DM7 – Safeguarding aerodromes	This policy would be replaced by the ‘Development Management Criteria’ Policy MW2
Policy DM8 – Design, local landscape and townscape character	This policy would be replaced by the ‘Development Management Criteria’ Policy MW2
Policy DM9 – Archaeological sites	This policy would be replaced by the ‘Development Management Criteria’ Policy MW2
Policy DM10 - Transport	This policy would be replaced by the ‘Transport’ Policy MW3
Policy DM11 – Sustainable construction and operations	This policy would be replaced by the ‘Climate change mitigation and adaption’ Policy MW4
Policy DM12 – Amenity	This policy would be replaced by the ‘Development Management Criteria’ Policy MW2
Policy DM13 – Air Quality	This policy would be replaced by the ‘Development Management Criteria’ Policy MW2
Policy DM14 – Progressive working, restoration and afteruse	This policy would be replaced by the ‘Progressive working, restoration and afteruse’ Policy MP7
Policy DM15 - Cumulative impacts	This policy would be replaced by the ‘cumulative impacts and phasing of workings’ Policy MP6
Policy DM16 – Soils	This policy would be replaced by the ‘agricultural soils’ Policy MW6

Appendix 2 – Existing Mineral Site Specific Allocations and Areas of Search Policies

Minerals SSA Policy	Location	Site proposal	Proposed change
Policy SD1 – Sustainable Development	N/A	N/A	Policy to be retained in accordance with the NPPF as Policy MW1
Policy MIN 10	Land off Fakenham Road, Beetley	Extraction of 2,400,000 tonnes of sand and gravel	Part of this site received planning permission in April 2015 and the permission has been implemented. The suitability of mineral extraction within part of the site without planning permission, for the plan period to 2036, is being considered as part of the M&WLPR.
Policy MIN 51	Land west of Bilney Road, Beetley	Extraction of 1,300,000 tonnes of sand and gravel	The suitability of mineral extraction at this site, for the plan period to 2036, is being considered as part of the M&WLPR.
Policy MIN 102	Land at North Farm, south of the River Thet, Snetterton	Extraction of 1,500,000 tonnes of sand and gravel	The suitability of mineral extraction at this site, for the plan period to 2036, is being considered as part of the M&WLPR.
Policy MIN 108	Land to the north of Hargham Road, Shropham	Extraction of 150,000 tonnes of sand and gravel	Policy to be deleted because the landowner no longer wants the site to be considered for mineral extraction
Policy MIN 109	Land to the south of Honeypots Quarry, Shropham	Extraction of 350,000 to 400,000 tonnes of sand and gravel	Policy to be deleted because the landowner no longer wants the site to be considered for mineral extraction
Policy MIN 110	Land to the south of Spong Lane, Shropham	Extraction of 150,000 tonnes of sand and gravel	Policy to be deleted because the landowner no longer wants the site to be considered for mineral extraction
Policy MIN 37	Land at Mayton Wood, Coltishall Road, Frettenham	Extraction of 1,450,000 tonnes of sand and gravel	The suitability of mineral extraction at this site, for the plan period to 2036, is being considered as part of the M&WLPR.
Policy MIN 48	Swannington Bottom Plantation, Felthorpe	Extraction of 1,900,000 tonnes of sand and gravel	The suitability of mineral extraction at this site, for the plan period to 2036, is being considered as part of the M&WLPR.
Policy MIN 55	Land at Keepers Cottage, Attlebridge	Extraction of 525,000 tonnes of sand and gravel	The suitability of mineral extraction at this site, for the plan period to 2036, is being considered as part of the M&WLPR.
Policy MIN 64	Horstead Quarry, Grange Farm, Horstead	Extraction of 950,000 tonnes of sand and gravel	The suitability of mineral extraction at this site, for the plan period to 2036, is being considered as part of the M&WLPR.
Policy MIN 96	Land at Grange Farm, Spixworth	Extraction of 1,000,000 tonnes of sand and gravel	The suitability of mineral extraction at this site, for the plan period to 2036, is being considered as part of the M&WLPR.
Policy MIN 6	Land off East Winch Road, Mill	Extraction of 1,416,000	The suitability of mineral extraction at this site, for the plan period

