

Appendix - State of the Environment baseline data

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Description of the State of the Environment

Note: Some of the data in the following report is based on the 2011 Census. During the production of the Broads Plan and the Local Plan for the Broads (referred to below as the Local Plan) the results of the 2021 Census will be released, and subsequent Sustainability Appraisals (SAs) will include the updated data. Please note that this is similar to the baseline data used for the SA Scoping Report; additions and updates are included where appropriate and highlighted.

3.1 Biodiversity, Geodiversity, Flora and Fauna

The Broads contains a mosaic of habitats which gives the area a high conservation value and contributes to the distinctiveness of the landscape. The wetlands which characterise the Broads are

essentially a freshwater system, becoming more brackish towards the coast. As well as rivers, estuary and broads, there are fens, reedbeds, wet woodlands, coastal dunes and grazing marshes.

The Biodiversity audit headlines are that the Broads is home to around 1,500 species of conservation concern with 66 species relying almost entirely on the Broads for UK survival.

As well as having status equivalent to a national park, the Broads contains many areas with national and international designations for their environmental and wildlife importance, including Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar sites, Sites of Special Scientific Interest (SSSI), numerous County Wildlife Sites (both within the area and close to or on the border of the Broads), as well as 8 National Nature Reserves and one Local Nature Reserve. Virtually the entire SSSI network is designated as internationally important for nature conservation and has either SPA or SAC status under European legislation. A large number of SPAs are also Ramsar sites. See the Map Bundle (Appendix 3b) for national and local protected sites. Table 1 shows the condition of SSSI in the Broads area. (Source: [Natural England](#), April 2022).

Table 1

SSSI condition in Broads (April 2022)

SSSI Name	% meeting area of favourable or unfavourable recovering	% Area favourable	% Area unfavourable recovering	% Area unfavourable no change	% Area unfavourable declining
Alderfen Broad	100.00%	8.65%	91.35%	0.00%	0.00%
Ant Broads and Marshes	92.71%	49.90%	42.81%	0.00%	7.29%
Barnby Broad & Marshes	100.00%	59.93%	40.07%	0.00%	0.00%
Breydon Water	100.00%	100.00%	0.00%	0.00%	0.00%
Broad Fen, Dilham	100.00%	0.00%	100.00%	0.00%	0.00%
Bure Broads and Marshes	89.93%	43.08%	46.85%	10.07%	0.00%
Burgh Common and Muckfleet Marshes	96.57%	27.00%	69.57%	3.43%	0.00%
Crostick Marsh	0.00%	0.00%	0.00%	100.00%	0.00%
Damgate Marshes, Acle	100.00%	74.73%	25.27%	0.00%	0.00%
Decoy Carr, Acle	100.00%	70.21%	29.79%	0.00%	0.00%
East Ruston Common	100.00%	38.11%	61.89%	0.00%	0.00%

SSSI Name	% meeting area of favourable or unfavourable recovering	% Area favourable	% Area unfavourable recovering	% Area unfavourable no change	% Area unfavourable declining
Geldeston Meadows	0.00%	0.00%	0.00%	97.18%	2.82%
Hall Farm Fen, Hemsby	100.00%	100.00%	0.00%	0.00%	0.00%
Halvergate Marshes	81.77%	72.75%	9.02%	18.23%	0.00%
Hardley Flood	100.00%	100.00%	0.00%	0.00%	0.00%
Leet Hill, Kirby Cane (near to BA boundary)	0.00%	0.00%	0.00%	0.00%	100%
Limpenhoe Meadows	100.00%	0.00%	100.00%	0.00%	0.00%
Ludham - Potter Heigham Marshes	100.00%	100.00%	0.00%	0.00%	0.00%
Poplar Farm Meadows, Langley	100.00%	100.00%	0.00%	0.00%	0.00%
Priory Meadows, Hickling	100.00%	29.79%	70.21%	0.00%	0.00%
Sprat's Water and Marshes, Carlton Colville	99.67%	80.48%	19.19%	0.33%	0.00%
Stanley and Alder Carrs, Aldeby	100.00%	0.00%	100.00%	0.00%	0.00%
Trinity Broads	87.46%	45.48%	41.98%	12.54%	0.00%
Upper Thurne Broads and Marshes	80.62%	63.97%	16.65%	4.82%	14.57%
Upton Broad & Marshes	99.28%	7.43%	91.84%	0.72%	0.00%
Winterton-Horsey Dunes	77.80%	67.92%	9.88%	22.20%	0.00%
Yare Broads and Marshes	50.52%	39.22%	11.30%	47.27%	2.20%

Where unfavourable condition exists, it is mostly due to eutrophication, excessive nutrients and water abstraction, agricultural runoff and water pollution from sewage, and industrial and urban discharge.

Peatland is a particularly important feature of the Broads, covering about 27% of the area and the basis of both fen and wet woodland habitats and some drained marshes (or fen meadows) – see the peat in the Broads at section 3.6.1. These are highly valuable for the characteristic and specialised wildlife of the Broads. Altogether, the Broads contains the largest expanse of species-rich fen in lowland Britain as well as the most extensive tract of wet woodland within the region. Grazing marshes are another characteristic habitat of the area. Each of these habitats supports a different wealth of species, and each requires active management to maintain.

Biodiversity within the Broads is being affected by a number of threats and pressures. These include land-take for development, invasion of non-native species, pollution, habitat fragmentation, disturbance (such as recreation impact), sea level rise and climate change. In particular, the area is threatened by two sets of water resource problems – low river flows and depleted groundwater and the threat of increased salt water incursion and tidal salt water flooding. Water quality is also an issue – the main threat comes from waste water and diffuse pollution, often arising from outside the Broads boundary, for example, from sewage, farm and road run-off. See 3.7.2 for recent water quality mapping.

