

Shouldham Neighbourhood Plan 2025-2040

Preliminary Screening

Strategic Environmental Assessment and Habitats Regulation Assessment 2025



CONTENTS

INTRODUCTION	3
STRATEGIC ENVIRONMENT ASSESSEMENT SCREENING	4
SCOPE OF THE SHOULDHAM NEIGHBOURHOOD PLAN.....	4
BASELINE INFORMATION.....	5
CONTEXT	5
BIODIVERSITY, FLORA AND FAUNA.....	5
NATIONAL AND LOCAL DESIGNATIONS	8
POPULATION	9
HUMAN HEALTH.....	10
SOIL	10
WATER.....	11
AIR AND CLIMATIC FACTORS	14
MATERIAL ASSETS.....	14
CULTURAL HERITAGE	16
SEA SCREENING CONCLUSION	28
HABITATS REGULATION ASSESSMENT SCREENING ASSESSMENT.....	29
HRA SCREENING CONCLUSION	39
<i>APPENDIX A - CONSERVATION OBJECTIVES OF THE EUROPEAN SITES</i>	<i>40</i>

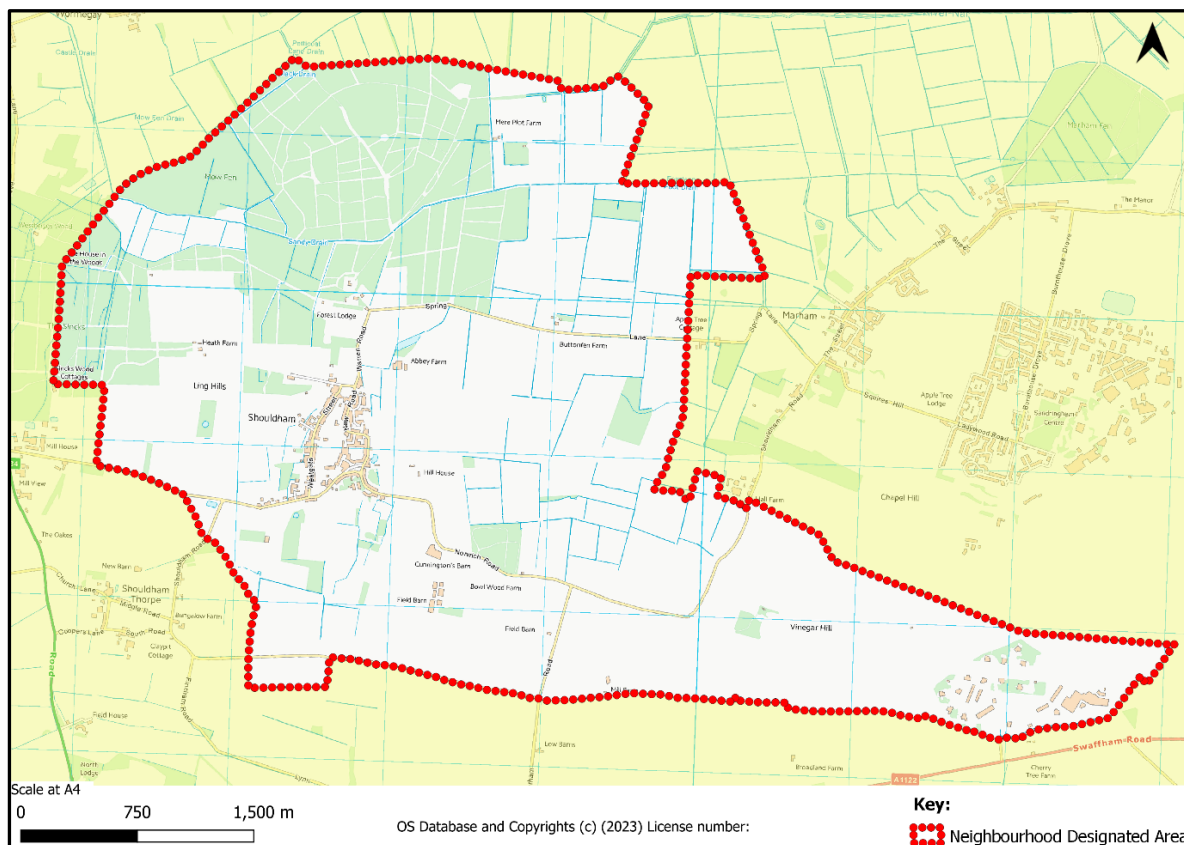
LIST OF FIGURES

<i>Figure 1: Designated Neighbourhood Area (NDA)</i>	<i>3</i>
<i>Figure 2: County Wildlife Sites (Source Suffolk County Council, 2024)</i>	<i>8</i>
<i>Figure 3: Priority Habitats (Source: Natural England, 2024)</i>	<i>9</i>
<i>Figure 4: Age Groups in Shouldham 2011 and 2021 (Census)</i>	<i>10</i>
<i>Figure 5: Agricultural Land Classification (Source: Natural England, 2024).....</i>	<i>11</i>
<i>Figure 6: Flood risk from rivers and sea in Shouldham (Source: DEFRA, 2024)</i>	<i>12</i>
<i>Figure 7: Surface Water Flood Risk within the whole parish (Source: DEFRA, 2024)</i>	<i>13</i>
<i>Figure 8: Surface Water Flood Risk within the built-up area of Shouldham (Source: DEFRA, 2024).....</i>	<i>13</i>
<i>Figure 9: Public Rights of Way within Shouldham (Source: Norfolk County Council, 2023).....</i>	<i>15</i>
<i>Figure 10: Public Rights of Way within the built-up settlement (Source: Norfolk County Council, 2023)</i>	<i>15</i>
<i>Figure 11: Heritage Assets.....</i>	<i>16</i>
<i>Figure 12: Historic Finds within Shouldham (Source: Norfolk Heritage Explorer, 2024)</i>	<i>17</i>
<i>Figure 13: Schedule 1 Criteria for determining the likely significance of effects</i>	<i>19</i>
<i>Figure 14-Application of the SEA Directive to plans and programmes</i>	<i>20</i>
<i>Figure 15-Application of SEA Directive to SNP</i>	<i>21</i>
<i>Figure 16-Likely Significant Effects</i>	<i>23</i>
<i>Figure 17- Table of the International Designated Wildlife Sites within 20km radius of SNP</i>	<i>31</i>
<i>Figure 18- International Designated Wildlife Sites within 20km radius of SNP</i>	<i>32</i>
<i>Figure 19-Summary of Impact Pathways.....</i>	<i>34</i>
<i>Figure 20- HRA Screening Assessment</i>	<i>37</i>

INTRODUCTION

1. Shouldham Parish Council is preparing a Neighbourhood Plan for its village known as SNP throughout this document. The planning period will be 2025-2040 and the designated area as shown in **Figure 1** is located within Borough Council of King's Lynn and West Norfolk. [Collective Community Planning](#) has been appointed by the parish council to consider whether there is a need for a Strategic Environmental Assessment (SEA) to be undertaken on SNP. This is required under European Directive 2001/42/EC (the SEA Directive), transposed into UK law through the SEA Regulations¹.
2. SEA may be required for a Neighbourhood Plan if it is likely to have significant environmental effects. A Sustainability Appraisal (SA) is like an SEA but includes assessment of the likely significant effects of a plan or programme on economic and social factors, as well as environmental factors. Planning Practice Guidance (PPG) clarifies that there is no legal requirement for a Neighbourhood Plan to be subject to a SA, but that SA can be used to demonstrate how the plan will contribute to sustainable development.

Figure 1: Designated Neighbourhood Area



¹ The Environmental Assessment of Plans and Programmes Regulations 2004 (SI 2004/1633), as amended by the Environmental Assessment and Miscellaneous Planning (Amendment) (EU Exit) Regulations 2018 (SI 2018/1232). It should be noted that the purpose of the amendments to the SEA Regulations is to ensure that the law functions correctly after the UK has left the European Union. No substantive changes are made to the way the SEA regime operates.

STRATEGIC ENVIRONMENT ASSESSEMENT SCREENING

Scope of the Shouldham Neighbourhood Plan

3. A draft (Regulation 14) version of SNP is currently being prepared. It is intended that this is subject to public consultation in mid 2025. SNP includes a vision for the long-term future of Shouldham, along with aims to support delivery of this vision. The current draft vision is:

Protect and enhance Shouldham's special characteristics as an historic village with green spaces that bring the countryside into the heart of the village.

Development must respect and strengthen these special characteristics.

4. The draft Shouldham Neighbourhood Plan currently includes four specific objectives to deliver this vision:

- A. *Protect and enhance the features that make up the settlement's character, especially its green, open nature and the visual links between built development and the countryside beyond.*
- B. *Protect and enhance the historic environment by protecting assets of heritage value and ensuring that new development is designed to reflect key features of historic value.*
- C. *Ensure the type, size and layout of housing development meets current and future needs of residents.*
- D. *Support retention and investment in local infrastructure to meet community needs.*

5. SNP will have a range of non-strategic planning policies to realise and deliver the above vision and aims. This includes policies:

- Protect the natural environment such as biodiversity, trees/hedgerows, green spaces, important views and established green corridors for habitat enhancement;
- Tackling light pollution through an appropriate dark skies policy;
- To achieve high quality design with the input of Shouldham design codes/guide, that reinforces and complements local distinctiveness;
- To protect the historic environment including the conservation area, designated and non-designated heritage assets;
- To ensure the housing mix, including affordable housing, on new development sites meets local need;
- To protect the loss of community facilities for the vitality of the parish and support appropriate employment services in the area; and
- Protect and enhance public rights of way.

6. **The plan does not allocate land for development.**

Baseline Information

7. This section summarises baseline information for the SNP area, drawing on the Evidence Base which accompanies the Neighbourhood Plan.

Context

8. Shouldham is situated in West Norfolk between Marham and Watlington. Shouldham is about 3 miles from Marham (6 min drive) and around 5.2 miles from Watlington (12 min drive). The village lies on the western escarpment of a chalk ridge that rises above the Fens to the west and which runs north/south between the coast and Breckland. The village is situated in the central western half of the parish, surrounded by farmland and several woods. The parish has a population of 650 and numerous facilities/services to support the local area including but not limited to All Saints Church, a care home, B&B and Antiques, Post Office, Primary School, playing field, Public House, Shouldham Warren and the bus services (Lynx 39 towards King's Lynn and Marham² and Go to Town 62³ towards Downham Market).

Biodiversity, Flora and Fauna

9. There are no European statutory designated sites in the neighbourhood area, though there are a number of important European designations within approximately 20km of Shouldham. This includes:
- **Breckland** - Special Protection Area (SPA) and Special Area of Conservation (SAC)
 - **Dersingham Bog and Roydon Common** - Special Area of Conservation (SAC) and Ramsar Site
 - **Norfolk Valley Fens** - Special Area of Conservation (SAC)
 - **Ouse Washes** - Special Protection Area (SPA) and Ramsar Site
 - **The Greater Wash and North Norfolk Coast** - Special Protection Area (SPA), Special Area of Conservation (SAC) and Ramsar Site
10. **Breckland SPA** is approximately 39,433.66ha in area size and the Breckland SAC covers 7,543.5ha in size. The Breckland of Norfolk and Suffolk lies in the heart of East Anglia on largely sandy soils of glacial origin. In the nineteenth century the area was termed a sandy waste, with small patches of arable cultivation that were soon abandoned. The continental climate, with low rainfall and free draining soils, has led to the development of dry heath and grassland communities. The remnants of dry heath and grassland which have survived these recent changes support heathland breeding birds, where grazing by rabbits and sheep is sufficiently intensive to create short turf and open ground. These breeding birds have also adapted to live in forestry and arable habitats. Woodlark *Lullula arborea* and nightjar *Caprimulgus europaeus* breed in clear-fell and open heath areas, whilst stone curlews *Burhinus oedicanus* establish nests on open ground provided by arable cultivation in the spring, as well as on Breckland grass-heath⁴.

² 39 | Lynx (lynxbus.co.uk)

³ Home | Go To Town (gtt-online.co.uk)

⁴ European Site Conservation Objectives for Breckland SPA - UK9009201 (naturalengland.org.uk)

11. **Dersingham Bog** is approximately 158ha in area size. It is a National Nature Reserve, and Site of Special Scientific Interest (SSSI). It is East Anglia's largest remaining example of a pure acid valley mire grading into dry heathland. The site includes extensive bog, wet heath, and transition communities over peat, fed by groundwater springs and seepage. In addition to its internationally important plant communities, the site supports important assemblages of birds and numerous nationally important invertebrate species. Human activities on site includes tourism, cutting of vegetation, and livestock grazing⁵.
12. **Roydon Common** is approximately 194ha in area size. It is a mixed valley mire exhibiting a classic sequence of vegetation types, linked to the varying hydrological characteristics of the site and influenced by the nutrient quality of the water. Several vulnerable or nationally scarce plant and invertebrate species are supported. The site provides nesting habitat for *Caprimulgus europaeus*, winter roosting sites for raptors *Circus cyaneus* and *Falco columbarius*⁶.
13. The Annex 1 habitats that are a primary selection for Dersingham Bog and Roydon Common to be a Special Area of Conservation (SAC) include the Northern Atlantic wet heaths with *Erica tetralix* and the depressions on peat substrates of the *Rhynchosporion*⁷. The *Erica tetralix* vegetation community is part of a lowland mixed valley mire, a complex series of plant communities grading from wet acid heath through valley mire to calcareous fen. This gradation is of outstanding interest. The mire is extremely diverse and supports many rare plants, birds and insects, including the dragonfly *Sympetrum scoticum*, a northern species with a very local distribution in south-east England. Birds protected at European level occurring in the heathland at this site include European nightjar *Caprimulgus europaeus*, hen harrier *Circus cyaneus* and merlin *Falco columbarius*. Dersingham Bog represents depressions on peat substrates of the *Rhynchosporion* in eastern England. There are examples of this habitat type present in natural bog pools of patterned valley mire, in flushes on the margins of valley mire and locally in disturbed areas associated with trackways and paths in mire and wet heath. Mosaics containing this habitat type are important for bog orchid *Hammarbya paludosa*.
14. **Norfolk Valley Fens** is one of two sites selected in East Anglia, in eastern England, where the main concentration of lowland alkaline fens occurs. This site comprises a series of valley-head spring-fed fens. Such spring-fed flush fens are very rare in the lowlands. Most of the vegetation at this site is of the small sedge fen type, mainly referable to M13 *Schoenus nigricans* – *Juncus subnodulosus* mire, but there are transitions to reedswamp and other fen and wet grassland types. The individual fens vary in their structure according to intensity of management and provide a wide range of variation. There is a rich flora associated with these fens, including species such as grass-of-Parnassus *Parnassia palustris*, common butterwort *Pinguicula*

⁵ [Dersingham Bog | Ramsar Sites Information Service](#)

⁶ [Roydon Common | Ramsar Sites Information Service](#)

⁷ [Roydon Common and Dersingham Bog - Special Areas of Conservation \(jncc.gov.uk\)](#)

vulgaris, marsh helleborine *Epipactis palustris* and narrow-leaved marsh-orchid *Dactylorhiza traunsteineri*⁸.