Minerals SSA Policy	Location	Site proposal	Proposed change
	Drove, Middleton	tonnes of carstone	to 2036, is being considered as part of the M&WLPR.
Policy MIN 19	Eastern extension to Pentney Quarry	Extraction of 700,000 tonnes of sand and gravel	The suitability of mineral extraction at this site, for the plan period to 2036, is being considered as part of the M&WLPR.
Policy MIN 40	Land to the east of Grandcourt Farm, East Winch	Extraction of 3,000,000 tonnes of silica sand	The suitability of mineral extraction at this site, for the plan period to 2036, is being considered as part of the M&WLPR.
Policy MIN 45	Coxford Abbey Quarry, East Rudham	Extraction of 3,600,000 tonnes of sand and gravel	Part of this site received planning permission in xx and the permission has been implemented. The suitability of mineral extraction within the remaining part of the site without planning permission, for the plan period to 2036, is being considered as part of the M&WLPR.
Policy MIN 75	Home Farm, Watlington	Extraction of 335,000 tonnes of sand and gravel	The suitability of mineral extraction at this site, for the plan period to 2036, is being considered as part of the M&WLPR.
Policy MIN 76	West Field, Watlington	Extraction of 285,000 tonnes of sand and gravel	The suitability of mineral extraction at this site, for the plan period to 2036, is being considered as part of the M&WLPR.
Policy SIL01	Land at Mintlyn South, Bawsey	Extraction of 1,200,000 tonnes of silica sand	The suitability of mineral extraction at this site, for the plan period to 2036, is being considered as part of the M&WLPR.
Areas of Search Policy for silica sand extraction	Areas of search within the parishes of: Marham, Runcton Holme, Tottenhill, Shouldham, Shouldham Thorpe, Stow Bardolph, Wormegay	Areas of search for future extraction of silica sand	Policy to be replaced by Policy MP14 'Areas of Search for silica sand extraction'
Policy MIN 69	Land north of Holt Road, Aylmerton	Extraction of 750,000 tonnes of sand and gravel	The suitability of mineral extraction at this site, for the plan period to 2036, is being considered as part of the M&WLPR.
Policy MIN 71	Land to the west of Norwich Road, Lodge Farm, Holt	Extraction of 1,100,000 tonnes of sand and gravel	The suitability of mineral extraction at this site, for the plan period to 2036, is being considered as part of the M&WLPR.
Policy MIN 84	Land south of Holt Road, East Beckham	Extraction of 1,600,000 tonnes of sand and gravel	Policy to be deleted because this site received planning permission in August 2014 and the permission has been implemented
Policy MIN 115	Land at Lord Anson's wood, near north Walsham	Extraction of 1,100,000 tonnes of sand and gravel	The suitability of mineral extraction at this site, for the plan period to 2036, is being considered as part of the M&WLPR.
Policy MIN 79	Land north of Hickling Lane, Swardeston	Extraction of 1,750,000 tonnes of sand and gravel	The suitability of mineral extraction at this site, for the plan period to 2036, is being considered as part of the M&WLPR.

Minerals SSA Policy	Location	Site proposal	Proposed change
Policy MIN 80	Land south of Mangreen Hall Farm, Swardeston	Extraction of 760,000 tonnes of sand and gravel	The suitability of mineral extraction at this site, for the plan period to 2036, is being considered as part of the M&WLPR.
Policy MIN 81	Land south of Mangreen Lane, Stoke Holy Cross	Extraction of 955,000 tonnes of sand and gravel	Policy to be deleted because this site received planning permission in October 2015 and the permission has been implemented
Policy MIN 83	Extension to Norton Subcourse Quarry, Loddon Road	Extraction of 674,000 tonnes of sand and gravel	Policy to be deleted because this site received planning permission in February 2015 and the permission has been implemented
Policy MIN 90	Extension to Norton Subcourse Quarry, Loddon Road	Extraction of 511,000 tonnes of sand and gravel	Policy to be deleted because this site received planning permission in February 2015 and the permission has been implemented
Policy MIN 91	Extension to Norton Subcourse Quarry, Loddon Road	Extraction of 1,146,000 tonnes of sand and gravel	Policy to be deleted because this site received planning permission in February 2015 and the permission has been implemented
Policy MIN 118	Land at Hall Farm, Wymondham	Extraction of 600,000 tonnes of sand and gravel	Policy to be deleted because this site received planning permission in January 2014 and the permission has been implemented.