3.2 Habitats

The various broad habitat sites of the Broads, and the wider local area, are shown on the Map 1 and Table 2, taken from [Natural Capital Evidence Compendium for Norfolk and Suffolk](#) (2020). This shows that much of the Broads is pastures and grassland. The Broads area is circled.

Map 1

Broads habitats

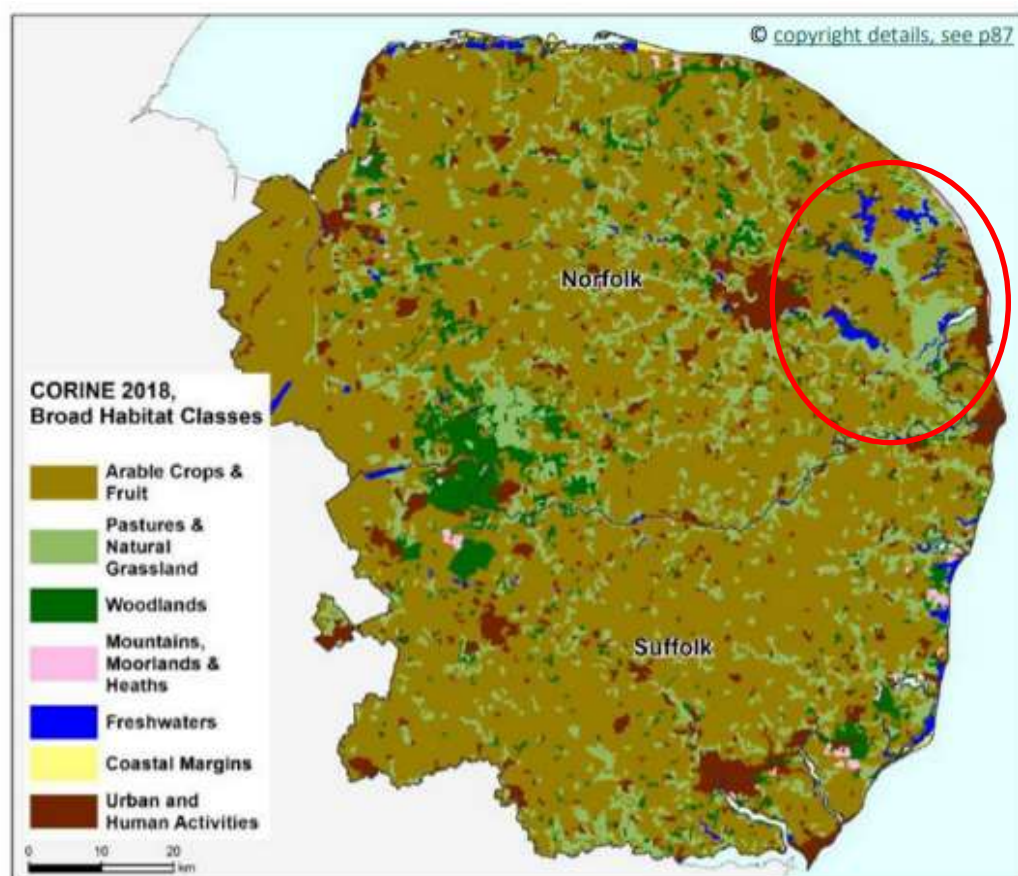


Table 2

Broads habitats by type (data)

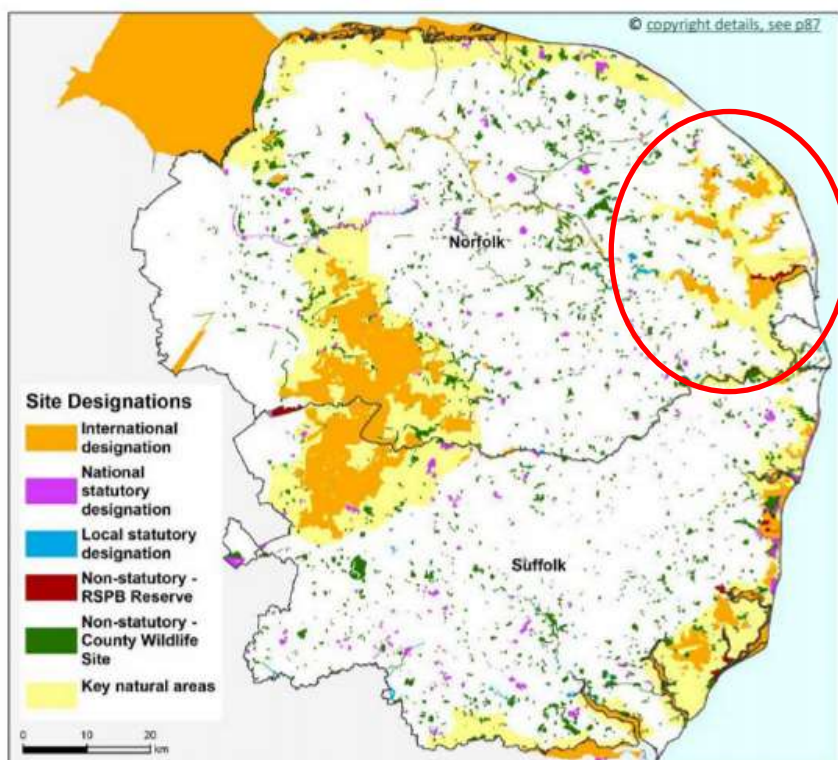
LAND TYPES BY AREA (Ha)	Norfolk	Suffolk	England TOTAL	The Brecks	Broads NP	N&S AONBs TOTAL
Arable crops and Fruit	380,622	280,916	5,759,358	55,206	6,623	45,954
Pastures and Natural Grassland	71,618	41,734	3,967,464	15,077	15,358	14,336
Heaths (Mountains, Moors & Heaths)	1,198	1,732	671,428	407	111	1,935
Woodlands	35,814	20,443	831,116	24,532	2,371	9,481
Freshwaters	7,445	2,677	77,755	240	4,640	2,634
Coastal Margins	3,674	1,587	49,046	0	501	14,460
Urban and Human Activities	37,477	31,020	1,696,614	6,465	547	5,019
Unclassified	164	60	1,679	0	-1	369
TOTAL AREA	538,011	380,169	13,054,460	101,926	30,151	94,187