15. **Ouse Washes** is a wetland of major international importance comprising seasonally flooded washlands which are agriculturally managed in a traditional manner. It provides breeding and winter habitats for important assemblages of wetland bird species, particularly wildfowl and waders. The Ouse Washes is one of the country's few remaining areas of extensive washland habitat. The associated dykes and rivers hold a great variety of aquatic plants; the pondweeds *Potamogeton spp.* are particularly well represented. The associated aquatic fauna is similarly diverse and includes spined loach *Cobitis taenia*. The Counter Drain, with its clear water and abundant aquatic plants, is particularly important, and a healthy population of spined loach is known to occur.
16. **The Greater Wash** this is the UK's largest estuary system which contains extensive saltmarshes. The intertidal flats of The Wash form one of the largest intertidal areas in Britain, supporting high concentrations of marine invertebrates which in turn provide a food source for over 300,000 wintering wildfowl⁹. The Wash has been given multiple statutory designations by Natural England because of its importance for wildlife and geology. These designations are:
 - National Nature Reserve (NNR)
 - Ramsar site
 - Special Area of Conservation (SAC)
 - Special Protection Area (SPA)
 - Site of Special Scientific Interest (SSSI)
17. The Special Area of Conservation designation recognises the importance of The Wash's coastal saltmarsh, sand and mudflats habitat for wildlife including Common Seals, breeding birds and wintering passage birds. Ramsar sites are wetland areas of international significance for waterfowl. The Wash area has Ramsar status in part due to the number of qualifying species of wildlife found in the area, in particular wintering passage and breeding birdlife. Natural England describes the whole area as being "of exceptional biological interest", hence its multiple designations. They describe the intertidal mudflats and saltmarshes as one of Britain's most important winter-feeding areas for waders and wildfowl outside of the breeding season. The saltmarsh and shingle habitats are of considerable botanical interest and the Wash is also significant as a breeding ground for Common Seals. This designation sits to the north of the plan area.
18. **The North Norfolk Coast** has multiple designations including UNESCO Biosphere Reserve, Special Protection Area EC Directive; Nature Reserve, SSSI, National Landscape and Heritage Coast. The area size spans over 7,887ha and it is a stretch of coastline consisting of shingle beaches, dunes, saltmarsh, intertidal mud and sand flats, brackish lagoons, reedbeds, and grazing marshes. The site supports

⁸ [Norfolk Valley Fens - Special Areas of Conservation \(jncc.gov.uk\)](http://jncc.gov.uk)

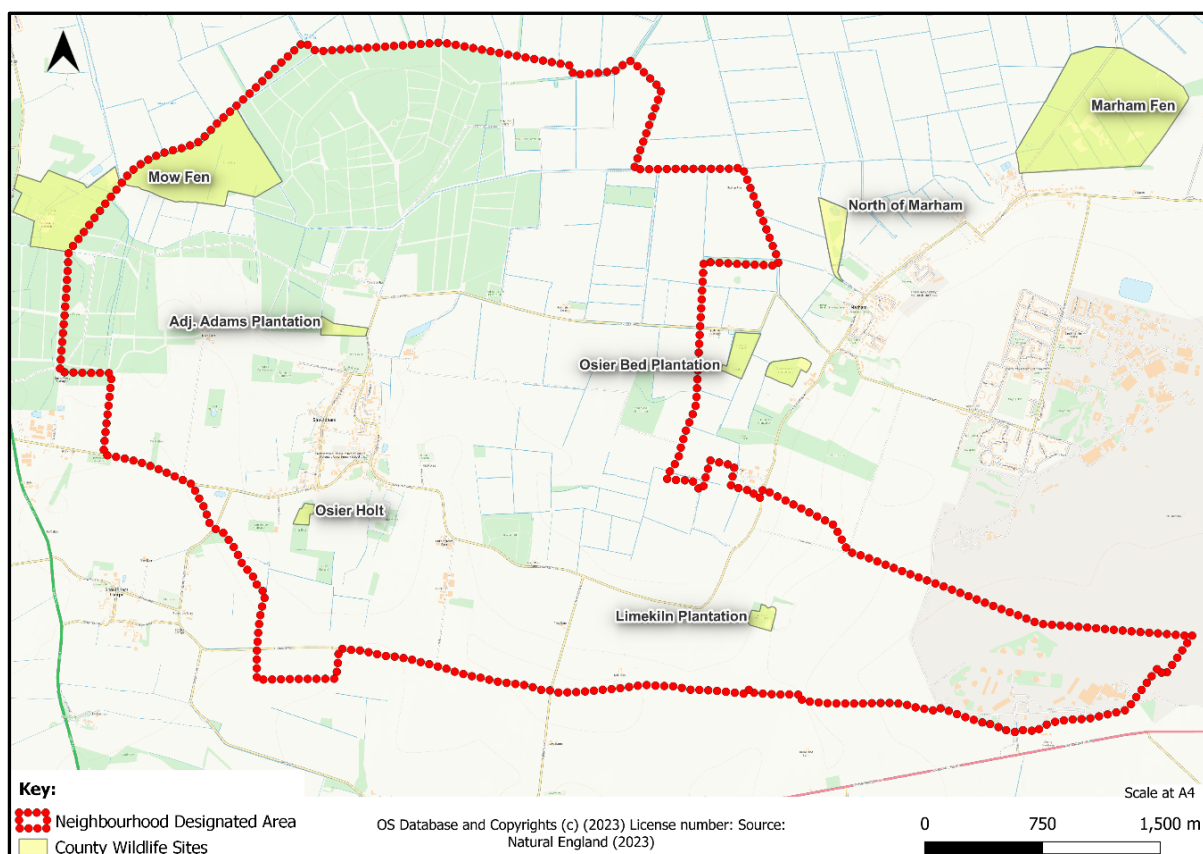
⁹ JNCC Ramsar Information Sheet UK11072 [untitled \(jncc.gov.uk\)](http://jncc.gov.uk) – accessed 01/12/2021

nationally and internationally important numbers of various species of breeding or wintering waterbirds. It also includes several important botanical areas and is a centre for tourism and general recreation; a visitors' centre, trails and hides are available¹⁰.

National and Local Designations

19. There are four County Wildlife Sites that fall within the neighbourhood area as shown in **Figure 2**. These include Mow Fen (CWS425), Adjacent Adam's Plantation (CWS373), Osier Holt (CWS372), and Limekiln Plantation (CWS487). As well as this there are three County Wildlife Sites adjacent or in close proximity to the parish including Osier Bed Plantation (CWS488), North of Marham (CWS528), Westbrigg's Wood (CWS424). These wildlife sites are not designated on a statutory basis, though they do receive a degree of protection through the planning process and are often recognised in district local plans. In this context, site protection relies on the commitment of local authorities and public bodies.

Figure 2-County Wildlife Sites (Source Suffolk County Council, 2024)

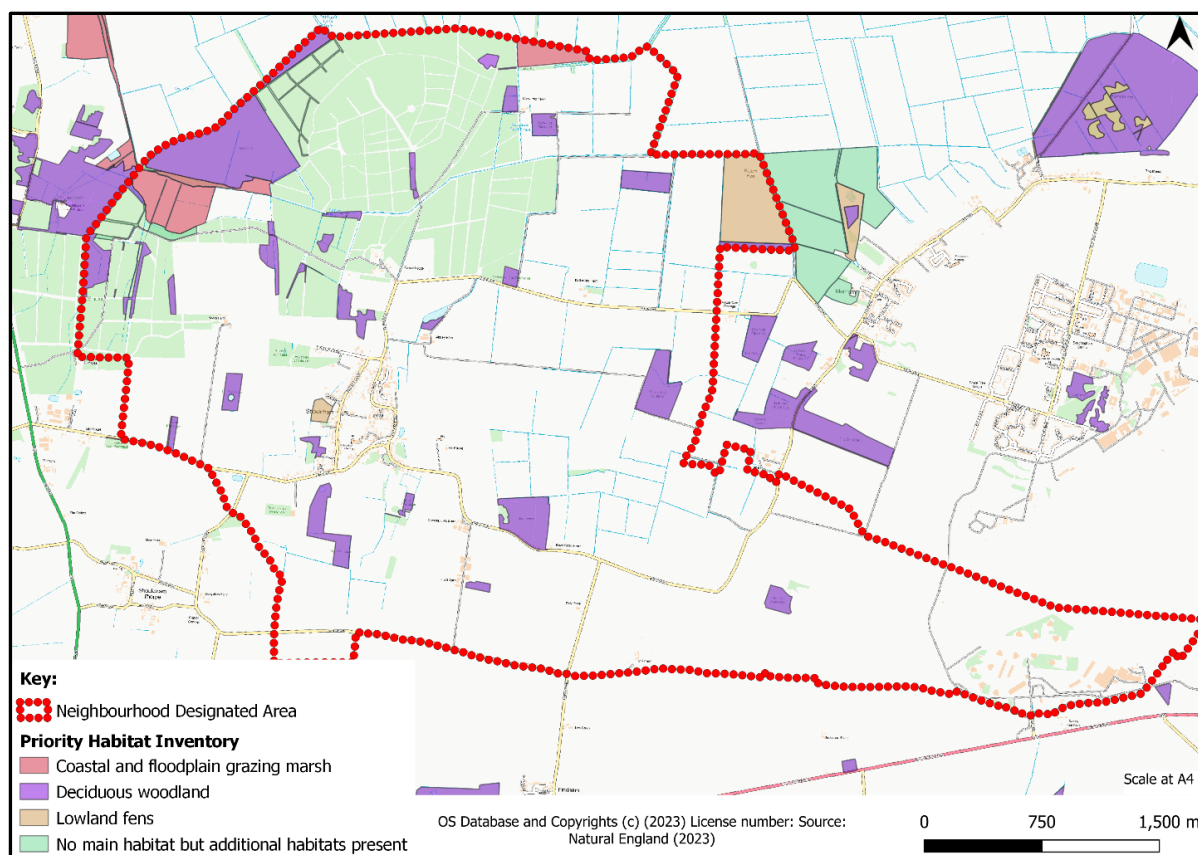


20. The parish contains priority habitat also known as Habitats of Principle Importance for biodiversity conservation. These are habitats which are most threatened, in greatest decline, or where the UK holds a significant proportion of the world's total population. There are three main types of priority habitat in the parish shown in **Figure 3**: coastal and floodplain grazing marsh; deciduous woodland and lowland fens. There are also a few sites which are identified as 'no main habitat but additional habitats present. Deciduous woodland accounts for 39% of the total

¹⁰ [North Norfolk Coast | Ramsar Sites Information Service](#)

priority habitats resource in England¹¹, the largest proportion of any habitat group, and this is the most apparent priority habitat in Shouldham's built-up settlement.

Figure 3- Priority Habitats (Source: Natural England, 2024)



Population

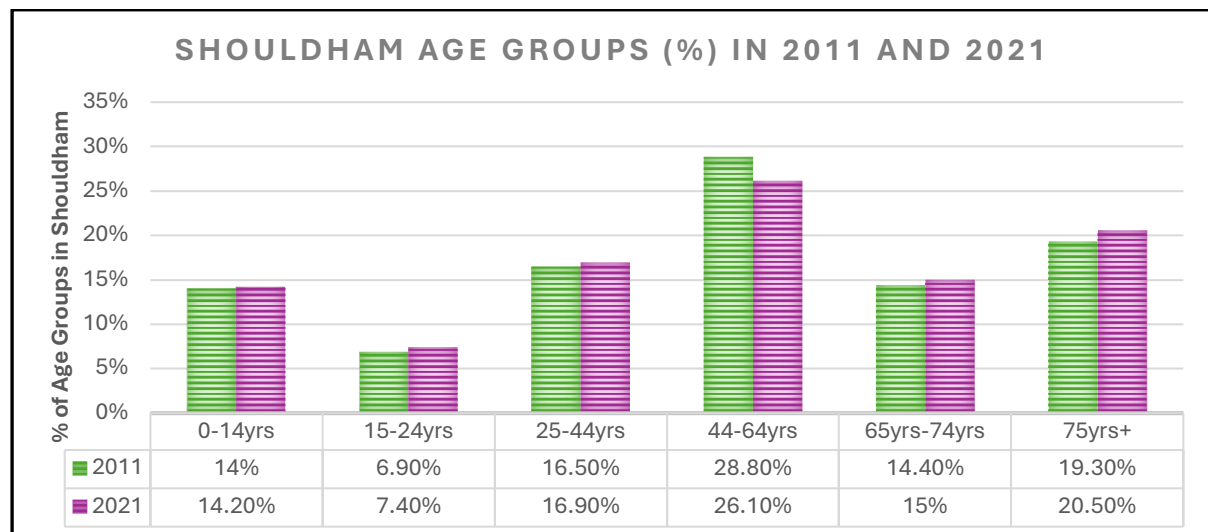
21. The total resident population of Shouldham is 650 according to the Census 2021¹² compared to 605 in 2011¹³, showing a slight increase. The parish is small in comparison to the 154,300 people residing in King's Lynn and West Norfolk and 56,490,000 in England.
22. In 2011, the census data shows that the ratio of females and males was nearly a 50:50 split with males making up 55.2% of the parish and females 44.8%. According to census data a high proportion of the population is of working age. In 2011, the mean age was 50.4 years old, and the median was 55 years old. As shown in **Figure 4**, the age profile of the population has remained fairly static over the last ten years. There has been a decline in the 44-64 years old category and an increase in other age groups. Interestingly for a rural area the amount of younger people (0 – 24 years old) makes up around 21.5% of the parish according to the Census 2021 data. The data also shows there has been a slight rise in older age groups (65+ years old).

¹¹https://assets.publishing.service.gov.uk/media/654df579c0e06800101b2d2b/2a_Extent_and_condition_of_priority_habitats.pdf

¹² Census 2021. Population. Source: [Build a custom area profile - Census 2021, ONS](#)

¹³ Census 2011. Nomis Local Area Report for Shouldham. Source: [Local Area Report for areas in England and Wales - Nomis \(nomisweb.co.uk\)](#)

Figure 4- Age Groups in Shouldham 2011 and 2021 (Census)



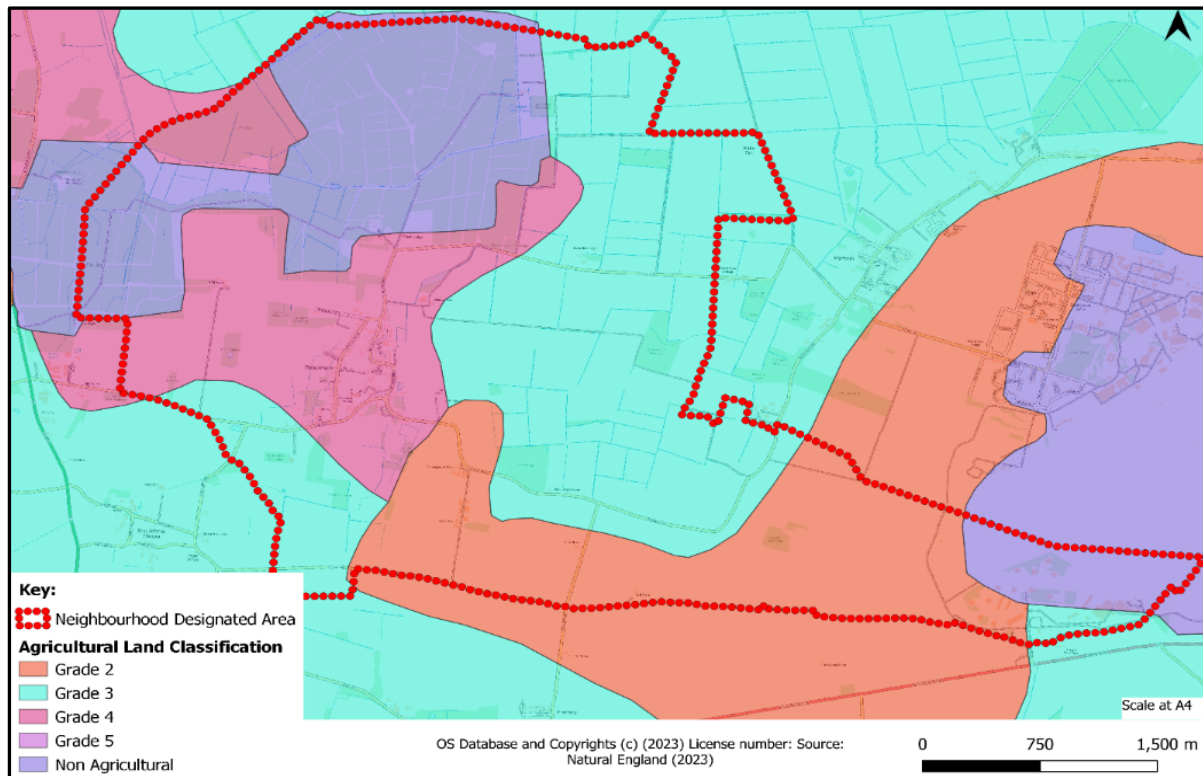
Human Health

23. Provision of age-related services may be a consideration for the neighbourhood plan area as the proportion of over 65s, according to the Census 2021, makes up 36% of the NPA.