Appendix 3 – Existing Waste Site Specific Allocations Policies

Waste SSA Policy	Location	Site Proposal	Replacement Policy
Policy SD1 - Sustainable Development	N/A	N/A	Policy to be retained in accordance with the NPPF as Policy MW1
WWTW1	Whitlingham Water Recycling Centre	Continued operation of the Water Recycling Centre	Policy to be replaced by the Whitlingham WRC Policy WP15
WAS 01	Land at Beck Farm, East Bilney, East Dereham	Inert waste recycling and inert landfill	This is a partly restored mineral working with a mineral processing plant. Therefore, any planning application for a waste management facility on this site would more appropriately be determined in accordance with criteria based Policy WP4 (recycling or transfer of inert and CD&E waste) or WP11 (inert waste landfill), depending on the precise proposal. Policy WAS 01 is no longer required and would therefore be deleted.
WAS 87	Land west of Bilney Road, Beetley	Inert waste recycling and inert landfill	This site is proposed for mineral extraction (site MIN 51) with restoration by inert fill. Any planning application for a waste management facility on this site as part of the restoration of a mineral working would more appropriately be determined in accordance with criteria based Policy WP4 (recycling or transfer of inert and CD&E waste) or WP11 (inert waste landfill), depending on the precise proposal. Policy WAS 87 is no longer required and would therefore be deleted.
WAS 06	Land off B1108 Norwich Road, Carbrooke	Inert recycling, and the reworking, removal and reuse of previously deposited foundry sand.	The site is a former quarry, partly infilled. Any planning application for a waste management facility on this site would more appropriately be determined in accordance with criteria based Policy WP4 (recycling or transfer of inert and CD&E waste). However, the current landuse is not in compliance with Policy WP4. Policy WAS 06 is no longer required and would therefore be deleted.
WAS 14	Land at Ashill Recycling Centre, Swaffham Road, Ashill	Composting, inert waste recycling and/or extension to the household waste recycling centre	The site mainly consists of a former quarry, now well vegetated. Any planning application for a waste management facility on this site would more appropriately be determined in accordance with criteria based Policy WP8 (composting), WP4 (recycling or transfer

Waste SSA Policy	Location	Site Proposal	Replacement Policy
			of inert and CD&E waste) or WP7 (household waste recycling centres), depending on the precise proposal. However, the current landuse is not in compliance with Policy WP8 or WP4. Policy WAS 14 is no longer required and would therefore be deleted.
WAS 19	Land at Harling Road, Snetterton	composting, anaerobic digestion, processing of recyclables, inert waste recycling, HWRC and/or residual waste treatment processes, including energy-from-waste, thermal treatment and/or mixed waste processing	The site is located in a former mineral working and any planning application for waste management facilities on this site would more appropriately be determined in accordance with criteria based Policy WP8 (composting), WP9 (anaerobic digestion), WP4 (recycling or transfer of inert and CD&E waste), WP5 (waste transfer stations and materials recycling facilities), WP7 (household waste recycling centres), or WP10 (residual waste treatment facilities), depending on the precise proposal. However, the current landuse is not in compliance with these policies. Policy WAS 19 is no longer required and would therefore be deleted.
WAS 32	Land at Thetford Transfer Station, Burrell Way, Thetford	processing of recyclables, mixed waste processing, inert waste recycling and/or household waste recycling centre	Due to the small scale of the site and its location at an existing waste management facility on employment land, any planning application for an alternative waste management facility on this site would more appropriately be determined in accordance with criteria based Policy WP4 (recycling and transfer of inert and CD&E waste), WP5 (waste transfer stations and materials recycling facilities), or WP7 (household waste recycling centres), depending on the precise proposal. Policy WAS 32 is therefore no longer required and would be deleted.
WAS 47	Land at West Carr Road, Attleborough	Inert waste recycling and/or waste transfer	Due to the location of the site on employment land any planning application for a waste management facilities on this site would more appropriately be determined in accordance with criteria based Policy WP4 (recycling or transfer of inert and CD&E waste) or WP5 (waste transfer and materials recycling facilities), depending on the precise proposal. Policy WAS 47 is no longer required and would therefore be deleted.
WAS 79	Land at North Farm, Snetterton	Inert landfill and secondary aggregate recycling	This site is proposed for mineral extraction (site MIN 102) with restoration by inert fill. Any planning application for inert landfill on this site as part of the restoration of a mineral working. Any