3.3 Land under conservation management

Map 2 shows how much of the Broads, and the wider local area, are under conservation management. Map taken from [Natural Capital Evidence Compendium for Norfolk and Suffolk](#) (2020). This shows that a lot of the Broads is under an international designation. The Broads area is circled.

Map 2

Broads area under conservation management



3.4 Landscape

The Broads is considered to be the UK's premier wetland and is part of a global network of protected landscapes. Its national designation, equivalent to a national park, both reflects its landscape value and provides the highest level of landscape protection under national planning policy. The Broads has a largely undeveloped, yet highly managed, landscape of water, fens, marshes and woodland. The 2.7 km long coastal strip at Winterton is also part of the North Norfolk Coast Area of Outstanding Natural Beauty.

'Landscape' is a term with a variety of meanings. It can include components such as visual amenity, character, integrity and sensory factors, which are harder to identify and quantify than a view, and consequently more sensitive and vulnerable to change. Anecdotal evidence suggests a continuing incremental change to some aspects of the Broads' landscape.

Although the area benefits from protection, there are pressures from development, including large scale housing development planned for the areas outside but close to the Broads, which could adversely affect the landscape of the area.

In the past the area has been threatened by, for instance, the impact of intensive agriculture. To counter this, Halvergate Marshes became the birthplace of agri-environment support, with the Broads Grazing Marsh Scheme which led to the Environmentally Sensitive Area (ESA) scheme – the total area eligible for grant support was 32,400 ha (75% of the wider ESA). ELM scheme is being developed by Defra to provide public benefits, such as sustainable farming, nature recovery and landscape recovery.

Above all, it is the landscape of the Broads that gives rise to the unique character and distinctiveness of the area. One of the main issues for the Broads Plan and the Local Plan, therefore, is the need to protect the landscape character, and to conserve the Broads as a living, working landscape.

3.5 Cultural Heritage

The historic landscape reflects patterns of human activity over hundreds of years, and contains distinctive landscape features particular to the area. These include drainage mills, waterside chalets and villages with houses of brick and thatch. This unique environment has a high economic value, attracting business and tourism to the area.

The built and historic environment are important parts of the cultural landscape and reflect the activities of people living and working in the Broads over time for example, there are over 70 surviving drainage mills. Together these contribute significantly to the character and distinctiveness of the Broads.

There is evidence that there has been gradual erosion of the Broads' historical assets, and of the quality and distinctiveness of the built environment. Successive development plans and management plans for the Broads have recognised the need to protect and enhance the historic and cultural landscape of the area, which is as important as its natural assets. Nevertheless, it is essential that these general aims be framed within the context of a changing Broads. It is neither possible nor desirable to protect the area exactly as it is now, but it is feasible to maintain the best elements and enhance those that have been degraded. Enhancement may necessitate a dramatic change in management in certain areas.

See the Baseline Map Bundle (Appendix 3b). These show Conservation Areas, Registered Parks & Gardens, Listed Mills, Scheduled Monuments and Listed Buildings.

a. **Conservation Area Appraisals reviewed**

(Source: Broads Authority Historic Environment Officer)

- 2022 Halvergate and Tunstall Conservation Area re-appraisal being prepared
- 2022 Bungay Conservation Area adopted March 2022
- 2021 Horning Conservation Area ready to be consulted. (POSTPONED)
- 2021 Belaugh Conservation Area adopted October 2021
- 2020 Ludham Conservation Area adopted
- 2018-2019: Somerton Conservation Area adopted
- 2016-2017: Loddon and Chedgrave Conservation Area re-appraisal adopted, Stalham Staithe Conservation Area re-appraisal adopted
- 2015-2016: Oulton Broad Conservation Area re-appraisal adopted

- 2014-2015: Beccles and Halvergate Marshes Conservation Area re-appraisals were adopted
- 2013- 2014: Langley Abbey re-appraisal adopted
- 2012-2013: Ellingham, Ditchingham Dam and Geldeston Conservation Areas re-appraisals adopted
- 2011-2012: Neatishead and Somerleyton Conservation Areas re-appraisals adopted
- 2010-2011: Belaugh and Wroxham Conservation Areas re-appraisals adopted

b. Number of Listed Buildings at Risk

(Source: Broads Authority Historic Environment Officer)

- 2021-2022: 15
- 2020 - 2021: 18
- 2019 - 2020: 18
- 2018 - 2019: 18
- 2017 - 2018: 22
- 2016 - 2017: 26
- 2015 - 2016: 28
- 2014 - 2015: 28
- 2013 - 2014: 29
- 2012 - 2013: 26
- 2011 - 2012: 37
- 2010 - 2011: 49