Soil

24. The parish contains predominantly Grade 2 and 3 agricultural land and non-agricultural land, as identified by the Agricultural Land Classification Scale and shown in **Figure 5**. There is no Grade 1 classification. However, there is Grade 2 agricultural land in the parish which is considered to be of very good to excellent quality. Grade 3 is considered to be good to moderate land capable of producing yields of crops. There could be moderate limitations which affect the choice of crop. Around the built-up area the soil classification is Grade 4 and to the north-west of the parish non-agricultural.

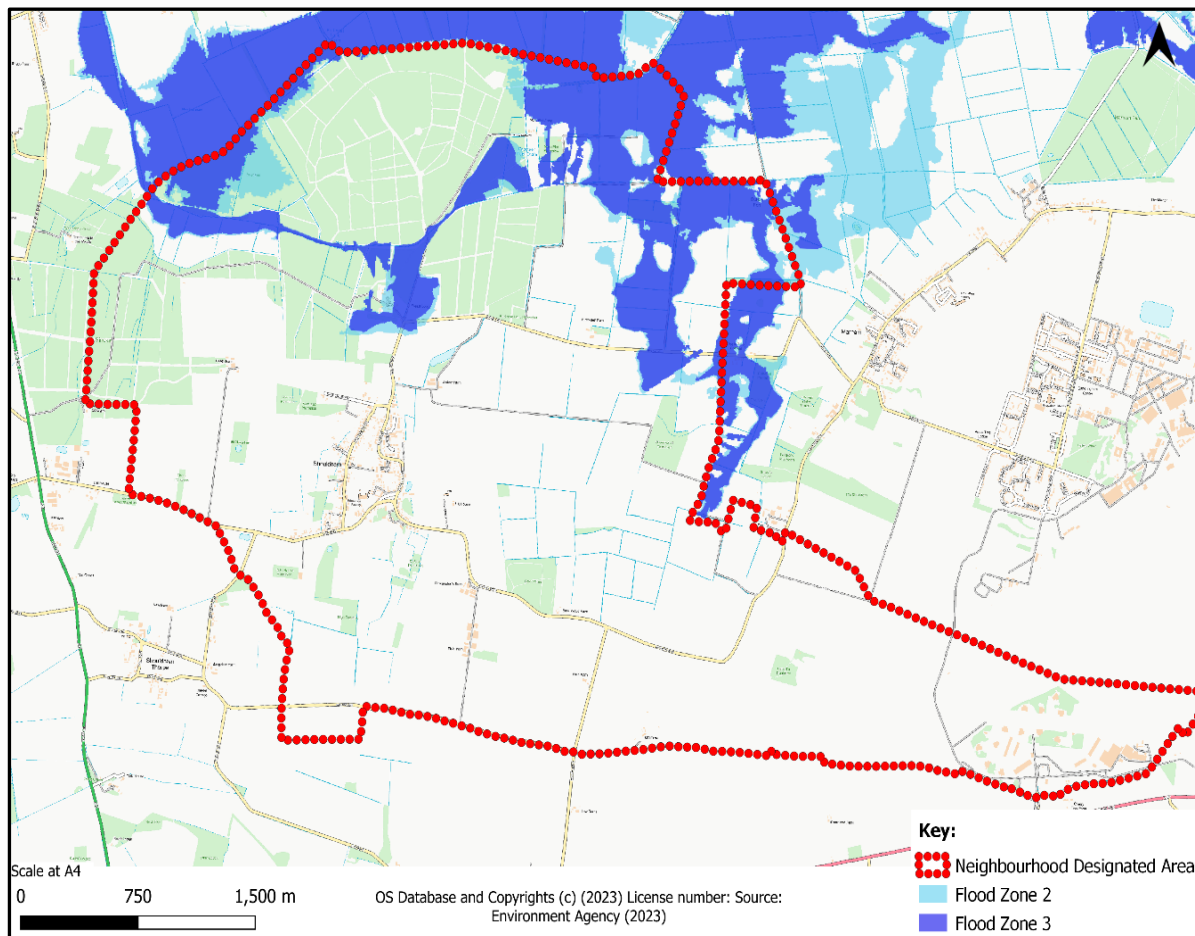
Figure 5-Agricultural Land Classification (Source: Natural England, 2024)



Water

25. According to the Environment Agency most of the parish falls within Flood Zone 1, including the more built-up parts of the settlement, which means there is a low risk of flooding from rivers or the sea. National policy is to locate development in areas least likely to flood. Based on current mapping, this is unlikely to be a constraint on development in the plan area. The nearest high risk flood area (Flood Zones 2 and 3) from rivers or the sea is to the north of the parish along Warren Road, Spring Lane and Mere Plot Drove and in surrounding fields as shown in **Figure 6**.

Figure 6-Flood risk from rivers and sea in Shouldham (Source: DEFRA, 2024)



26. The Environment Agency's future flood risk modelling shows that there is low, medium, and high risk of surface water flooding (ponding) in parts of the parish, including around existing buildings, roads, gardens, and open landscape within the built-up parts of Shouldham as shown in the maps at **Figures 7 and 8**. The map indicates that high flood risk mainly affects agricultural land, areas where water sources may be present such as drainage ditches, ponds or even ghost ponds and residential properties along Lynn Road, Westgate Street, Orchard Lane, Eastgate Street, New Road and Hallfields.

Figure 7- Surface Water Flood Risk within the whole parish (Source: DEFRA, 2024)

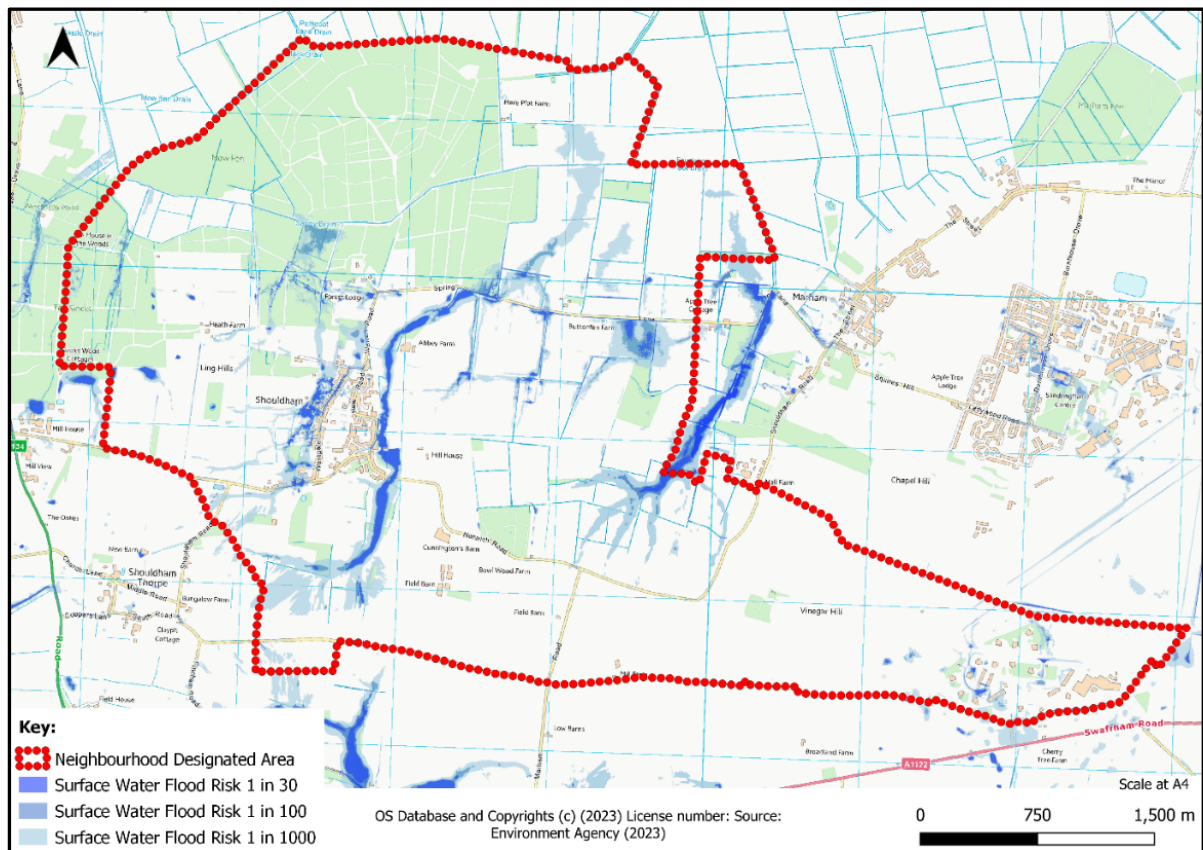
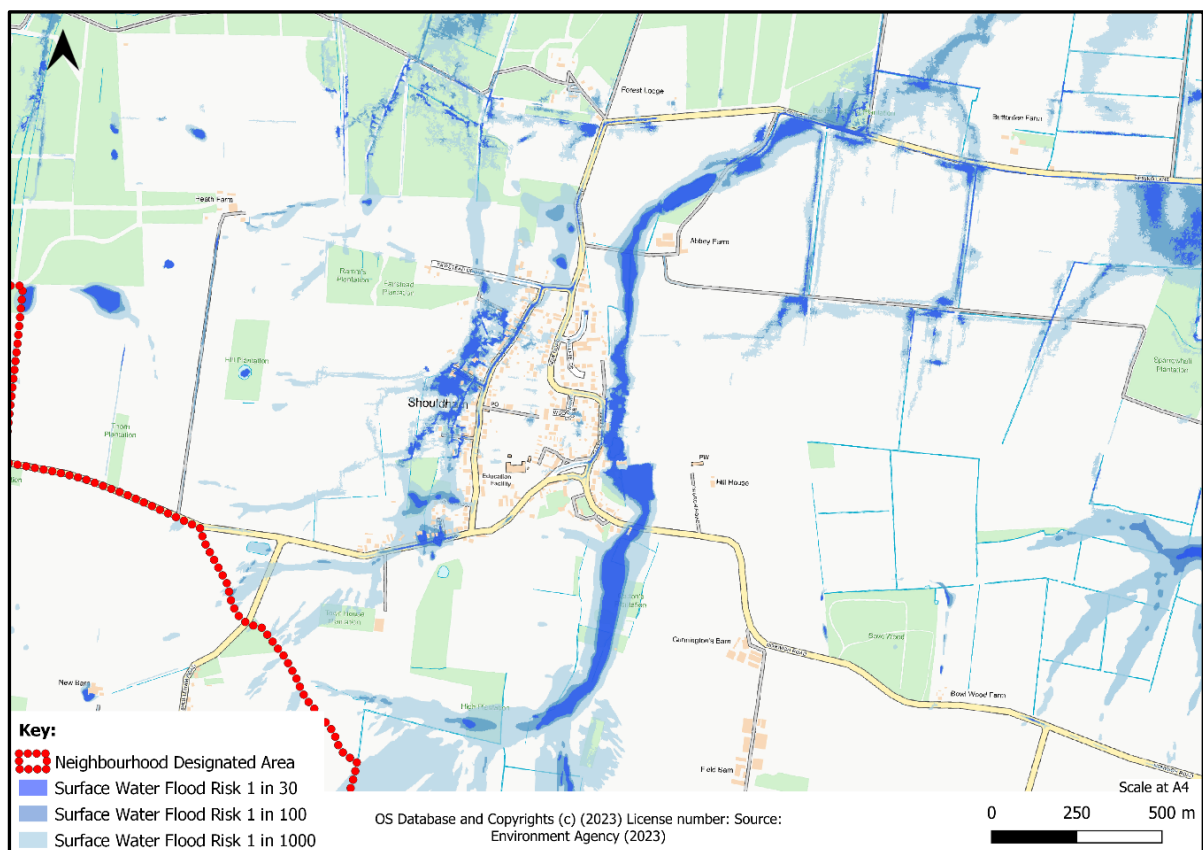


Figure 8-Surface Water Flood Risk within the built-up area of Shouldham (Source: DEFRA, 2024)



27. Reviewing the King's Lynn and West Norfolk Borough Council Strategic Flood Risk Assessment (FRA) Level 1 (2018) Report¹⁴, Shouldham is identified in the King's Lynn and West Norfolk settlement Surface Water Management Plan: Stage 1 (2010) due to being an area most at risk of surface water flooding. However, Shouldham is not mentioned in the Level 2 Report (2019). Development is required to complete a site-specific FRA if a site falls within Flood Zones 2 or 3, is at risk of flooding from other sources including surface water or is in Flood Zone 1 and is 1ha or more¹⁵. The Lead Local Flood Authority (LLFA) datasets show no report/investigation of flooding in the parish over recent years¹⁶.

Air and Climatic Factors

28. As part of the National Air Quality Strategy all local authorities are obliged to establish air quality levels in their area that meet national air quality objectives. If an area does not meet these objectives Air Quality Management Areas (AQMAs) are declared. The King's Lynn & West Norfolk Borough Council Air Quality Annual Status Report (2023) confirms that there are two Air Quality Management Areas in the Borough. These are within King's Lynn at Gaywood Clock and Railway Road. Gaywood Clock and Railway Road AQMAs are approximately 10 miles north of the SNP area¹⁷. This would suggest that air quality is generally not of a concern in the SNP area, and indeed the report confirms that air quality could be improved but a number of measures have been put in place to improve local air quality.

Material Assets

29. Shouldham has a number of facilities and services within the parish. These include, but are not limited to, a bowls green, Church, care home, B&B and Antiques, public house, post office, primary school, playing field and play park, Shouldham Warren and bus services (39 and 62). Service 39 runs from King's Lynn towards Marham stopping off at West Winch and Shouldham. The 39 bus runs through Shouldham Monday to Saturday and makes a number of in the village. Service 62 runs between Downham Market and Fincham on a Monday, Wednesday and Friday and stops off in Shouldham at three different stops: Westgate Street, the playing field and the former school on Eastgate Street.
30. There are also businesses in the parish as detailed In the Shouldham Evidence Base Paper 2024. There are several existing green spaces which are accessible to the public.
31. There are a number of walking routes within the parish. These are predominantly around the north towards Shouldham Warren and around the built-up area and are shown in **Figures 9 and 10**.