Waste SSA Policy	Location	Site Proposal	Replacement Policy
			<p>planning application for a waste management facility on this site as part of the restoration of a mineral working would more appropriately be determined in accordance with criteria based Policy WP4 (recycling or transfer of inert and CD&E waste) or WP11 (inert waste landfill), depending on the precise proposal. Policy WAS 79 is no longer required and would therefore be deleted.</p>
WAS 17	Land at Mayton Wood closed landfill site, Little Hautbois Road	Household waste recycling centre	<p>Due to the small size of the site, any planning application for an extension to the existing HWRC would more appropriately be determined in accordance with criteria based Policy WP7 (household waste recycling centres). Policy WAS 17 is therefore no longer required and would be deleted.</p>
WAS 68	Land near Mayton Wood closed landfill site, Coltishall Road	Inert landfill	<p>This site is proposed for mineral extraction (site MIN 37) with restoration by inert fill. Any planning application for inert landfill on this site as part of the restoration of a mineral working would more appropriately be determined in accordance with criteria based Policy WP11 (inert waste landfill). Policy WAS 68 is no longer required and would therefore be deleted.</p>
WAS 24	Land at Keeper's Cottage, Attlebridge	Composting, inert landfill or non-hazardous landfill	<p>This site is proposed for mineral extraction (site MIN 55) with infilling required for restoration. Therefore any planning application for infill with waste on this site as part of the restoration of a mineral working would more appropriately be determined in accordance with criteria based Policy WP8 (composting), WP11 (inert waste landfill) or WP12 (non-hazardous landfill) , depending on the precise proposal. Policy WAS 24 is no longer required and would therefore be deleted.</p>
WAS 76	Land at SPC Atlas Works, Lenwade	Scrap metal recycling facility	<p>Due to the small size of the site and its location on both previously developed land and employment land, any planning application for a waste management facility on this site would more appropriately be determined in accordance with criteria based Policy WP5 (waste transfer stations, material recycling facilities, ELV facilities and WEEE recovery facilities). Policy WAS 76 is therefore no longer required and would be deleted.</p>

Waste SSA Policy	Location	Site Proposal	Replacement Policy
WAS 78	Land at SPC Atlas Works, Lenwade	mixed waste processing, metal recycling, inert waste recycling, in-vessel composting, physical, chemical, and/or mechanical/biological treatment of household waste, waste transfer, and other forms of residual waste treatment (excluding thermal treatment)	Due to the location of this site on both previously developed land and employment land, any planning application for a waste management facility on this site would more appropriately be determined in accordance with criteria based Policy WP8 (composting), WP9 (anaerobic digestion), WP10 (residual waste treatment facilities), WP5 (waste transfer stations, materials recycling facilities, ELV facilities and WEEE recovery facilities) or WP4 (recycling or transfer of inert and CD&E waste) depending on the precise proposal. Policy WAS 78 is therefore no longer required and would be deleted.
WAS 49	Land at Old Lindgreat Site, Harfreys Road, Great Yarmouth	processing of recyclables, mixed waste processing, inert waste recycling, household waste recycling centre, and/or waste transfer	Due to the small scale of the site and its location on employment land, any planning application for a waste management facility on this site would more appropriately be determined in accordance with criteria based Policy WP4 (recycling or transfer of inert and CD&E waste), WP5 (waste transfer stations and materials recycling facilities), or WP7 (household waste recycling centres) depending on the precise proposal. Policy WAS 49 is therefore no longer required and would be deleted.
WAS 66	Land at Harfreys Road, Harfreys Industrial estate, Great Yarmouth	household waste recycling centre, or for processing of recyclables, mixed waste processing, inert waste recycling, and/or waste transfer	Due to the location of the site on employment land any planning application for a waste management facilities on this site would more appropriately be determined in accordance with criteria based Policy WP4 (recycling or transfer or inert and CD&E waste), WP5 (waste transfer stations and materials recycling facilities), or WP7 (household waste recycling centres), depending on the precise proposal. Policy WAS 66 is no longer required and would therefore be deleted.
WAS 70	Land at Town Lands, Harfrey's Industrial Estate, Great Yarmouth	waste recycling and processing, and wood shredding	Due to the location of the site at an existing waste management facility, any planning application for alternative waste management facilities on this site would more appropriately be determined in accordance with criteria based Policy WP5 (waste transfer stations and materials recycling facilities). Policy WAS 70 is no longer required and would therefore be deleted.