3.6 Geodiversity

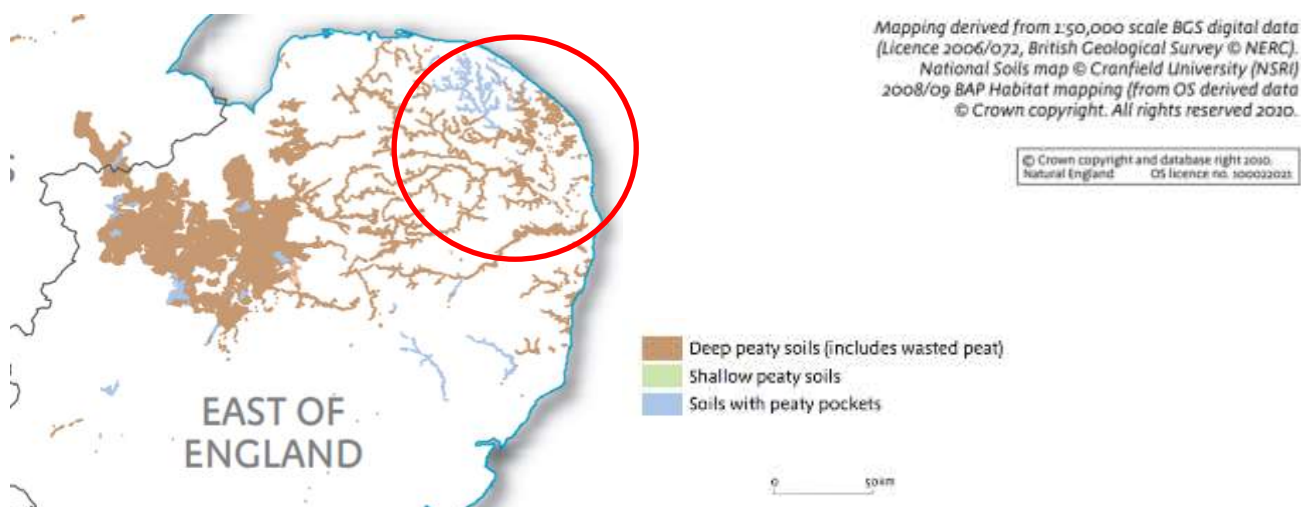
3.6.1 Peat

England's deep peatlands cover much of our uplands, but also include large lowland areas. Shallower peaty soils fringe the uplands. The Map 3 shows the general areas of peat around the Broads (also see peat map in the bundle). The Broads area is circled.

Map 3

Areas of peat around the Broads

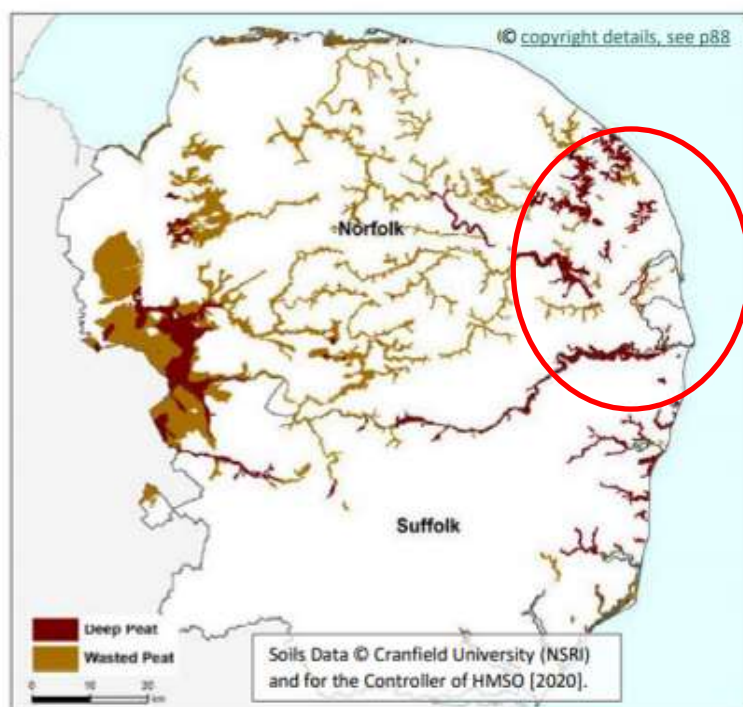
Source: [England's peatlands – carbon storage and greenhouse gases, Natural England \(2010\).](#)



Map 4, taken from [Natural Capital Evidence Compendium for Norfolk and Suffolk](#) (2020) shows the location of deep and wasted peat¹. The Broads area is circled. The maps show that some of the Broads is peat soils.