¹⁴ [Flood risk assessment - Level 2 | Flood risk assessment - Level 2 | Borough Council of King's Lynn & West Norfolk \(west-norfolk.gov.uk\)](#)

¹⁵ [Flood risk assessment - Level 1 | Flood risk assessment - Level 1 | Borough Council of King's Lynn & West Norfolk \(west-norfolk.gov.uk\)](#)

¹⁶ [Flood investigations - Norfolk County Council](#)

¹⁷ Borough Council of King's Lynn & West Norfolk Air Quality Annual Status Report (2023) Available at: [Air quality annual status report 2023 | Borough Council of King's Lynn & West Norfolk \(west-norfolk.gov.uk\)](#)

Figure 9-Public Rights of Way within Shouldham (Source: Norfolk County Council, 2023)

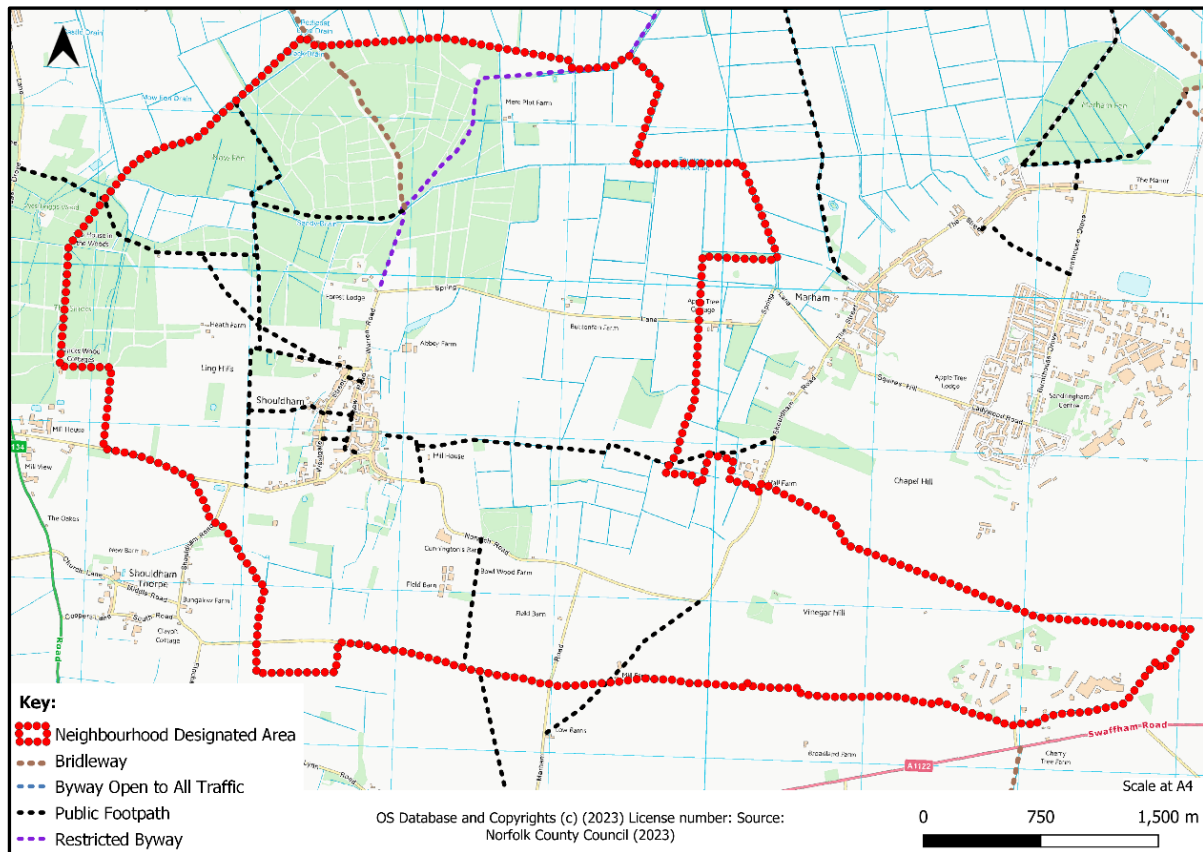
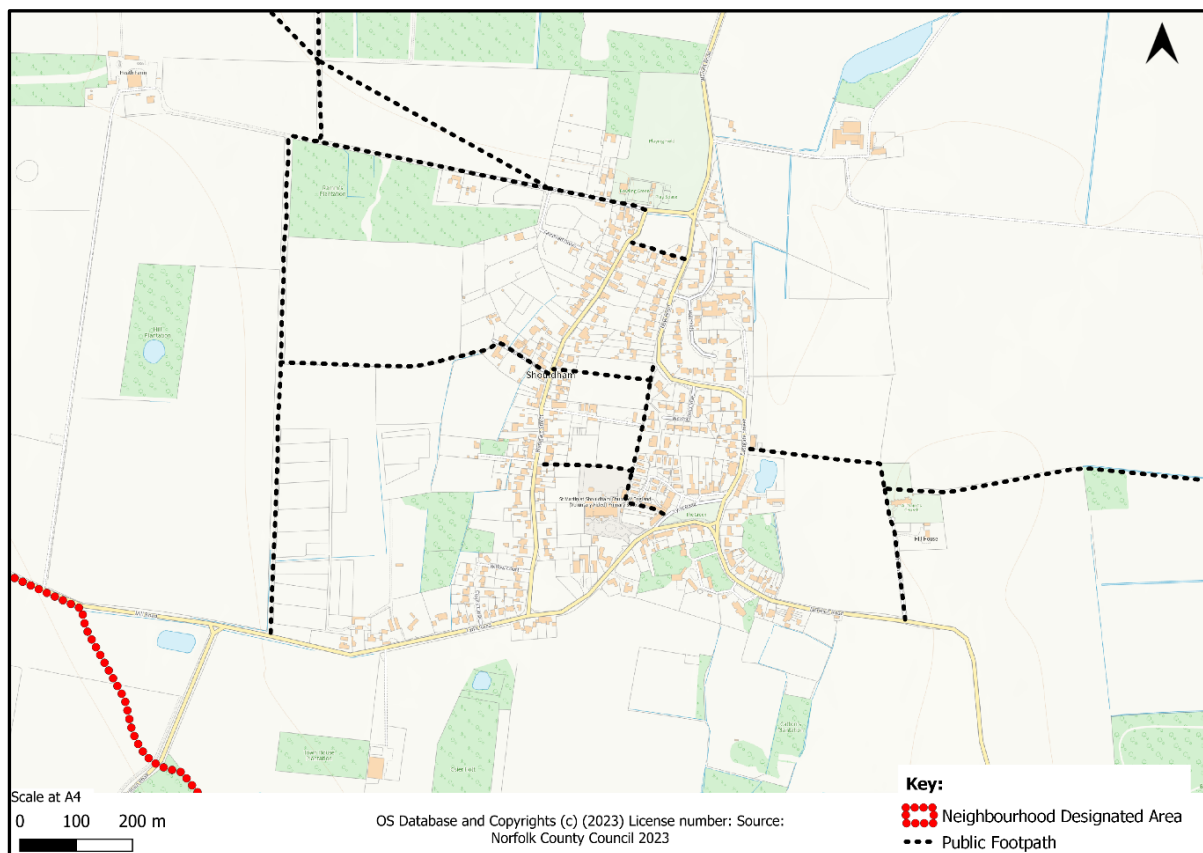


Figure 10-Public Rights of Way within the built-up settlement (Source: Norfolk County Council, 2023)



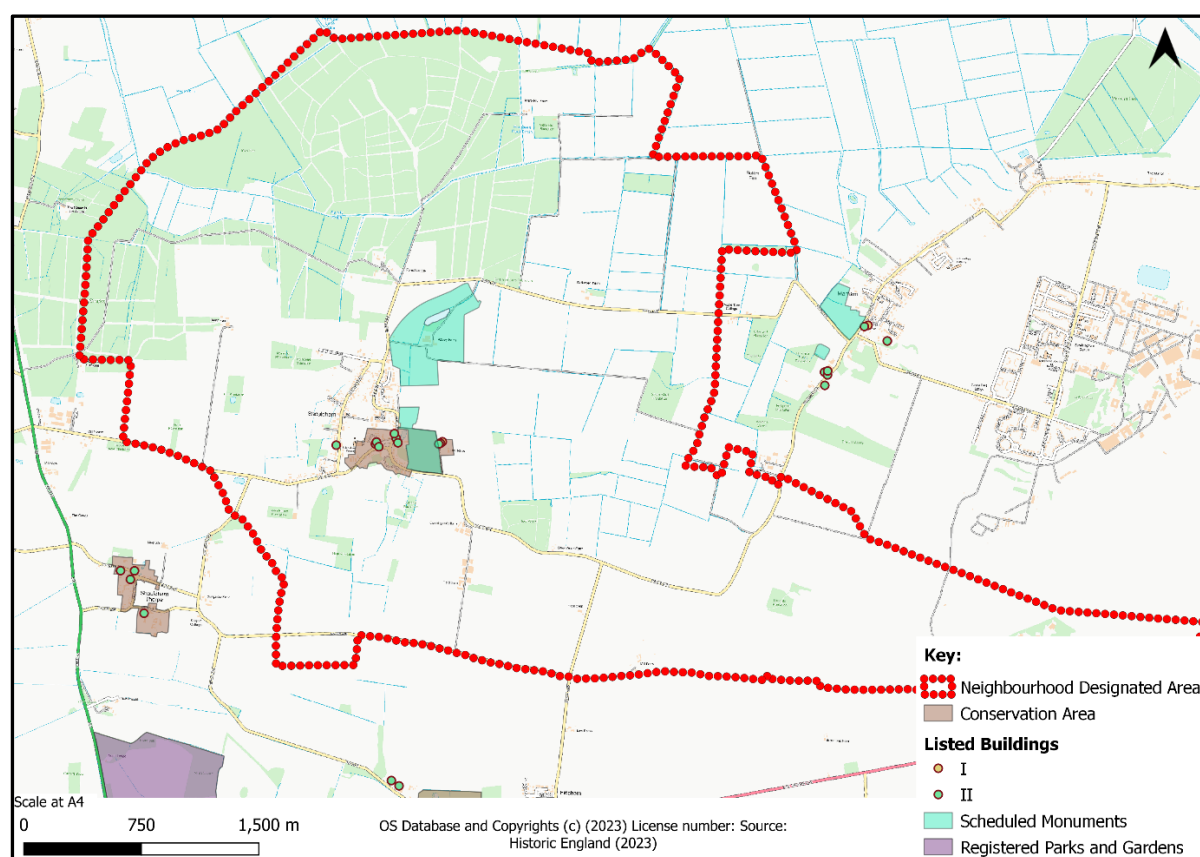
Cultural Heritage

32. The Neighbourhood Designated Area (NDA) has a wealth of historic value that is shown in **Figure 11** and includes:

- a Conservation Area;
- ten listed buildings (Grade I to II);
- two scheduled monuments, one being the remains of the medieval settlement that is immediately west of All Saints Church;
- Shouldham Priory with associated water management features;
- a section of Roman road; and
- a Bronze Age urnfield which is east of Warren Road and surrounds Abbey Farm.

The majority of the listed buildings are Grade II and many of these are situated in the built-up area around Eastgate Street, Westgate Street and Church Road. There is one Grade I building which is Church of All Saints. There are no Battlefields, Registered Parks and Gardens, World Heritage Sites, or other historic designations within the neighbourhood area.

Figure 11- Heritage Assets

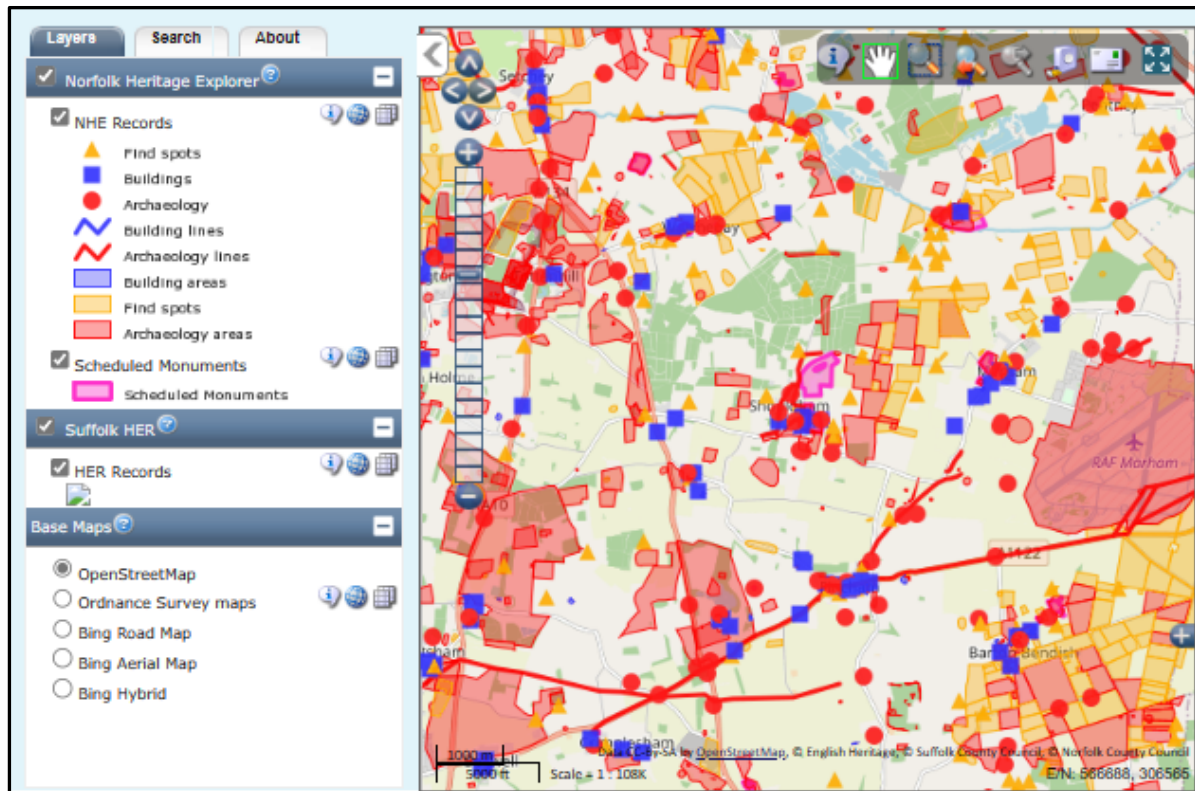


33. According to Norfolk Heritage Explorer¹⁸ there are 141 records of historic artefacts, structures, buildings, and marking in the landscape such as crop marks and

¹⁸ [Your Search Results - Norfolk Heritage Explorer](#)

ditches within the neighbourhood area. These include assets from multiple time periods including the Neolithic, Bronze Age, Roman, Middle and Late Saxon, Medieval, and post-medieval, 14th to 20th century such as World War One and World War Two. Finds have included but are not limited to axe heads, brooches and buttons, coins, flint flakes, copper and metal objects, possible Roman roads/trackways and sites of historic buildings including Priory, St Margarets Church, All Saints Church, Colt's Hall, The Spar, all as mapped in **Figure 12**.

Figure 12- Historic Finds within Shouldham (Source: Norfolk Heritage Explorer, 2024)



Landscape

34. The King's Lynn and West Norfolk Landscape Character Assessment (2007)¹⁹ identifies that the parish falls within the 'Settled Farmland with Plantations' landscape character type. This landscape forms the transition between the low-lying flat landscape of The Fens – Open Inland Marshes and the more elevated, variable landform of: The Brecks – Heathland with Plantations.
35. The Settled Farmland with Plantations character area key features are listed below which can be considered relevant to Shouldham:
 - Medium to large field units interspersed by area of woodland and belts that offer some degree of enclosure and impart a medium scale to the landscape.
 - Topography gradually ascends inland and appears for the most part very flat but with localised areas of gently sloping land dropping away towards the Rivers Great Ouse and Nar.

¹⁹ KLWN Landscape Character Assessment, Final Report March 2007, Chris Blandford Associates

- Arable crop production is the predominant land use and is defined by a variety of field margins.
- There are some small areas of pasture, but these are limited.
- Areas of mixed woodland bring textural qualities and offer semi-enclosure in the landscape. Away from the wooded areas however, the landscape is open with distant views.
- Field margins range from ditches and dykes, Hawthorn hedges, scrubby margins, and lines of Poplar to areas where boundary is visible.
- Although fields are geometric in form, due to the inconsistent nature of the field margins and the irregular location and shape of the wooded areas, the regularity of the land cover pattern is diffused.
- Scattered farm dwellings and small-scale settlements of low density are dispersed throughout this landscape, connected by rural roads.
- Characteristic materials are buff coloured brick and clay roof tiles.
- The skyline is variable – appearing inconsistent in areas of mixed woodland and scrub, regular where views can be gained of the block plantations within the adjacent landscape and feeling uncomplicated and open across fens.
- With the exception of views across and into fens, wooded horizons define much of the skyline.
- Landmark features include churches, located on higher ground. There are however significant areas where there are no obvious landmarks or points of focus.
- Due to the predominantly flat landform, vertical elements from a strong contrast to the horizontal plane.
- A number of main routes cross through the landscape, bringing a constant source of movement but away from these main routes the landscape is, for the most part, still and peaceful.