Waste SSA Policy	Location	Site Proposal	Replacement Policy
WAS 05	Land at Estuary Road, King's Lynn	processing of recyclables, mixed waste processing, thermal treatment and other forms of residual waste treatment	The site currently hosts a solar array and is within the development boundary for King's Lynn and adjacent to existing employment land. Any planning application for a waste management facility on this site would more appropriately be determined in accordance with criteria based Policy WP5 (waste transfer stations and materials recycling facilities) or WP10 (residual waste treatment facilities), depending on the precise proposal. Policy WAS 06 is no longer required and would therefore be deleted.
WAS 25	Land off East Winch Road / Mill Drove, Middleton	Inert landfill	This site is proposed for mineral extraction (site MIN 06) with restoration by inert fill. Any planning application for inert landfill on this site as part of the restoration of a mineral working would more appropriately be determined in accordance with criteria based Policy WP11 (inert waste landfill). Policy WAS 25 is no longer required and would therefore be deleted.
WAS 36	Land at Blackborough End landfill site, Mill Drove, Middleton	temporary uses comprising composting, processing of recyclables (materials recovery facility), inert waste recycling and/or waste transfer	Due to the location of this site at an existing waste management facility, any planning application for another waste management facility on this site would more appropriately be determined in accordance with criteria based Policy WP8 (composting), WP4 (recycling or transfer of inert and CD&E waste) or WP5 (waste transfer stations and materials recycling facilities), depending on the precise proposal. Policy WAS 36 is no longer required and would therefore be deleted.
WAS 40	Land off Mill Drove, Blackborough End	Inert landfill and inert waste recycling	This site has been worked for minerals and any planning application for inert recycling and landfill on this site as part of the restoration of the mineral working would more appropriately be determined in accordance with criteria based Policy WP4 (recycling or transfer of inert and CD&E waste) or WP11 (inert waste landfill), depending on the precise proposal. Policy WAS 40 is no longer required and would therefore be deleted.
WAS 37	Land at Feltwell landfill site, Lodge Road, Feltwell	composting	Due to the location of this site at an existing waste management facility, any planning application for a composting facility on this site would more appropriately be determined in accordance with criteria based Policy WP8 (composting). Policy WAS 37 is no longer

Waste SSA Policy	Location	Site Proposal	Replacement Policy
			required and would therefore be deleted.
WAS 45	Land off the B1454, Docking Common, Docking	composting	Due to this site being partly located on an existing waste management facility, any planning application for a waste management facility on this site would more appropriately be determined in accordance with criteria based Policy WP8 (composting). Policy WAS 45 is no longer required and would therefore be deleted.
WAS 65	Land at the Willows Business Park, Saddlebow, King's Lynn	composting, recycling/processing, anaerobic digestion, thermal treatment and other forms of residual waste treatment	Norfolk County Council is the landowner of the site and is no longer promoting the site for the thermal treatment of waste. Any planning application for other waste management uses on this site would more appropriately be determined in accordance with criteria based policy WP8 (composting), WP9 (anaerobic digestion), WP5 (materials recycling facilities) or WP10 (residual waste treatment). In order to be delivered, any future use would require the agreement of full Council. Policy WAS 65 is no longer required and would therefore be deleted.
WAS 30	Land at Folgate Road, Lyngate Industrial Estate, North Walsham	composting, processing of recyclables, mixed waste processing and/or waste transfer	Due to the location of the site at an existing waste management facility on employment land, any planning application for an alternative waste management facility on this site would more appropriately be determined in accordance with criteria based Policy WP8 (composting), or WP5 (waste transfer stations, materials recycling facilities) depending on the precise proposal. Policy WAS 30 is therefore no longer required and would be deleted.
WAS 94	Land off Folgate Road and Cornish Way, North Walsham	Composting or anaerobic digestion	Due to the location of the site on allocated employment land, any planning application for a waste management facility on this site would more appropriately be determined in accordance with criteria based Policy WP8 (composting) or Policy WP9 (anaerobic digestion). Policy WAS 94 is therefore no longer required and would be deleted.
WAS 90	Land at 49 Hurricane Way, Norwich	Recycling centre	Due to the small size of the site and its location on employment land, any planning application for a waste management facility on this site would more appropriately be determined in accordance

Waste SSA Policy	Location	Site Proposal	Replacement Policy
			with criteria based Policy WP5 (materials recycling facilities). Policy WAS 90 is therefore no longer required and would be deleted.
WAS 31	Land at Costessey Transfer Station, Longwater Business Park, Costessey	Residual waste treatment (excluding thermal treatment)	Due to the location of the site at an existing waste management facility producing RDF, located on employment land, any planning application for a different waste management facility on this site would more appropriately be determined in accordance with criteria based Policy WP10 (residual waste treatment). Policy WAS 31 is no longer required and would therefore be deleted.
WAS 58	Land at Longwater Industrial Estate, Costessey	Processing of recyclables and/or inert waste recycling	Due to the location of the site on employment land, any planning application for a waste management facility on this site would more appropriately be determined in accordance with criteria based Policy WP4 (recycling or transfer of inert and CD&E waste) or WP5 (waste transfer stations and materials recycling facilities), depending on the precise proposal. Policy WAS 58 is no longer required and would therefore be deleted.
WAS 33	Land at Pulham Market Transfer Station, Station Road, Tivetshall St Margaret	Household waste recycling centre	Due to the location of the site at an existing waste management facility, any planning application for an alternative waste management facility on this site would more appropriately be determined in accordance with criteria based Policy WP7 (household waste recycling centres). Policy WAS 33 is therefore no longer required and would be deleted.