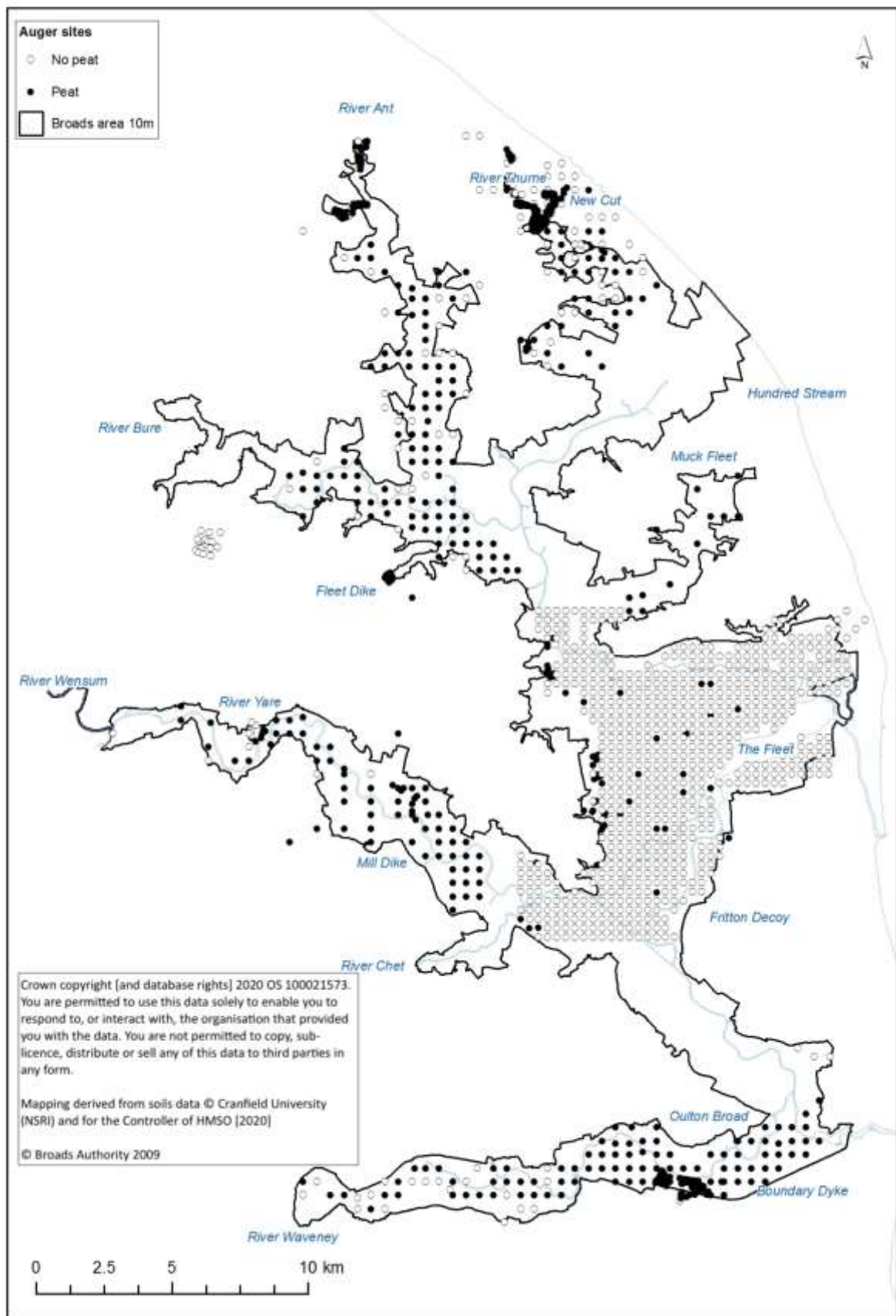
Map 4

Location of deep and wasted peat



The following map shows data gained from peat coring and is from [Assessing carbon stocks within the peat of the Broads National Park](#) (2021)

¹ a technical term for deep peat that has been substantially degraded following years of drainage and cultivation



3.6.2 Bedrock and Soils

Map 5 show that the Broads lie on Crag Group bedrock and Aluvium soil. Source: [Norfolk's Earth Heritage - valuing our geodiversity](#) (2010).

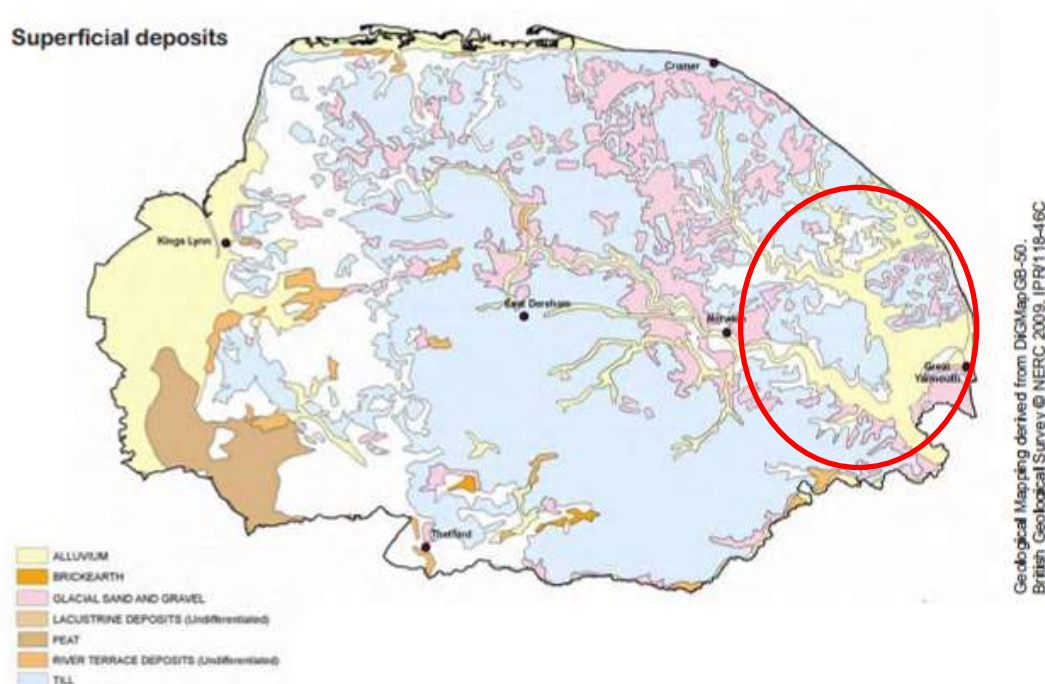
Map 5

Bedrock deposits



Map 6

Bedrock deposits



3.6.3 Norfolk Geodiversity Audit

The tables at Appendix 3c shows the results of the Norfolk Geodiversity Audit. Features of merit are detailed, sorted by district/borough/city - also includes sites in East Suffolk.

3.6.4 Soils

See the Agricultural Land Class map in the Baseline Map Bundle (Appendix 3b). This shows that the majority of the area is Grade 3.