Legislative Background

36. The European Directive 2001/42/EC²⁰ is the basis for Strategic Environmental Assessments and Sustainability Appraisal legislation, which was transposed into English secondary legislation by the Environmental Assessment of Plans and Programmes Regulations 2004 otherwise known as the SEA Regulations. A SEA would be required if the implementation of the contents of the Shouldham Neighbourhood Plan are likely to cause significant environmental effects.
37. The assessment undertaken will follow and answer specific questions using criteria drawn from the European SEA Directive and Schedule 1 of the UK Environmental Assessment of Plans and Programmes Regulations 2004 when determining the likely significance of effects as shown in **Figure 13**²¹.

²⁰ [EUR-Lex - 32001L0042 - EN - EUR-Lex \(europa.eu\)](#)

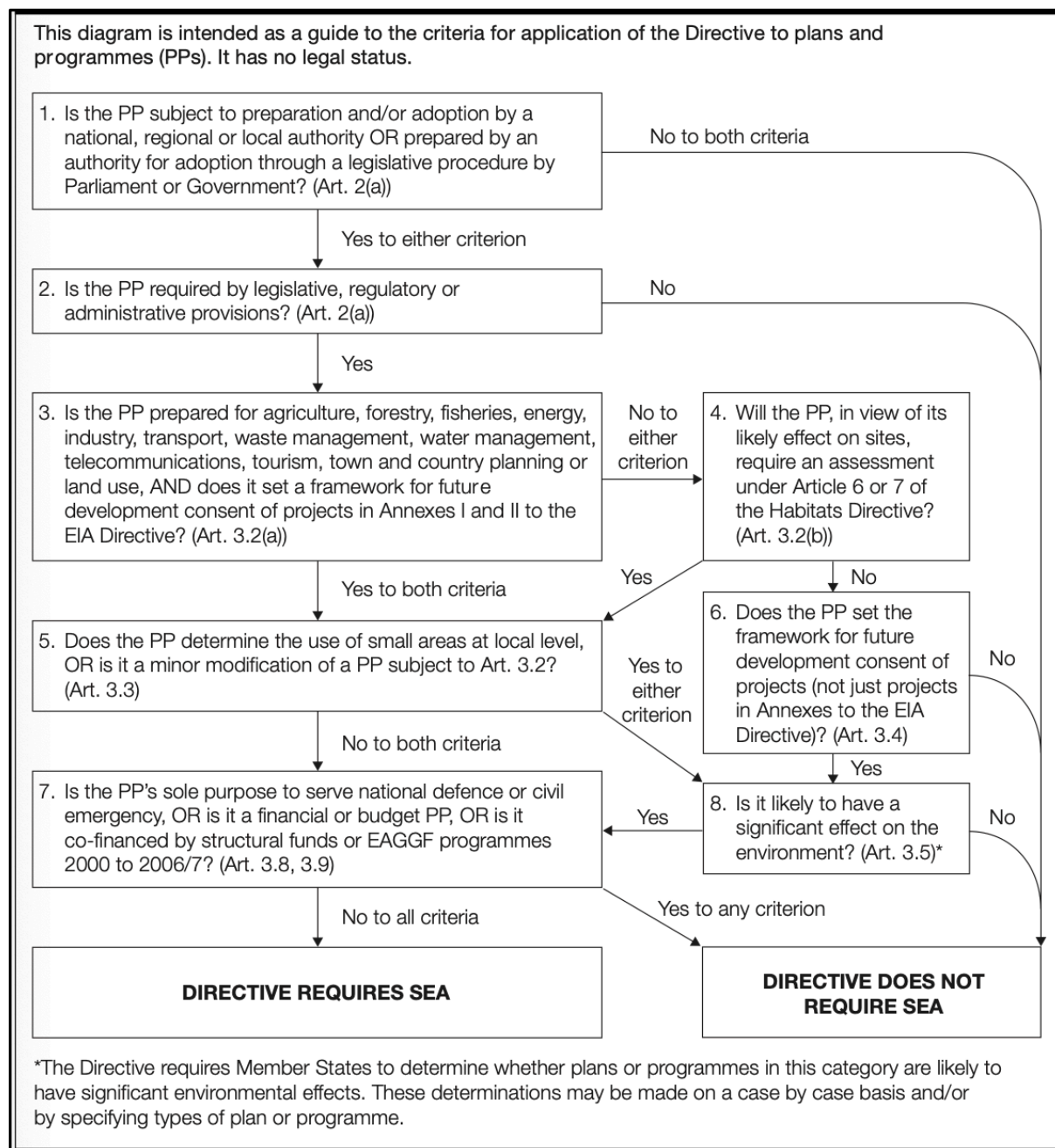
²¹ [The Environmental Assessment of Plans and Programmes Regulations 2004 \(legislation.gov.uk\)](#)

SCHEDULE 1-
CRITERIA FOR DETERMINING THE LIKELY SIGNIFICANCE OF EFFECTS
ON THE ENVIRONMENT

1. The characteristics of plans and programmes, having regard, in particular, to:
 - a) the degree to which the plan or programme sets a framework for projects and other activities, either with regard to the location, nature, size and operating conditions or by allocating resources;
 - b) the degree to which the plan or programme influences other plans and programmes including those in a hierarchy;
 - c) the relevance of the plan or programme for the integration of environmental considerations in particular with a view to promoting sustainable development;
 - d) environmental problems relevant to the plan or programme; and
 - e) the relevance of the plan or programme for the implementation of [E1retained EU law] on the environment (for example, plans and programmes linked to waste management or water protection).
2. Characteristics of the effects and of the area likely to be affected, having regard, in particular, to:
 - a) the probability, duration, frequency and reversibility of the effects;
 - b) the cumulative nature of the effects;
 - c) the transboundary nature of the effects;
 - d) the risks to human health or the environment (for example, due to accidents);
 - e) the magnitude and spatial extent of the effects (geographical area and size of the population likely to be affected);
 - f) the value and vulnerability of the area likely to be affected due to:
 - i) special natural characteristics or cultural heritage;
 - ii) exceeded environmental quality standards or limit values; or
 - iii) intensive land-use; and
 - g) the effects on areas or landscapes which have a recognised national, Community or international protection status.

38. **Figure 14** presents the flow diagram entitled Application of the SEA Directive to plans and programmes which is taken from the Practical Guide to the Strategic Environmental Assessment Directive, published in September 2005²². **Figure 15** below assesses whether Shouldham Neighbourhood Plan (SNP) will require a full SEA. The questions in the first column are drawn from **Figure 14** which sets out how the SEA Directive should be applied.

Figure 14-Application of the SEA Directive to plans and programmes



39. An assessment has been undertaken to determine whether the draft SNP requires SEA in accordance with the SEA Regulations. Where the results can be viewed below.

Figure 15-Application of SEA Directive to Shouldham Neighbourhood Plan

	Stage	Y/N	Justification
1	Is the Neighbourhood Plan (NP) subject to preparation and/or adoption by a national, regional or local authority OR prepared by an authority for adoption through a legislative procedure by Parliament or Government (Art. 2(a))	Y	The NP is being prepared by Shouldham Parish Council (as the “relevant qualifying body”) and will be made Borough Council of Kings Lynn and West Norfolk, subject to Shouldham passing an independent examination and successful local community referendum. The preparation of the Shouldham Neighbourhood Plan is allowed under primary legislation: The Town and Country Planning Act (1990) as amended by the Localism Act (2011). The preparation of NP’s is subject to several relevant regulations as shown below (not intend to be a complete list): • The Neighbourhood Planning (General) Regulations 2012, • the Neighbourhood Planning (referendums) Regulations 2012 • the Neighbourhood Planning (General)(Amendment) Regulations 2015 • the Neighbourhood Planning (General)and Development Management Procedure (Amendment) Regulations 2016 • the Neighbourhood Planning (General)and Development Management Procedure (Amendment) Regulations 2012 GO TO QUESTION 2
2	Is the Neighbourhood Plan (NP) required by legislative, regulatory, or administrative provisions? (Art. 2(a))	Y	Whilst it is not a requirement for a parish to create a neighbourhood plan under the Town and Country Planning Act (1990) and Localism Act (2011), the NP will eventually be “made” and form part of the Development Plan for Borough Council of Kings Lynn and West Norfolk. These authorities are directed by legislative processes, and it is important that the screening process considers whether it is likely to have significant environmental effects and hence whether an SEA is required under the Directive. GO TO QUESTION 3

	Stage	Y/N	Justification
3	Is the Neighbourhood Plan (NP) prepared for agriculture, forestry, fisheries, energy, industry, transport, waste management, water management, telecommunications, tourism, town and country planning or land use, AND does it set a framework for future development consent of projects in Annexes I and II to the EIA Directive? (Art. 3.2(a))	Y	Developments that fall within Annex I are 'excluded' development for Neighbourhood Plans (as set out in Section 61(k) of the Town and Country Planning Act 1990 (as subsequently amended)²³ and the Localism Act 2011 Schedule 9 Part 2 Para 7 Section 38 B (1)(b),(6)²⁴. A Neighbourhood Plan is prepared for Town and Country Planning and Land use. The Shouldham Neighbourhood Plan can include at a neighbourhood level, through different policy areas, the framework for development that would fall within Annex II of the EIA Directive. The Neighbourhood Plan is being prepared to set out a framework for town and country planning and land use within the parish of Shouldham. Its intention is to complement the higher order strategic framework that already exists for land use planning across the Kings Lynn and West Norfolk Borough. The Neighbourhood Plan seeks to align and be in general conformity with the strategic framework. The Neighbourhood Plan is not allocating any development but is a key tool to manage future development within Shouldham. GO TO QUESTION 5
4	Will the Neighbourhood Plan (NP), in view of its likely effect on sites, require an assessment under Article 6 or 7 of the Habitats Directive? (Art. 3.3)		A Habitats Regulations Assessment (HRA) screening of the Neighbourhood Plan has been undertaken in the next section and has concluded that the Neighbourhood Plan is not likely to have a significant effect on any European site, either alone or in combination. GO TO QUESTION 6
6	Does the Neighbourhood Plan (NP) set the framework for future development consent of projects (not just projects in Annexes to the EIA Directive)? (Art. 3.4)		Although the Neighbourhood Plan does not allocate sites for development, it includes non-strategic policies which proposals for development within the parish will be assessed against when materially relevant. GO TO QUESTION 8

²³ [Town and Country Planning Act 1990 \(legislation.gov.uk\)](https://www.legislation.gov.uk/ukpga/1990/61)

²⁴ [Localism Act 2011 \(legislation.gov.uk\)](https://www.legislation.gov.uk/ukpga/2011/22)

	Stage	Y/N	Justification
8	Is it likely to have a significant effect on the environment? (Art. 3.5)	N	SEE FIGURE 15 AND 16 – PLAN DOES NOT REQUIRE SEA.

** PP in this instance refers to Neighbourhood Plan*

40. Schedule 1 of the SEA Regulations sets out the criteria for determining the likely significance of effects. These are listed in **Figure 16** below along with comments on the extent to which the Shouldham Neighbourhood Plan (SNP) meets these criteria.

Figure 16-Likely Significant Effects

SEA Directive Criteria (Annex II)	Comments	Likely Significant Effect? Y/N
Characteristics of the plan and programmes, having regard in particular, to:-		
a) The degree to which the plan or programme sets a framework for projects and other activities, either with regard to the location, nature, size and operating conditions or by allocating resources	Once made, SNP will become part of the statutory development plan and will guide the delivery of development within the designated plan area. The parish of Shouldham is located within Kings Lynn and West Norfolk Borough. The King's Lynn and West Norfolk Local Plan 2021-2040 designates Shouldham as a Rural Village (RV). In the Local Plan 2021-2040 no sites have been allocated in Shouldham. In terms of the degree to which SNP sets a framework, it does not allocate land for development.	N
b) The degree to which the plan or programme influences other plans and programmes including those in a hierarchy	The Shouldham Neighbourhood Plan will be adopted alongside the higher order adopted Local Plans and National Planning Policy Framework and form part of the Borough Council's Development Plans. The Neighbourhood Plan must be in general conformity to the strategic framework and will expand upon some of the Local	N

SEA Directive Criteria (Annex II)	Comments	Likely Significant Effect? Y/N
	Plan policies, providing supplementary information on a local scale. It does not have an influence over other plans. However, once made SNP will form part of the statutory development plans for Shouldham and will be used in conjunction with the current development plans to determine planning applications.	
c) The relevance of the plan or programme for the integration of environmental considerations in particular with a view to promoting sustainable development	One of the basic conditions which SNP must meet is to contribute towards sustainable development. Some of the policies within the plan will focus on environmental protection including designating local green spaces, important local views, creating green corridors for biodiversity/habitat enhancement, protecting existing trees/hedgerows, and avoiding unnecessary light pollution in a dark skies policy. These aim to ensure the effects on the environment are minimised within the plan area and promote positive action. Given the non-strategic nature of the SNP this does not have the potential to restrict the delivery of other plans or programmes.	N
d) Environmental problems relevant to the plan or programme	Baseline information relating to SNP was described earlier in this Screening Document. There are no European statutory designated sites in the neighbourhood area, though there are a few important European designations within approximately 20km in all directions. These include Breckland, Norfolk Valley Fens, The Greater Wash and North Norfolk Coast, Dersingham Bog, Roydon	N

SEA Directive Criteria (Annex II)	Comments	Likely Significant Effect? Y/N
	Common and the Ouse Washes. Some of these sites fall outside of the district boundary. The plan itself will not specifically allocate land for development and will not exacerbate any significant known environmental problems.	
e) The relevance of the plan or programme for the implementation of community legislation on the environment (eg plans and programmes linked to waste management or water protection)	The implementation of community legislation is unlikely to be significantly compromised by the Neighbourhood Plan.	N
Characteristics of the effects and of the area likely to be affected, having regard, in particular, to:-		
a) The probability, duration, frequency, and reversibility of the effects	SNP does not contain any site-specific development proposals that will result in complex, widespread, long lasting, or serious environmental effects.	N
b) The cumulative nature of the effects	As it will not allocate land for development SNP will not lead to any cumulative effects in combination with existing or emerging plans.	N
c) Transboundary nature of effects	The emerging SNP area provides supplementary policy areas on a local scale such as design, The impacts for transboundary effects beyond the parish are unlikely to be significant.	N

SEA Directive Criteria (Annex II)	Comments	Likely Significant Effect? Y/N
d) The risks to human health or the environment (for example, due to accidents)	SNP is unlikely to produce any significant effects to human health or the environment.	N
e) The magnitude and spatial extent of the effects (geographical area and size of the population likely to be affected)	The SNP area has a total population of around 650 (Census 2021). This sits within the context of a total population of 154,300 in King's Lynn & West Norfolk district. SNP remains a non-strategic plan and the principle of development that will take place has already been established within the King's Lynn & West Norfolk Local Plan.	N
f) The value and vulnerability of the area likely to be affected due to: i) Special natural characteristics or cultural heritage; ii) Exceeded environmental quality standards or limit values; or iii) Intensive land-use	i) There are no national statutory natural designations which falls within Shouldham. Regarding cultural heritage, there is a conservation area, 10 statutory listed buildings and 2 scheduled monuments within the neighbourhood plan area according to the latest data on the Historic England website. As the plan does not allocate land for development it is not anticipated to have likely significant effects on the natural and cultural characteristics of the area. Policies have also been put in place to afford protection in areas of natural and historical importance either through local green space designations, important local views, design or biodiversity. ii) SNP is unlikely to result in exceedance of environmental quality	N

SEA Directive Criteria (Annex II)	Comments	Likely Significant Effect? Y/N
	standards, such as those relating to air, water, and soil quality. iii) SNP is unlikely to bring forward development of an extent that would result in a significant intensification of Local land Use. The emerging SNP does not include site allocations and therefore are not anticipated to have likely significant effects on the parish.	
g) The effects on areas of landscapes which have a recognised national, international or community protection status.	The Neighbourhood Plan Area does not have any recognised international, national, or local protection status. The nearest landscape of international and national status is Breckland (SPA) which is 3km east of the designated neighbourhood area followed by: • Norfolk Valley Fens (6km north) • Roydon Common (10km north) • Ouse Washes (10km south) • The Greater Wash and North Norfolk Coast (15km north) • Dersingham Bog (17km north) SNP is not anticipated to have likely significant effects on designated landscapes given the plan cannot influence areas outside of the parish, it will not allocate land for development, and it contains a few protective policies such as dark skies, local green spaces, important local views and	N

SEA Directive Criteria (Annex II)	Comments	Likely Significant Effect? Y/N
	biodiversity and green ecological corridors. The environmental effects on areas of international and national status have been considered and examined through the Local Plan.	