Appendix 4 - Development excluded from safeguarding provisions

In accordance with Policies WP17, MP10 and MP11, Local Planning Authorities in Norfolk should consult Norfolk County Council on planning applications within Minerals Consultation Areas and Waste Consultation Areas.

It is neither practicable nor necessary for consultation to occur on all developments proposed through planning applications. Therefore it is proposed to restrict the type of developments requiring consultation to those with significant potential for affecting the future use of areas and sites referred to above.

The following developments will be excluded from the consultation process:

1.	Proposals for minor infilling of development in towns and villages within the defined settlement limits identified in adopted local development plan documents
2.	Applications for householder development including: Construction of a replacement dwelling where the new dwelling occupies the same or similar footprint to the building being replaced; Minor extensions to existing dwellings or properties where they lie within the immediate curtilage; Proposals for the provision of incidental and non-habitable structures lying within the curtilage of an existing dwelling (such as driveways, garages, carparks and hard standing).
3.	Advertisement applications
4.	Applications related to existing permissions, such as reserved matters, or for minor amendments to current permissions.
5.	Applications for new or improved accesses.
6.	Applications for listed building consent or Conservation Area consent
7.	'Minor' extensions/alterations to existing buildings
8.	Applications for 'temporary' buildings, structures or uses (for up to five years)
9.	Proposals for the erection of agricultural buildings immediately adjacent to an existing working farmstead.
10.	Proposals for 'minor' works such as fencing or bus shelters
11.	Proposals for the demolition of a residential or other building
12.	Extensions to existing settlements of no greater than 2 hectares, unless the extension is within 250 metres of a safeguarded minerals or waste site, or 400 metres of a safeguarded water recycling centre.

**Appendix 5 - Safeguarded mineral infrastructure - railheads and wharfs
(as at May 2017)**

Location	Facility	Mineral type	Operator
Middleton	Railhead	Silica Sand	Sibelco UK Ltd
Trowse	Railhead	Crushed Rock	Tarmac Lafarge
Snetterton	Railhead	Crushed Rock	Frimstone Ltd
Great Yarmouth (Palgrave Wharf)	Wharf	Crushed Rock	Silverton Aggregates Ltd

Appendix 6 - Safeguarded mineral extraction sites (as at May 2017)

Town or Parish	Operator	Mineral Type
BRECKLAND		
Beeston With Bittering	Tarmac	Sand and Gravel
Beeston With Bittering & Stanfield	East Anglian Stone Ltd	Sand and Gravel
Beeston With Bittering & Longham	McLeod Aggregates Ltd	Sand and Gravel
Beetley	Middleton Aggregates Ltd	Sand and Gravel
Carbrooke	Four Leaf Enterprises Ltd	Sand and Gravel
Carbrooke	Frimstone Ltd	Sand and Gravel
Newton By Castle Acre	Needham Chalks Ltd	Chalk
Rocklands & Shropham	None	Sand and Gravel (inactive)
Weeting With Broomhill & Brandon	Lignacite Ltd	Sand and Gravel
BROADLAND		
Attlebridge	Cemex	Sand and Gravel
Buxton With Lammas	Frimstone Ltd	Sand and Gravel
Horstead With Stanninghall	Longwater Gravel Co Ltd	Sand and Gravel
Horstead With Stanninghall	Tarmac Lafarge	Sand and Gravel
Spixworth	Tarmac Lafarge	Sand and Gravel
GREAT YARMOUTH		
Burgh Castle	Folkes Plant & Aggregates Ltd	Sand and Gravel
KING'S LYNN AND WEST NORFOLK		
Congham	West Norfolk Lime Ltd	Chalk
East Rudham	Longwater Gravel Co Ltd	Sand and Gravel
East Winch	Middleton Aggregates Ltd	Sand and Gravel
East Winch	Middleton Aggregates Ltd	Carstone
East Winch & Leziate	Sibelco UK Ltd	Silica Sand
Feltwell	L P Pallett	Sand and Gravel
Middleton	Middleton Aggregates Ltd	Clay
Middleton	Middleton Aggregates Ltd	Carstone
Middleton	William George Recycling	Sand and Gravel
Pentney	Middleton Aggregates Ltd	Sand and Gravel
Snettisham	Frimstone Ltd	Carstone
Tottenham & Watlington	Frimstone Ltd	Sand and Gravel
West Dereham	Frimstone Ltd	Sand and Gravel
Wormegay	Middleton Aggregates Ltd	Sand and Gravel
Wormegay	None	Sand and Gravel (inactive)