3.7 Water

Water is an essential natural resource, but especially important for the Broads as a sensitive wetland. Before reaching the Broads, its rivers drain large parts of Norfolk and Suffolk, including some of the most built up areas and those planned to receive major growth in housing and other development. The Broads therefore remains vulnerable to impacts of upstream abstraction and pollution. In the East of England there is a deficiency between demand for water and supply; influx during the tourist season will only exacerbate the problem

3.7.1 Water Supply

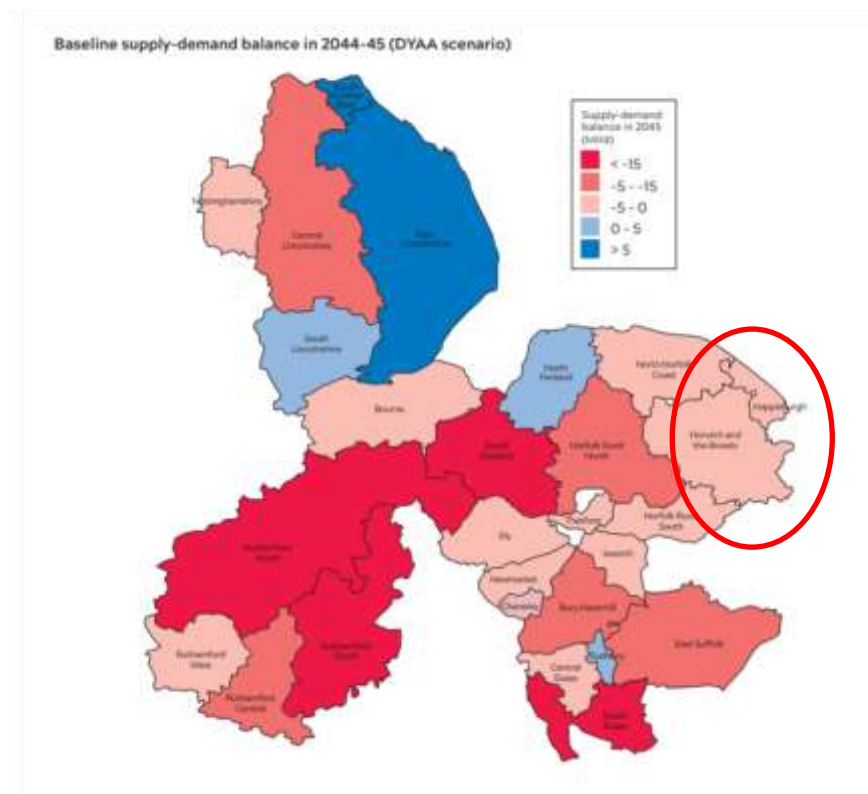
Source: [Anglian Water Resource Management Plan 2019](#).

Map 6 shows that the Norwich and the Broads zone will be in deficit by 2045.

‘Impacts are not distributed evenly; some Water Resource Zones (WRZs) are affected more than others. Central Lincolnshire, Ruthamford North and South, South Fenland, Bury Haverhill, East Suffolk and South Essex are particularly affected. By 2045, only six WRZs remain in surplus: East Lincolnshire, South Lincolnshire, North Fenland, Sudbury, South Humber Bank and Hartlepool’.

Map 6

Supply demand balance in 2045



Part of the Broads is Essex & Suffolk Water, and they also have a [WRMP](#) – see table 3.

Table 3

Suffolk Northern Central balance of supply

Table 3.4: Suffolk Northern Central balance of supply

Norfolk Central WRZ	End of AMP6	End of AMP7	End of AMP8	End of AMP9	End of AMP10	End of Planning Horizon	End of 40 Year Planning Horizon
Year	2019/20	2024/25	2029/30	2034/35	2039/40	2044/45	2059/60
Balance of Supply (excluding headroom)	23.93	24.03	23.95	23.62	22.91	22.13	19.97
Balance of Supply (including headroom)	19.16	18.66	18.93	18.93	18.42	17.76	15.99

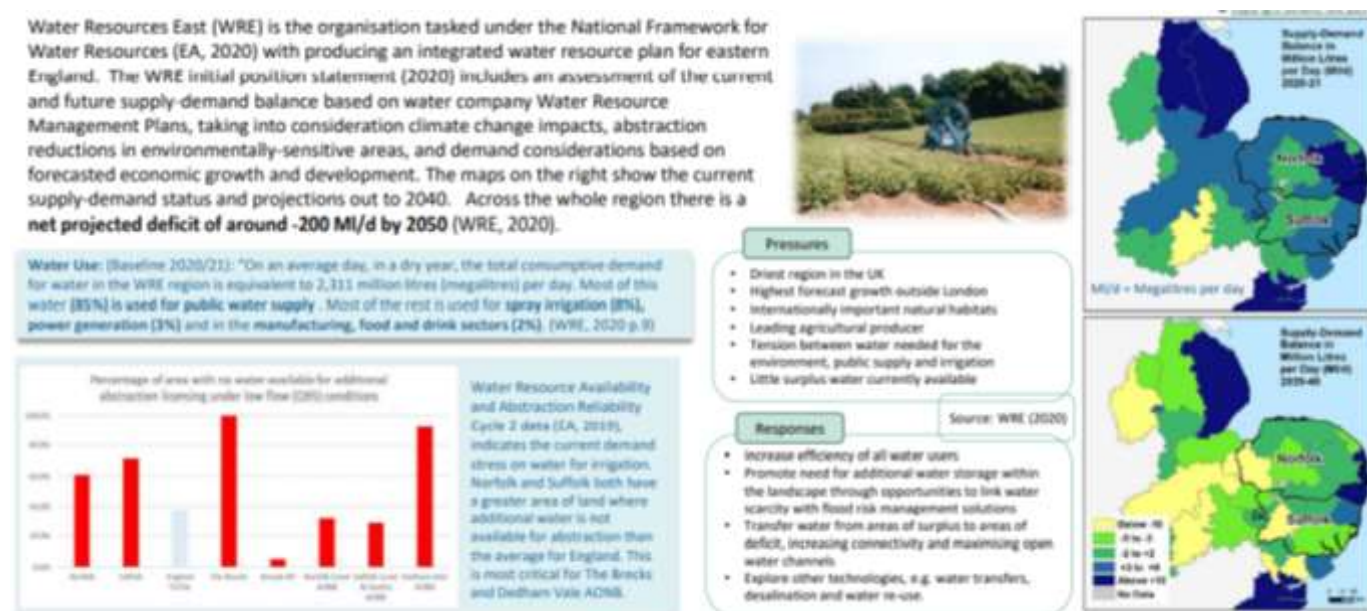
The balance of supply with target headroom ranges from 19.16 Mld at the end of AMP6 to 17.76 Mld at the end of the 25 year planning horizon and 15.99 Mld at the end of the 40year planning horizon.