SEA Screening Conclusion

41. A Screening Assessment has been undertaken by applying the criteria from the SEA Directive and Schedule 1 of the SEA Regulations to determine whether or not the SNP is likely to have significant environmental effects when assessed against the topics listed in the SEA Regulations.
42. SNP will set out a vision and non-strategic planning policies to shape development in Shouldham up to 2040. The plan does not allocate sites for development but does contain policies that protect locally important assets (local green spaces, non-designated heritage assets, important local views) and promotes environmental improvement. Such mitigating policies will compliment those set out in the Local Plan. The assessment concludes that this will not result in likely significant effects on the environment.
43. **On this basis, it is considered that the Shouldham Neighbourhood Plan does not have the potential to have significant environmental impacts, and therefore a SEA is not required.**

HABITATS REGULATION ASSESSMENT SCREENING ASSESSMENT

What is a Habitats Regulation Assessment?

43. A Habitats Regulations Assessment (HRA) is the process by which a ‘competent authority’ is required to assess the potential impacts of plans and projects (such as Local Plans, Neighbourhood Plans or development proposals put forward in planning applications) on International Sites in accordance with Article 6 (3) of the EU Habitats Directive and Regulation 61 of the [Conservation of Habitats and Species Regulations 2017 \(as amended\)](#). A competent authority, such as the Local Planning Authority, must determine if a plan or project may affect the protected features set out in the Conservation Objectives of an International habitat site before deciding whether to undertake, permit or authorise it.

What are the International (European) Designated Sites?

44. There are three types of International Sites designations:
- **Ramsar:** Ramsar sites are wetlands of international importance, designated under the Ramsar Convention on Wetlands²⁵.
 - **Special Area of Conservation (SAC):** Areas which have been given special protection for a variety of wild animals, plants and habitats.
 - **Special Protection Area (SPA):** Identified as being of international importance for the breeding, feeding, wintering or the migration of rare and vulnerable species of birds found within EU countries.

Screening

45. To fulfil the legal requirements if likely significant effects will occur with the implementation of the SNP upon the International Sites (Natura 2000 sites) an initial screening has been undertaken which is the first stage of the HRA process. If any likely significant effects on International Sites will occur then the screening is followed by an appropriate assessment (second stage of the HRA process) which needs to consider these impacts in more detail and what mitigation measures, if any, can be achieved to address these²⁶.
46. The purpose of the Screening stage is to:
- Identify all features of the SNP that would have **no effect** on an International/ European site. These features can be eliminated from further consideration in respect of this and other plans.
 - Identify all aspects of the SNP that would **not be likely to have a significant effect** on an International/European site (i.e. would have some effect because of links/connectivity but the effect is not significant), either alone or in combination with other aspects of the

²⁵ The Ramsar Convention on Wetlands is an international treaty for the conservation and sustainable use of wetlands. It is named after the city of Ramsar in Iran, where the Convention was signed in 1971. It came into force in 1975.

²⁶ [Habitats regulations assessments: protecting a European site - GOV.UK \(www.gov.uk\)](#)

same plan or other plans or projects. These do not require ‘Appropriate Assessment’.

- Identify those aspects of the SNP where it is **not possible to rule out the risk of significant effects** on a European site, either alone or in combination with other plans or projects. This provides a clear scope for the parts of the plan that will require Appropriate Assessment.

Case Law and the Interpretation of ‘likely significant effects’

47. Before undergoing the preliminary assessment, it is useful to reflect on relevant case law to help interpret when effects should be considered as a likely significant effect, when carrying out a HRA of a neighbourhood plan. In the Waddenzee case the European Court of Justice ruled on the interpretation of Article 6(3) of the Habitats Directive²⁷ (translated into Reg.102 in the Habitats Regulations):

“An effect should be considered ‘likely’, “if it cannot be excluded, on the basis of objective information, that it will have a significant effect on the site” (paragraph 44). An effect should be considered ‘significant’, “if it undermines the conservation objectives” (paragraph 48). Where a plan or project has an effect on a site “but is not likely to undermine its conservation objectives, it cannot be considered likely to have a significant effect on the site concerned” (paragraph 47).”

48. As well as this another relevant opinion of Advocate General Sharpston (2012²⁸) delivered to the Court of Justice of the European Union for Case C-258/11 Peter Sweetman v An Bord Pleanala stated:

“The requirement that an effect in question be ‘significant’ exists in order to lay down a de minimis threshold. Plans or projects that have no appreciable effect on the site are thereby excluded. If all plans or projects capable of having any effect whatsoever on the site were to be caught by Article 6(3), activities on or near the site would risk being impossible by reason of legislative overkill.(Paragraph 47)”

49. This opinion on the interpretation of significant effects in the ‘Sweetman’ case allows for the authorisation of plans and projects whose possible effects, alone or in combination, can be considered ‘trivial’ or de minimis; referring to such cases as those “that have no appreciable effect on the site”. In practice such effects could be screened out as having no likely significant effect – they would be ‘insignificant’. The HRA preliminary screening assessment therefore considers whether the Pre-Submission Draft of Shouldham Neighbourhood Plan and its policies could have likely significant effects either alone or in combination.

Assessment

50. Firstly, it is established practice in HRA to identify any International/European Sites that could possibly be affected within the area covered by the plan proposal or

²⁷ [EUR-Lex - 62002CJ0127 - EN - EUR-Lex \(europa.eu\)](#)

²⁸Case C-258/11 Peter Sweetman Ireland Attorney General Minister for the Environment, Heritage and Local Government v An Bord Pleanala Source: [CURIA - Documents \(europa.eu\)](#)

project and other sites that may be affected beyond this area. In this screening assessment the area screened was the SNP designated area as well as a distance of 20 kilometres (km) taken from the northern point of SNP. A distance of 20 kilometres from the centre point of the SNP area was used in the first instance because this has been agreed with Natural England for the relevant Local Plans HRAs in this region²⁹ and is considered precautionary. In line with HRA requirements, the application of a 20-kilometre buffer is considered a highly precautionary distance with relation to potential impacts to the surrounding area.

51. The assessment also considers areas that may be functionally linked to the International/European sites. The term ‘functional linkage’ refers to the role or ‘function’ that land or sea beyond the boundary of a European site might fulfil in terms of ecologically supporting the populations for which the site was designated or classified. Such land is therefore ‘linked’ to the European site in question because it provides an important role in maintaining or restoring the population of qualifying species at favourable conservation status³⁰.
52. Whilst the boundary of an International/European site will usually be drawn to include key supporting habitat for a qualifying species, this cannot always be the case where the population for which a site is designated or classified is particularly mobile. Individuals of the species population will not necessarily remain in the site all the time. The mobility of qualifying species is considerable and may extend so far from the key habitat that forms the designated area (SAC or SPA) that it would be entirely impractical to attempt to designate or classify all of the land or sea that may conceivably be used by the species.
53. In the SNP area it was found that **there are no designated International/European sites**. This screening assessment has also considered the impact on International Sites within a 20km radius of the SNP area as an in-combination assessment (**Figure 17**). A number of International Sites are shown to be located within 20km radius of the SNP area including:

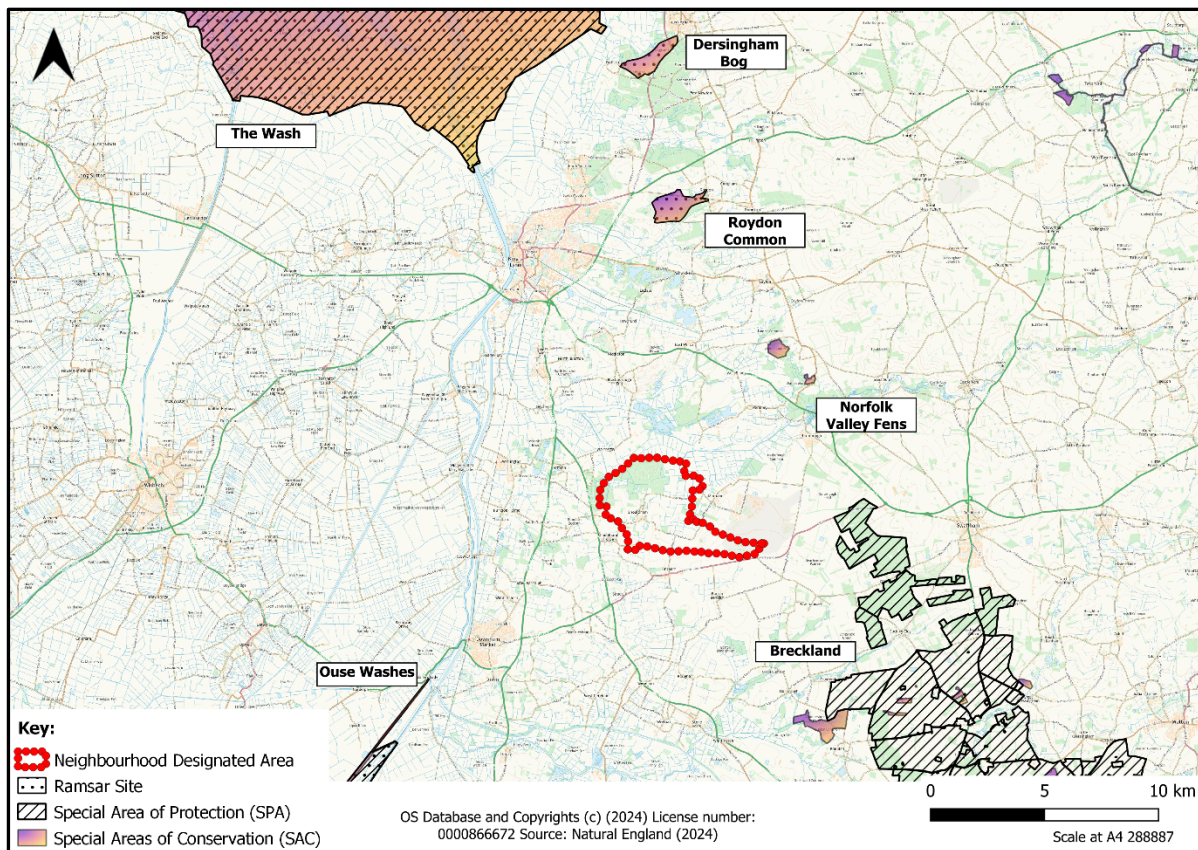
Figure 17- Table of the International Designated Wildlife Sites within 20km radius of SNP

Special Areas of Conservation	Special Protection Areas	Ramsar Sites
- Norfolk Valley Fens - Roydon Common & Dersingham Bog - The Greater Wash & North Norfolk Coast	- Breckland - Ouse Washes - The Greater Wash & North Norfolk Coast	- Ouse Washes - Roydon Common & Dersingham Bog - The Greater Wash & North Norfolk Coast

²⁹Borough Council of Kings Lynn and West Norfolk. Source Footprint Ecology. https://www.west-norfolk.gov.uk/download/downloads/id/6634/kings_lynn_and_west_norfolk_habitats_regulations_assessment_draft_document_270521.pdf

³⁰ Functional linkage: How areas that are functionally linked to European sites have been considered when they may be affected by plans and projects - a review of authoritative decisions - NECR207 (naturalengland.org.uk)

Figure 18- Map of the International Designated Wildlife Sites within 20km radius of SNP



54. Appendix A provides detailed information about the European Sites described with reference to Standard Data Forms for the SPA sites and Natural England's Site Improvement Plans³¹. Natural England's conservation objectives³² for the SPA sites have also been reviewed. These state that site integrity must be maintained or restored by maintaining or restoring the habitats of qualifying features, the supporting processes on which they rely, and populations of qualifying species.
55. As required under Regulation 105 of the Conservation of Habitats and Species Regulations 2017 (as amended), an assessment has been undertaken of the potential 'likely significant effects' of the plan. The assessment has been prepared in order to identify which policies would be likely to have a significant effect on European sites. The Screening assessment has been conducted without taking mitigation into account, in accordance with the 'People Over Wind' judgment which took place in April 2018³³. The judgment clarified that when making screening decisions for the purposes of deciding whether an appropriate assessment is required, competent authorities cannot take into account any mitigation measures in neighbourhood plans, permissions in principle and certain development orders³⁴.

³¹ [Natural England Access to Evidence - Site Improvement Plans: East of England](#)

³² [Natural England Access to Evidence - Conservation Objectives for European Sites](#)

³³ The Court of Justice of the European Union delivered its judgment in [Case C-323/17 People Over Wind & Peter Sweetman v Coillte Teoranta \('People over Wind'\)](#).

³⁴ GOV. Para 009 . Source: [Appropriate assessment - GOV.UK \(www.gov.uk\)](#)

56. Each European site has a set of interest features which are the ecological features for which the site is designated or classified, and the features for which Member States should ensure the site is maintained or where necessary restored (as set out in Appendix A). European sites are at risk if there are possible means by which any aspect of a plan or project can, when being taken forward for implementation, pose a potential threat to the wildlife interest of the sites. This is often referred to as the 'impact pathway'. Potential impact pathways which have been considered in this assessment for significant effects are:
- Physical loss or damage to habitat;
 - Non-physical disturbance (noise, vibration and light pollution);
 - Non-toxic contamination;
 - Air pollution;
 - Recreational pressure;
 - Changes to hydrology, including water quantity and quality
 - Urban effects
57. Where the plan is likely to have an effect on its own (due to impact pathways being present), but it is not likely to be significant, the in-combination assessment at Screening stage needs to determine whether there may also be the same types of effect from other plans or projects that could combine with the plan to produce a significant effect. If so, this likely significant effect arising from the plan in combination with other plans or projects, would then need to be considered through the Appropriate Assessment stage to determine if the impact pathway would have an adverse effect on integrity of the relevant European site. Where the Screening assessment has concluded that there is no impact pathway between development proposed in the plan and the conditions necessary to maintain qualifying features of a European site, then there will be no in-combination effects to assess at the Screening or Appropriate Assessment stage.
58. The potential for in-combination impacts will therefore focus on plans prepared by local authorities that overlap with European sites that are within the scope of this HRA. The findings of any associated HRA work for those plans will be reviewed where available. Where relevant, any strategic projects in the area that could have in-combination effects with the plan will also be identified and reviewed. The online HRA Handbook suggests that proposals in draft plans may be relevant to consider as part of the in-combination assessment.

HRA Impacts Screening

59. A risk-based approach involving the application of the precautionary principle was adopted in the assessment, such that a conclusion of 'no likely significant effect' (LSE) would only be reached where it was considered unlikely, based on current knowledge and the information available, that a SNP policy would have a significant effect on the integrity of a European site. SNP does not allocate land for development and therefore will not directly result in an increase in the number of new dwellings within the vicinity of European Sites. A summary of findings is presented in **Figure 19** with regard to the different impact pathways and an

assessment of potential impacts of the draft policies contained within SNP is provided in **Figure 20**.