	NORTH NORFOLK	
Beeston Regis	DSP Supplies / Carter Concrete	Sand and Gravel
East Beckham	Gresham Gravel Ltd	Sand and Gravel
Holt	Cemex	Sand and Gravel
Stody	Frimstone Ltd	Sand and Gravel
	SOUTH NORFOLK	
Caistor St Edmund	Needham Chalks Ltd	Chalk
Earsham	Earsham Gravels Ltd	Sand and Gravel
Easton	Cemex	Sand and Gravel
Kirby Cane	Pallet Ltd	Sand and Gravel
Mundham	Earsham Gravels / A J Goff Ltd	Sand and Gravel
Norton Subcourse	Cemex	Sand and Gravel
Stoke Holy Cross	Tarmac Lafarge	Sand and Gravel
Wymondham	Longwater Gravel Co Ltd	Sand and Gravel

Appendix 7 - Safeguarded waste management sites (as at May 2017)

Town or Parish	Operator	Main Waste Operation
BRECKLAND		
Bridgham	Fibrophos Ltd	Transfer
Carbrooke	Frimstone Ltd	Inert recycling
Carlton Rode	None	Composting (inactive)
Cranworth	FCC Environment(UK) Ltd	Transfer/Treatment
Hockering	Norman Wenn Skip Hire	Transfer/Treatment
Hockering	Pips Skips	Transfer/Treatment
Longham	McLeod Aggregates Ltd	Inert recycling
Stanfield	East Anglian Stone Ltd	Inert recycling
Stow Bedon	R Childerhouse	Inert recycling
Thetford	FCC Environment(UK) Ltd	HWRC
Thetford	Fibrophos Ltd	Transfer/Treatment
Thetford	Viridor Ltd	Transfer/Treatment
Weston Longville	TMA Bark Supplies	Composting
Wretham	Viridor Ltd	Transfer/Treatment
BROADLAND		
Attlebridge	Biffa Waste Services	Non-hazardous landfill (in aftercare)
Aylsham	Aylsham Plant Hire Ltd	Inert recycling
Aylsham	NEWS Ltd	Transfer/Treatment
Buxton With Lammas	Frimstone Ltd	Inert recycling
Cantley	British Sugar PLC	Inert landfill
Horsford	M & C Skip Hire and AKS	Transfer/Treatment
Lenwade (Morton On The Hill)	European Metal Recycling Ltd	Metal recycling
Marsham	News Ltd	Composting
Rackheath	Parker Skip Hire	Transfer/Treatment
GREAT YARMOUTH		
Belton With Browston	E E Green & Son	Inert recycling
Burgh Castle	Folkes Plant & Aggregates Ltd	Inert recycling
Great Yarmouth	E E Green & Son	Inert recycling
Great Yarmouth	East Coast Waste Recycling	Transfer/Treatment
Great Yarmouth	Enviroco Ltd	Transfer
Great Yarmouth	European Metal Recycling Ltd	Metal recycling
Great Yarmouth	Folkes Plant & Aggregates Ltd	Transfer/Treatment
Great Yarmouth	M T Skips	Transfer/Treatment
West Caister	Norfolk County Council	Transfer/Treatment
West Caister	Norse Ltd	HWRC