Given the supply surplus, no supply or demand schemes will be required.

Figure 1 is taken from the [Natural Capital Evidence Compendium for Norfolk and Suffolk](#) (2020).

Figure 1

Water related information, including pressures and responses.



3.7.2 Water Quality

Water quality is a key issue for the Broads. Poor water quality had become a serious problem in the Broads in the mid to late 20th century, affecting both biodiversity and recreational enjoyment. Sustained efforts on particular water bodies and on reducing pollution inputs from agricultural and waste water sources have produced major improvements to date, but more remains to be done. Both maintenance of previous gains and further improvements depend on Asset Management Planning schemes, the Review of Abstraction Consents, Catchment Sensitive Farming Projects and control and co-ordination of development over the Broads and beyond. The Norwich Growth Area Water Cycle Study is an important component of the latter.

Water is essential for wetland habitats and species. The Broads are rich in wetland and related habitats including wet woodland, grazing marsh, reedbed, lakes, and fen. Many animal and plant species supported by these are important in national and European terms.

See WFD Ecological Status 2019 map in the map bundle at Appendix 3a. This shows that the majority of the water bodies in the Broads are rated as Moderate, with some as poor and some as bad.

Water management is also important for biodiversity within drained areas. Management of water levels and the poor-quality river water has continued to significantly constrain the environmental potential of the Broads. SSSIs in unfavourable condition in the Broads are mainly due to the impacts of water pollution and water management problems on biodiversity. Some of this will be addressed by Internal drainage board investment and agri-environment schemes.

Water quality (particularly phosphate levels) in parts of the Broads improved since the 1970's, helped by improvements and new initiatives in sewage treatment and agri-environmental practices. However, in most recent decades, further improvements have not occurred and levels have largely stabilised. WFD targets measure 30 different elements with a principle of 'one out, all out' (i.e. the

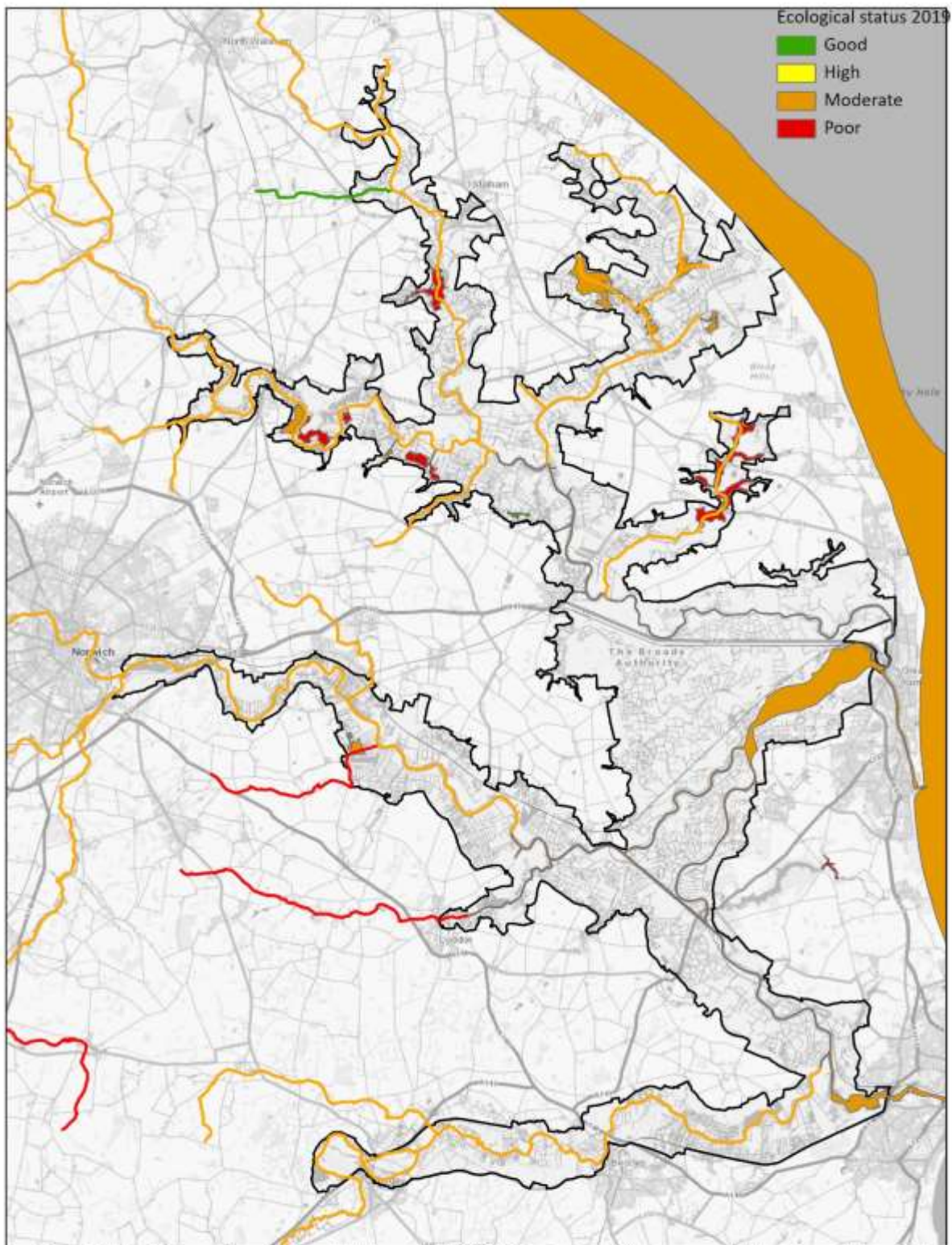
poorest individual result drives the overall classification). The lake specific targets for Natura 2000 Protected Area - Special Areas of Conservation (SACs) - requires a lower level of phosphate. As many of these lakes are connected to their river catchments, achievement of the SAC target requires that all factors that affect phosphates are regulated throughout the catchment, including development².