Figure 19-Summary of Impact Pathways

Impact Pathway	Findings
Physical loss or damage to habitat	Habitat loss from development in areas outside of the European site boundaries may result in likely significant effects where that habitat contributes towards maintaining the interest feature for which the European site is designated. This includes land which may provide offsite movement corridors or foraging and sheltering habitat for mobile species such as birds, bats and fish. European sites susceptible to the indirect effects of habitat loss are restricted to those with qualifying species that rely on offsite habitat. Natural England has advised that its recognised distance for the consideration of offsite functionally linked land for wintering birds is generally 2km. As the SNP area is approximately 20 kilometres from SAC/SPA/Ramsar Sites, no likely significant effect is predicted in relation to this site. The SNP also does not have influence over any development outside of the SNP designated area. Therefore, no likely significant effects will occur from SNP as a result of physical damage and loss to offsite habitat, either alone or in-combination with other plans and policies.
Non-physical disturbance (noise, vibration and light pollution)	Non-physical disturbance effects such as noise and vibration are most likely to disturb bird species and thus are a key consideration with respect to potential effects on European sites where birds are the qualifying features. Light pollution from artificial lighting at night also has the potential to affect species where it occurs in close proximity to key habitat areas, such as key roosting sites of SPA birds. It has been assumed that the effects of non-physical disturbances are most likely to be significant within a distance of 500 metres from the source. The SAC/SPA/Ramsar Sites are located significantly more than 500 metres from the Neighbourhood Plan area and therefore is not considered susceptible to non-physical disturbance from development in the SNP area. Offsite impacts can also be screened out, due to the 20km distance of the SPAs from the SNP area.
Non-toxic contamination	A non-toxic environment is understood to be an environment that is free from chemical pollution and of exposures to hazardous chemicals at levels that are harmful to human health and to the environment. An example of non-toxic contamination in the environment is the creation of dust. Dust can smother terrestrial

Impact Pathway	Findings
	habitats, preventing natural processes, and an increased sediment can potentially affect the aquatic habitats/species. As SNP is not allocating any sites for development in the area it is considered there will be no likely significant effects of non-contamination and is screened out of the assessment.
Air pollution	There are number of atmospheric pollutants which can result in direct or indirect impacts to Habitats sites. These impacts are usually caused when the qualifying features are plants, soils and wetland habitats. However, some species may also be indirectly impacted from air pollution causing changes in habitat composition. The primary contributor to atmospheric pollution is transport related activities. Therefore, the main pollutants to atmospheric pollution are considered to be oxides of nitrogen (NOx) or sulphur dioxide (SO2) from traffic emissions. s. Deposition of nitrogen compounds may lead to both soil and freshwater acidification, and NOx can cause eutrophication of soils and water. Based on the 2019 Highways England Design Manual for Road and Bridges (DMRB) LA 105 Air quality³⁵ (which sets out the requirements for assessing and reporting the effects of highway projects on air quality), the report states that an assessment of the impact of pollutant concentrations on sensitive receptors should be done within 200m from the road itself. It can be assumed that air pollution from roads is unlikely to be significant beyond 200 metres from the road itself. As SNP is not allocating any sites for development in the area it is considered there will be no likely significant effects of air pollution on the European Sites which are 20km away and is screened out of the assessment.
Recreational pressure	Recreational activities and human presence can result in significant effects on European sites. European sites with qualifying bird species are likely to be particularly susceptible to recreational disturbances from walking, dog walking, angling, off-road vehicles and motorbikes, wildfowling, and water sports. In addition, recreation can physically damage habitat as a result of trampling, fire or vandalism and also through erosion associated with terrestrial activities. Each European site will typically have a 'Zone of Influence' (ZOI) within which increases in population would be expected to result in likely significant effects. Zones of influence are areas from within which it is deemed there will be likely significant effects arising

³⁵ [LA 105 - Air quality \(standardsforhighways.co.uk\)](https://standardsforhighways.co.uk)

Impact Pathway	Findings
	from additional residents living within the zone and travelling to European sites for recreation. This determines where new development may result in changes in recreation and therefore where mitigation will be necessary. ZOIs in the Kings Lynn and West Norfolk Local Plan HRA have resulted from the 2016 visitor surveys³⁶ and the findings are therefore typically specific to each European site (and often to specific areas within a European site). The ZOI for the designated sites within 20km distance of SNP are: • Breckland SAC/SPA- 26km • Norfolk Valley Ouse Washes- 15km • North Norfolk Coast SAC/SPA/Ramsar- 42km • Roydon Common and Dersingham Bog- 12km • The Wash & North Norfolk Coast- 61km The SNP is approximately 17 kilometres from Dersingham Bog and it is likely that significant effects on these sites as a result of recreation can therefore be ruled out at this stage. The SNP area does fall within the ZOI for most of the sites except Dersingham Bog. However, the SNP is not allocating any sites for development so a full HRA should be ruled out at this stage. Distances (km) from SNP to Designated Sites: • Norfolk Valley Fens (6km north) • Roydon Common (10km north) • Ouse Washes (10km south) • The Greater Wash and North Norfolk Coast (15km north) • Dersingham Bog (17km north)
Changes to hydrology, including water quantity and quality	An increase in demand for water abstraction and treatment resulting from any growth proposed in the SNP area could result in changes in hydrology at European sites. Depending on the qualifying features and particular vulnerabilities of the European sites, this could result in likely significant effects, for example, due to changes in environmental or biotic conditions, water chemistry and the extent and distribution of preferred habitat conditions. The SNP does not have influence over any development outside of the SNP designated area. Therefore, no likely significant effects

³⁶ Borough Council of Kings Lynn and West Norfolk. Source Footprint Ecology. https://www.west-norfolk.gov.uk/download/downloads/id/6634/kings_lynn_and_west_norfolk_habitats_regulations_assessment_draft_document_270521.pdf

Impact Pathway	Findings
	will occur from SNP as a result of changes to hydrology either alone or in-combination with other plans and policies.

Figure 20- HRA Screening Assessment

Policy	Description	Likely Significant Effects (LSE)	Recommendation at Screening Stage
Policy SH01: Biodiversity	Requirement to contribute towards nature recovery and prioritise improving connectivity to existing habitats. Development should not have an adverse impact on important wildlife habitats and species in Shouldham.	No LSE – mitigation policy for growth	None. This policy does not trigger the need for an appropriate assessment (HRA Stage 2) to be undertaken
Policy SH02: Trees and Hedgerows	Policy setting out detail/criteria on protecting existing trees and hedgerows in the parish, replacement trees and new tree planting.	No LSE – protective policy	None. This policy does not trigger the need for an appropriate assessment (HRA Stage 2) to be undertaken
Policy SH03: Green Corridors	Green ecological corridors have been mapped out with local natural features in mind which proposed developments within or adjacent to the corridors should have regard to enhance or restore habitat connectivity.	No LSE – mitigation policy for growth	None. This policy does not trigger the need for an appropriate assessment (HRA Stage 2) to be undertaken
Policy SH04: Local Green Spaces	Protection of green spaces of local importance from future development.	No LSE – supports retention of green open spaces, conserving the natural environment	None. This policy does not trigger the need for an appropriate assessment (HRA Stage 2) to be undertaken

Policy	Description	Likely Significant Effects (LSE)	Recommendation at Screening Stage
Policy SH05: Important Local Views	Protection of important local views means proposals must demonstrate that development is sited and designed to be of a form and scale which avoids harm to the views.	No LSE – protective policy	None. This policy does not trigger the need for an appropriate assessment (HRA Stage 2) to be undertaken
Policy SH06: Dark Skies	Policy to protect unnecessary light pollution from new developments	No LSE – protective policy	None. This policy does not trigger the need for an appropriate assessment (HRA Stage 2) to be undertaken
Policy SH07: Design	Requiring high quality design that accords with the Shouldham Design Codes/Guide Document 2024.	No LSE – policy is qualitative and does not promote development	None. This policy does not trigger the need for an appropriate assessment (HRA Stage 2) to be undertaken.
Policy SH08: Shouldham Conservation Area	Development proposals should enhance the character of the area and appearance following criteria. Also submit a heritage statement.	No LSE – policy is qualitative and does not promote development	None. This policy does not trigger the need for an appropriate assessment (HRA Stage 2) to be undertaken.
Policy SH09: Non-Designated Heritage Assets	Policy designating a number of NDHAS which should be considered in proposals.	No LSE – protective policy	None. This policy does not trigger the need for an appropriate assessment (HRA Stage 2) to be undertaken

Policy	Description	Likely Significant Effects (LSE)	Recommendation at Screening Stage
Policy SH10: Housing Mix	This policy addresses housing mix with specific regard to the results from the Shouldham Housing Needs Assessment (HNA) 2024 including requirements that ensure future housing development meets the needs of local people and are accessible/adaptable.	No LSE – does not promote development but relates to qualitative criteria for development	None. This policy does not trigger the need for an appropriate assessment (HRA Stage 2) to be undertaken
Policy SH11: Community Facilities	Policy protects several community facilities and supports improvements in the area.	No LSE – does not promote development	None. This policy does not trigger the need for an appropriate assessment (HRA Stage 2) to be undertaken
Policy SH12: Protection and Enhancement of Public Rights of Way	Development proposals for sites that include Public Rights of Way or are adjacent to them, should protect and incorporate them into the scheme.	No LSE – policy is qualitative and does not promote development	None. This policy does not trigger the need for an appropriate assessment (HRA Stage 2) to be undertaken

HRA Screening Conclusion

60. The HRA Screening Assessment concludes that no significant effects are likely to occur with regards to the integrity of European Wildlife Sites within 20km. **As such a full HRA and Appropriate Assessment is not required at this point and is screened out.**

APPENDIX A - CONSERVATION OBJECTIVES OF THE EUROPEAN SITES

This appendix contains information on the European sites that are within 20km to SNP area. The site area and designated features are drawn from Natural England's website. Site conservation objectives are drawn from Natural England's website too and are only available for SACs and SPAs. Site Improvement Plans which have been published for the SPA/Ramsar Sites have been reviewed and included for information purposes.

It must be noted this information has been gathered from Natural England. This document should be read in conjunction with Supplementary Advice documents provided by the Statutory Body, which provides more detailed advice and information to enable the application and achievement of the Conservation Objectives.

Breckland

Site location overview

Breckland in the heart of East Anglia is a gently undulating plateau underlain by bedrock of Cretaceous Chalk, covered by thin deposits of sand and flint. The conditions during the last glaciation have given rise to the patterned ground features and ice depressions (pingos) that we see today and that are of high geological and biological importance. The continental climate, with low rainfall and free-draining soils, has led to the development of dry heath and grassland communities. Relatively lush river valleys provide a gentle contrast to the drier harsher surroundings. Occasional woods with alder *Alnus glutinosa* and willow *Salix* sp. the most dominant trees occur beside rivers and streams in the floodplains. These woods rely on high water levels and sometimes surface flooding as both river flooding or spring flows can be very important. The dry heaths of Breckland are of the *Calluna vulgaris* – *Festuca ovina* (heather – sheep's fescue) community.

The sand sedge-dominated *Carex arenaria* sub-community is typical of areas of blown sand – a very unusual feature of this location. The highly variable soils of Breckland, with underlying chalk being largely covered with wind-blown sands, have resulted in mosaics of heather-dominated heathland, acidic grassland and calcareous grassland that are unlike those of any other site. In many places there is a linear or patterned distribution of heath and grassland, arising from fossilised soil patterns that formed under peri-glacial conditions. Breckland is the most extensive surviving area of the rare *Festuca ovina* – *Hieracium pilosella* – *Thymus praecox* (sheep's fescue – mouse-ear-hawkweed – wild thyme) grassland type. The grassland is rich in rare species typical of dry, winter-cold, continental areas, and approaches the features of grassland types in central Europe more than almost any other seminatural dry grassland found in the UK. Wangford Warren and adjoining parts of RAF Lakenheath have one of the best-preserved systems of active inland sand dunes in the UK.

The habitat type, which is in part characterised Breckland SAC UK0019865 Compilation date: May 2005 Version: 1 Designation citation Page 2 of 2 by the nationally rare grey hair-grass *Corynephorus canescens* occurring here at its only inland station, is associated with open conditions with active sand movement. The site shows the colonisation sequence from open sand to acidic grass-heath. The Breckland meres are examples of hollows within glacial outwash deposits and are fed by water from the underlying chalk aquifer. Natural fluctuations in groundwater tables mean that these lakes occasionally

dry out. The flora is dominated by stonewort (pondweed) *Characeae Potamogetonaceae* associations. A number of the water bodies within the site support populations of amphibians, including great crested newts *Triturus cristatus*.

Qualifying features

SAC Qualifying habitats: The site is designated under article 4(4) of the Directive (92/43/EEC) as it hosts the following habitats listed in Annex I:

- Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae). (Alder woodland on floodplains)*
- European dry heaths
- Inland dunes with open *Corynephorus* and *Agrostis* grasslands. (Open grassland with grey-hair grass and common bent grass of inland dunes)
- Natural eutrophic lakes with *Magnopotamion* or *Hydrocharition*-type vegetation. (Naturally nutrient-rich lakes or lochs which are often dominated by pondweed)
- Semi-natural dry grasslands and scrubland facies: on calcareous substrates (*FestucoBrometalia*). (Dry grasslands and scrublands on chalk or limestone)

SAC Qualifying species: The site is designated under article 4(4) of the Directive (92/43/EEC) as it hosts the following species listed in Annex II:

- Great crested newt *Triturus cristatus*

SPA Qualifying species: The site is designated under article 4(4) of the Directive (92/43/EEC) as it hosts the following species listed in Annex II:

- Stone curlew *Burhinus oedichnemus* (Breeding)
- Nightjar *Caprimulgus europaeus* (Breeding)
- Woodlark *Lullula arborea* (Breeding)

Conservation Objectives³⁷

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

SAC

- The extent and distribution of qualifying natural habitats and habitats of qualifying species
- The structure and function (including typical species) of qualifying natural habitats
- The structure and function of the habitats of qualifying species
- The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely

³⁷ <https://publications.naturalengland.org.uk/publication/4572292419944448?category=6581547796791296>

- The populations of qualifying species, and the distribution of qualifying species within the site

SPA

- The extent and distribution of the habitats of the qualifying features
- The structure and function of the habitats of the qualifying features
- The supporting processes on which the habitats of the qualifying features rely
- The population of each of the qualifying features, and
- The distribution of the qualifying features within the site.

Key vulnerabilities

Reviewing the Site Improvement Plan (2014³⁸) there were a number of prioritised issues for the site and the features they affect. Measures were set out to address these. These can be considered as key vulnerabilities and are listed below:

- Lack of ground disturbance
- Under grazing
- Forestry and woodland management
- Water pollution
- Changes in species distributions
- Stone Curlew monitoring
- Planning permission
- Air Pollution
- Public Access/Disturbance
- Climate Change
- Inappropriate cutting/mowing, scrub control, pest control, weed control and management practices
- Habitat fragmentation

Non-qualifying habitats and/or species in which the qualifying habitats and/or species depend

In general, the qualifying species all rely on the sites ecosystem as a whole. The species will rely on the maintenance of populations of species in which they feed on and potentially off-site habitat foraging for these species.

³⁸ <https://publications.naturalengland.org.uk/publication/5075188492271616?category=4873023563759616>

[Dersingham Bog and Roydon Common](#)

Site location overview³⁹

Roydon Common and Dersingham Bog represent the largest and best examples of crossleaved heath – bog-moss (*Erica tetralix* – *Sphagnum compactum*) wet heath in East Anglia. This vegetation community is part of a lowland mixed valley mire, a complex series of plant communities grading from wet acid heath through valley mire to calcareous fen. This gradation is of outstanding interest. The mire is extremely diverse and supports many rare plants, birds and insects, including the black darter dragonfly *Sympetrum scoticum*, a northern species with a very local distribution in south-east England. The site also contains an area of dry heathland, which is dominated by heather *Calluna vulgaris*, gorse *Ulex europaeus* and young silver birch, *Betula pendula*, and has areas of bracken around the margins. There are examples of depressions on peat substrates in natural bog pools of patterned valley mire, in flushes on the margins of valley mire and locally in disturbed areas associated with trackways and paths in mire and wet heath. Mosaics containing this habitat type are important for bog orchid *Hammarbya paludosa*.