Town or Parish	Operator	Main waste operation
KING'S LYNN AND WEST NORFOLK		
Bawsey	P Bacon Recycling Ltd	Metal recycling
Feltwell	LP Pallett and FCC Environmental (UK) Ltd	Non-hazardous landfill (inactive)
Hockwold Cum Wilton	Freedom Recycling Ltd	Transfer/Treatment
King's Lynn	May Gurney	HWRC
King's Lynn	NEWS Ltd	Transfer/Treatment
Methwold	EFFG Woodlark	Anaerobic digestion
Middleton	FCC Environment(UK) Ltd	Non-hazardous landfill (inactive)
Middleton	Middleton Aggregates Ltd	Inert recycling
Middleton	Middleton Aggregates Ltd	Inert landfill
Snettisham	Frimstone Ltd	Inert recycling and landfill
South Wootton	Greenworld Sales Ltd	Composting
Wereham	British Sugar PLC	Soil recycling
Wereham	British Sugar PLC	Composting
West Dereham	Frimstone Ltd	Inert landfill
West Dereham	Frimstone Ltd	Inert recycling
West Dereham	Glazewing Ltd	Transfer/Treatment
NORTH NORFOLK		
Beeston Regis	Carter Concrete Ltd	Inert storage
Briston	Morrissey Builders Ltd	Inert recycling
Edgefield	NEWS Ltd	Non-hazardous landfill (in aftercare)
Holt	Cemex	Inert recycling
Letheringsett With Glandford	Glaven Pits Ltd	Inert recycling
North Walsham	Mr M Drury	Transfer/Treatment
Tattersett	R Gawn	Tyre recycling
Worstead	Carl Bird Ltd	Transfer/Treatment
NORWICH		
Norwich	FCC Environment(UK) Ltd	HWRC and Transfer/Treatment
SOUTH NORFOLK		
Aldeby	FCC Environment(UK) Ltd	Non-hazardous landfill (in restoration)
Bracon Ash	Greencomp	Composting
Costessey	FCC Environment(UK) Ltd	Transfer/Treatment
Costessey	Jays Total Waste Management Ltd	Transfer/Treatment
Costessey	NEWS Ltd	Transfer/Treatment
Costessey	None	Metal recycling (inactive)
Ketteringham	M W White Ltd	Transfer/Treatment
Kirby Bedon	Anglian Water Plc	Sludge cake storage
Morningthorpe With Fritton	Richardson Recycling Ltd	Inert landfill
Pulham Market	AR Kent & Son	Transfer/Treatment
Thurlton	M Gaze & Co Ltd	Composting
Tivetshall St Margaret	FCC Environment(UK) Ltd	Transfer/Treatment

Appendix 8 - Safeguarded Water Recycling Centres (as at May 2017)

All WRC are operated by Anglian Water Services Ltd

Town or Parish (site name if different)

Acle
Attleborough
Aylsham
Belaugh
Briston
Burnham Thorpe (Burnham Overy)
Bylaugh
Cley-Next-the-Sea (Glandford Road)
Dereham
Downham Market
Feltwell
Grimston
Heacham
Holt and Letheringsett with Glandford
(Letheringsett)
Horning
Ingoldisthorpe
King's Lynn
Kirby Bedon (Whitlingham)
Knapton (Knapton Road)
Little Cressingham
Ludham
Mattishall
Morningthorpe and Fritton (Hempnall)
North Walsham
Old Buckenham
Poringland
Pudding Norton (Fakenham)
Quidenham (East Harling)
Redenhall with Harleston (Harleston)
Reepham
Runton (Cromer)
Saxlingham Nethergate (Saxlingham)
Sisland
Sporle with Palgrave (Necton)
Stalham
Swaffham
Swardeston
Tharston and Hapton (Long Stratton)
Thetford
Watlington
Wells-Next-the-Sea (Freeman Street)
West Caister
West Walton
Wymondham

Appendix 9 – Forecast Waste Arisings

Year	Local Authority Collected Waste	Commercial and industrial waste	Inert waste	Hazardous waste	Total Forecast waste arisings
2015/16	408,342	1,188,534	1,311,000	64,845	2,972,721
2016/17	412,135	1,207,075	1,311,000	60,543	2,990,753
2017/18	415,927	1,225,906	1,311,000	56,528	3,009,361
2018/19	419,720	1,245,030	1,311,000	52,778	3,028,528
2019/20	423,512	1,264,452	1,311,000	49,277	3,048,241
2020/21	427,304	1,284,178	1,311,000	46,009	3,068,491
2021/22	431,097	1,304,211	1,311,000	42,957	3,089,265
2022/23	434,889	1,324,557	1,311,000	40,108	3,110,554
2023/24	438,682	1,345,220	1,311,000	37,448	3,132,350
2024/25	442,474	1,366,205	1,311,000	34,964	3,154,643
2025/26	446,267	1,387,518	1,311,000	32,645	3,177,430
2026/27	450,059	1,409,163	1,311,000	30,479	3,200,701
2027/28	453,852	1,431,146	1,311,000	28,458	3,224,456
2028/29	457,644	1,453,472	1,311,000	26,570	3,248,686
2029/30	461,437	1,476,146	1,311,000	24,808	3,273,391
2030/31	465,229	1,499,174	1,311,000	23,162	3,298,565
2031/32	469,021	1,522,561	1,311,000	21,626	3,324,208
2032/33	472,814	1,546,313	1,311,000	20,191	3,350,318
2033/34	473,606	1,570,436	1,311,000	18,852	3,373,894
2034/35	480,399	1,594,935	1,311,000	17,602	3,403,936
2035/36	484,191	1,619,816	1,311,000	16,435	3,431,442