Qualifying features

The site is designated under article 4(4) of the Directive (92/43/EEC) as it hosts the following habitats listed in Annex I:

- Depressions on peat substrates of the *Rhynchosporion*
- European dry heaths
- Northern Atlantic wet heaths with *Erica tetralix*. (Wet heathland with cross-leaved heath)

Conservation objectives⁴⁰

- Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;
- The extent and distribution of qualifying natural habitats
- The structure and function (including typical species) of qualifying natural habitats, and
- The supporting processes on which qualifying natural habitats rely

Key vulnerabilities

Reviewing the Site Improvement Plan (2015) there were a number of prioritised issues for the site and the features they affect. Measures were set out to address these.⁴¹ These can be considered as key vulnerabilities and are listed below:

³⁹ [European Site Conservation Objectives for Roydon Common & Dersingham Bog SAC - UK0012801](#) (naturalengland.org.uk)

⁴⁰ [Natural England Access to Evidence - Conservation objectives for European Sites: East of England](#)

⁴¹ [Natural England Access to Evidence - Site Improvement Plans: East of England](#)

- Hydrological changes
- Inappropriate ditch management
- Air Pollution: risk of atmospheric nitrogen deposition
- Under grazing
- Water pollution

Norfolk Valley Fens

Site location overview

This site comprises a series of valley-head spring-fed fens. Such spring-fed flush fens are very rare in the lowlands. The spring-heads are dominated by the small sedge fen type, mainly referable to black-bog-rush – blunt-flowered rush (*Schoenus nigricans* – *Juncus subnodulosus*) mire, but there are transitions to reedswamp and other fen and wet grassland types. The individual fens vary in their structure according to intensity of management and provide a wide range of variation. There is a rich flora associated with these fens, including species such as grass-of-Parnassus *Parnassia palustris*, common butterwort *Pinguicula vulgaris*, marsh helleborine *Epipactis palustris* and narrow-leaved marsh-orchid *Dactylorhiza traunsteineri*.

In places the calcareous fens grade into acidic flush communities on the valley sides. Purple moor-grass *Molinia caerulea* is often dominant with a variety of mosses including thick carpets of bog-moss *Sphagnum spp.* Marshy grassland may be present on drier ground and purple moor-grass is again usually dominant but cross-leaved heath *Erica tetralix* can be frequent. Alder *Alnus glutinosa* forms carr woodland in places by streams. Wet and dry heaths and acid, neutral and calcareous grassland surround the mires.

Within the Norfolk Valley Fens there are a number of marginal fens associated with pingos – pools that formed in hollows left when large blocks of ice melted at the end of the last Ice Age. These are very ancient wetlands and several support strong populations of Desmoulin's whorl snail *Vertigo moulinsiana* as part of a rich assemblage of rare and scarce species in standing water habitat. At Flordon Common a strong population of narrow-mouthed whorl snail *Vertigo angustior* occurs in flushed grassland with yellow iris *Iris pseudacorus*.

Qualifying features

Qualifying habitats: The site is designated under article 4(4) of the Directive (92/43/EEC) as it hosts the following habitats listed in Annex I:

- Alkaline fens. (Calcium-rich springwater-fed fens)
- Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*). (Alder woodland on floodplains)*
- Calcareous fens with *Cladium mariscus* and species of the *Caricion davallianae*. (Calcium-rich fen dominated by great fen sedge (saw sedge))*
- European dry heaths
- *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils (*Molinion caeruleae*). (Purple moor-grass meadows)

- Northern Atlantic wet heaths with *Erica tetralix*. (Wet heathland with cross-leaved heath)
- Semi-natural dry grasslands and scrubland facies: on calcareous substrates (*FestucoBrometalia*). (Dry grasslands and scrublands on chalk or limestone)

Qualifying species: The site is designated under article 4(4) of the Directive (92/43/EEC) as it hosts the following species listed in Annex II:

- Narrow-mouthed whorl snail *Vertigo angustior*
- Desmoulin's whorl snail *Vertigo moulinsiana*

Conservation Objectives

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats and habitats of qualifying species
- The structure and function (including typical species) of qualifying natural habitats
- The structure and function of the habitats of qualifying species
- The supporting processes on which qualifying natural habitats, and the habitats of qualifying species rely
- The populations of qualifying species, and,
- The distribution of qualifying species within the site

Key vulnerabilities

Reviewing the Site Improvement Plan (2014) there were a number of prioritised issues for the site and the features they affect. Measures were set out to address these. These can be considered as key vulnerabilities and are listed below:

- Air Pollution
- Change in land management and species distributions
- Inappropriate cutting/mowing, scrub control and water levels
- Hydrological changes
- Invasive Species
- Water Pollution
- Water Abstraction
- Under grazing and over grazing

Non-qualifying habitats and/or species in which the qualifying habitats and/or species depend

In general, the qualifying species all rely on the sites ecosystem as a whole. The species will rely on the maintenance of populations of species in which they feed on and potentially off-site habitat foraging for these species.

Ouse Washes

Site location overview

The Ouse Washes Ramsar site and proposed Special Protection Area is a wetland of major international importance comprising seasonally flooded washlands which are agriculturally managed in a traditional manner. It provides breeding and winter habitats for important assemblages of wetland bird species, particularly wildfowl and waders. The boundaries of the proposed Special Protection Area are coincident with those of the Ouse Washes SSSL apart from the exclusion of a section of the Old Bedford River in the north of the SSSI.

The Ouse Washes qualifies under Article 4.1 of the EC Birds Directive by supporting, in summer, a nationally important breeding population of ruff *Philomachus pugnax* an Annex 1 species. In recent years an average of 57 individuals have been recorded lekking, a significant proportion of the British population. The site also qualifies under Article 4.1 by regularly supporting internationally or nationally important wintering populations of three Annex 1 species. During the five year period 1986/87 to 1990/91, the following average peak counts were recorded: 4,980 Bewick's swan *Cygnus cohtnrbarius bewicktii* (29% of the north-west European wintering population, 70% of the British. wintering population), and 590 whooper swans *Cygnus cygnus* (3% of the international population, 10% of British). In addition, between 1982-87 an average of 12 wintering hen harrier *Circus cyaneus* was recorded, representing 2% of the British wintering population

The Ouse Washes qualifies under Article 4.2 by supporting, in summer, in recent years, nationally important breeding populations of five migratory species. 111 pairs of gadwall *Anas strepera* (20% of the British breeding population); 850 pairs of mallard *Anas platyrhynchos* (2% of British); 14 pairs of garganey *Anas querquedula* (20% of British). 155 pairs of shoveler *A. clypeata* (12% of British), and 26 pairs of black-tailed godwits *Limosa limosa* (44% of British).

The Ouse Washes is one of the country's few remaining areas of extensive washland habitat. The associated dykes and rivers hold a great variety of aquatic plants; the pondweeds *Potamogeton spp.* are particularly well represented. The associated aquatic fauna is similarly diverse and includes spined loach *Cobitis taenia*. The Counter Drain, with its clear water and abundant aquatic plants, is particularly important, and a healthy population of spined loach is known to occur.

Qualifying features

The site is designated under article 4(4) of the Directive (92/43/EEC) as it hosts the following species listed in Annex II:

- Spined loach *Cobitis taenia* (SAC)
- A037 *Cygnus columbianus bewickii*
- Bewick's swan (Non-breeding)
- A038 *Cygnus cygnus*; Whooper swan (Non-breeding)
- A050 *Anas penelope*; Eurasian wigeon (Non-breeding)

- A051 *Anas strepera*; Gadwall (Breeding)
- A052 *Anas crecca*; Eurasian teal (Non-breeding)
- A053 *Anas platyrhynchos*; Mallard (Breeding)
- A054 *Anas acuta*; Northern pintail (Non-breeding)
- A055 *Anas querquedula*; Garganey (Breeding)
- A056 *Anas clypeata*; Northern shoveler (Non-breeding)
- A056 *Anas clypeata*; Northern shoveler (Breeding)
- A082 *Circus cyaneus*; Hen harrier (Non-breeding)
- A151 *Philomachus pugnax*; Ruff (Breeding) A156a *Limosa limosa limosa*; Black-tailed godwit (Breeding) Waterbird assemblage Breeding bird assemblage

Conservation Objectives

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

SAC

- The extent and distribution of the habitats of qualifying species
- The structure and function of the habitats of qualifying species
- The supporting processes on which the habitats of qualifying species rely
- The populations of qualifying species, and
- The distribution of qualifying species within the site.

SPA

- The extent and distribution of the habitats of the qualifying features
- The structure and function of the habitats of the qualifying features
- The supporting processes on which the habitats of the qualifying features rely
- The population of each of the qualifying features, and
- The distribution of the qualifying features within the site.

Key vulnerabilities

Reviewing the Site Improvement Plan (2014) there were a number of prioritised issues for the site and the features they affect. Measures were set out to address these. These can be considered as key vulnerabilities and are listed below:

- Inappropriate water levels
- Water Pollution

Non-qualifying habitats and/or species in which the qualifying habitats and/or species depend

In general, the qualifying species all rely on the sites ecosystem as a whole and areas of freshwater for waterfowl. The species will rely on the maintenance of populations of species in which they feed on and potentially off-site habitat foraging for these species.

The Greater Wash and North Norfolk Coast

Site location overview

The Wash is the largest embayment in the UK. It is connected via sediment transfer systems to the north Norfolk coast. Together, the Wash and North Norfolk Coast form one of the most important marine areas in the UK and European North Sea coast, and include extensive areas of varying, but predominantly sandy, sediments subject to a range of conditions. Communities in the intertidal include those characterised by large numbers of polychaetes, bivalve and crustaceans. Subtidal communities cover a diverse range from the shallow to the deeper parts of the embayments and include dense brittlestar beds and areas of an abundant reef-building worm ('ross worm') *Sabellaria spinulosa*.

The embayment supports a variety of mobile species, including a range of fish, otter *Lutra lutra* and common seal *Phoca vitulina*. The extensive intertidal flats provide ideal conditions for common seal breeding and hauling-out. Sandy sediments occupy most of the subtidal area, resulting in one of the largest expanses of subtidal sandbanks in the UK. The subtidal sandbanks vary in composition and include coarse sand through to mixed sediment at the mouth of the embayment. Communities present include large dense beds of brittlestars *Ophiothrix fragilis*. Species include the sand-mason worm *Lanice conchilega* and the tellin *Angulus tenuis*. Benthic communities on sandflats in the deeper, central part of the Wash are particularly diverse.

The subtidal sandbanks provide important nursery grounds for young commercial fish species, including plaice *Pleuronectes platessa*, cod *Gadus morhua* and sole *Solea solea*. In the tide-swept approaches to the Wash, with a high loading of suspended sand, the relatively common tube-dwelling polychaete worm *Sabellaria spinulosa* forms areas of biogenic reef. These structures are varied in nature, and include reefs which stand up to 30 cm proud of the seabed and which extend for hundreds of metres. The reefs extend into The Wash where super-abundant *S. spinulosa* occurs and where reef-like structures such as concretions and crusts have been recorded. The reefs are diverse and productive habitats which support many associated species that would not otherwise be found in predominantly sedimentary areas. Associated motile species include large numbers of polychaetes, mysid shrimps, the pink shrimp *Pandalus montagui*, and crabs.

Sandy flats predominate in the intertidal zone with some soft mudflats in the areas sheltered by barrier beaches and islands along the north Norfolk coast. The biota includes especially large numbers of polychaetes, mysid shrimps, the pink shrimp and crabs. Salinity ranges from that of the open coast in most of the area (supporting rich invertebrate communities) to estuarine close to the rivers. Smaller, sheltered and diverse areas of intertidal sediment, with a The Wash and North Norfolk Coast SAC UK0017075 Compilation date: May 2005 Version: 1 Designation citation Page 2 of 2 rich variety of communities, including some eelgrass *Zostera spp.* beds and large shallow pools, are protected by the north Norfolk barrier islands and sand spits. The site contains the largest single area of saltmarsh in the UK and is one of the few areas in the UK where

saltmarshes are generally accreting. The proportion of the total saltmarsh vegetation represented by glasswort *Salicornia* and other colonising annuals is high because of the extensive enclosure of marsh in this site and is also unusual in that it forms a pioneer community with common cord-grass *Spartina anglica*. There are large ungrazed saltmarshes on the North Norfolk Coast and traditionally grazed saltmarshes around the Wash.

Saltmarsh swards dominated by sea-lavenders *Limonium spp.* are particularly well-represented. In North Norfolk, in addition to typical lower and middle saltmarsh communities, there are transitions from upper marsh to tidal reedswamp, sand dunes (which are largely within the adjacent North Norfolk Coast SAC), shingle beaches and mud/sandflats. Mediterranean saltmarsh scrub vegetation is dominated by a shrubby cover up to 1 metre high of bushes of shrubby sea-blite *Suaeda vera* and sea-purslane *Atriplex portulacoides*, with a patchy cover of herbaceous plants and bryophytes. This scrub vegetation often forms an important feature of the upper saltmarshes, and extensive examples occur where the drift-line slopes gradually and provides a transition to dune, shingle or reclaimed sections of the coast. At a number of locations on this coast perennial glasswort *Sarcocornia perennis* forms an open mosaic with other species at the lower limit of the sea-purslane community.

Qualifying features

Qualifying habitats: The site is designated under article 4(4) of the Directive (92/43/EEC) as it hosts the following habitats listed in Annex I:

- Atlantic salt meadows (*Glauco-Puccinellietalia maritimae*)
- Coastal lagoons*
- Large shallow inlets and bays
- Mediterranean and thermo-Atlantic halophilous scrubs (*Sarcocornetea fruticosi*). (Mediterranean saltmarsh scrub)
- Mudflats and sandflats not covered by seawater at low tide. (Intertidal mudflats and sandflats)
- Reefs
- *Salicornia* and other annuals colonising mud and sand. (Glasswort and other annuals colonising mud and sand)
- Sandbanks which are slightly covered by sea water all the time. (Subtidal sandbanks)

Qualifying species: The site is designated under article 4(4) of the Directive (92/43/EEC) as it hosts the following species listed in Annex II:

- Common seal *Phoca vitulina*
- Otter *Lutra lutra*

Conservation Objectives

Ensure that the integrity of the site is maintained or restored as appropriate, and ensure that the site contributes to achieving the Favourable Conservation Status of its Qualifying Features, by maintaining or restoring;

- The extent and distribution of qualifying natural habitats and habitats of qualifying species
- The structure and function (including typical species) of qualifying natural habitats
- The structure and function of the habitats of qualifying species
- The supporting processes on which qualifying natural habitats and the habitats of qualifying species rely
- The populations of qualifying species, and,
- The distribution of qualifying species within the site.

Key vulnerabilities

Reviewing the Site Improvement Plan (2015) there were a number of prioritised issues for the site and the features they affect. Measures were set out to address these. These can be considered as key vulnerabilities and are listed below:

- Inappropriate water levels
- Public access/disturbance
- Siltation
- Fisheries: Recreational marine and estuarine
- Invasive species
- Inappropriate coastal management
- Fisheries: Commercial marine and estuarine
- Predation

Non-qualifying habitats and/or species in which the qualifying habitats and/or species depend

In general, the qualifying species all rely on the site's ecosystem as a whole and areas of freshwater for waterfowl. The species will rely on the maintenance of populations of species in which they feed on and potentially off-site habitat foraging for these species. The diet of qualifying species includes

- Common seal *Phoca vitulina* - known to eat a wide variety of fish, including herring, sand eels, whiting and flatfish. Shrimps and squid are also sometimes eaten.
- Otter *Lutra lutra* - fish, amphibians, birds, eggs, insects