Map 7a, b, c shows the ecological and phosphate status of waterbodies in the Broads (and wider area) in 2019 as moderate.

² [Proposed total phosphorus targets for Lake Natura 2000 Protected Area Special Areas of Conservation for the updated river basin management plan consultation \(naturalengland.org.uk\)](https://naturalengland.org.uk/river-basin-management-plan-consultation)

Map 7a

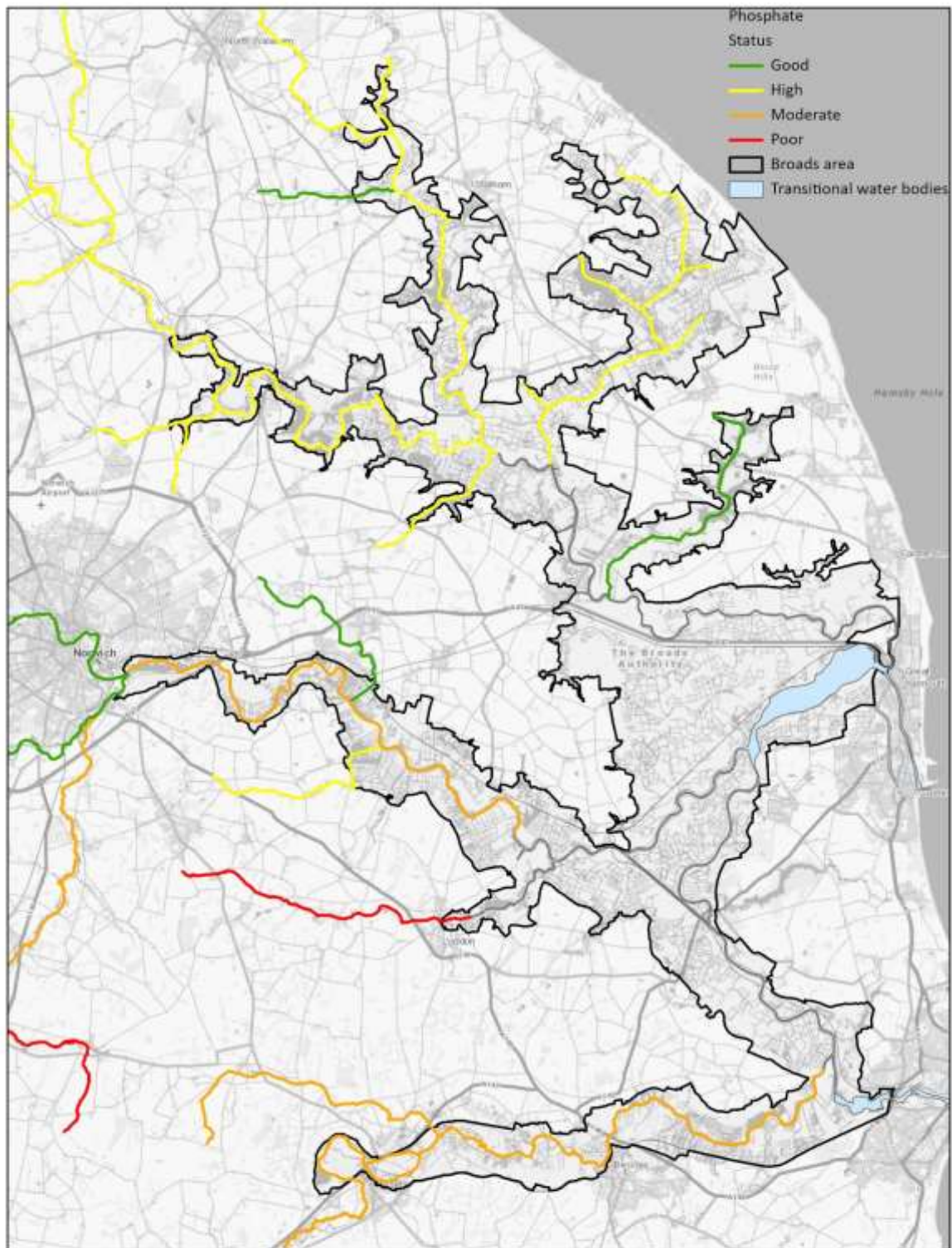
Ecological status of waterbodies in the Broads



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Map 7b

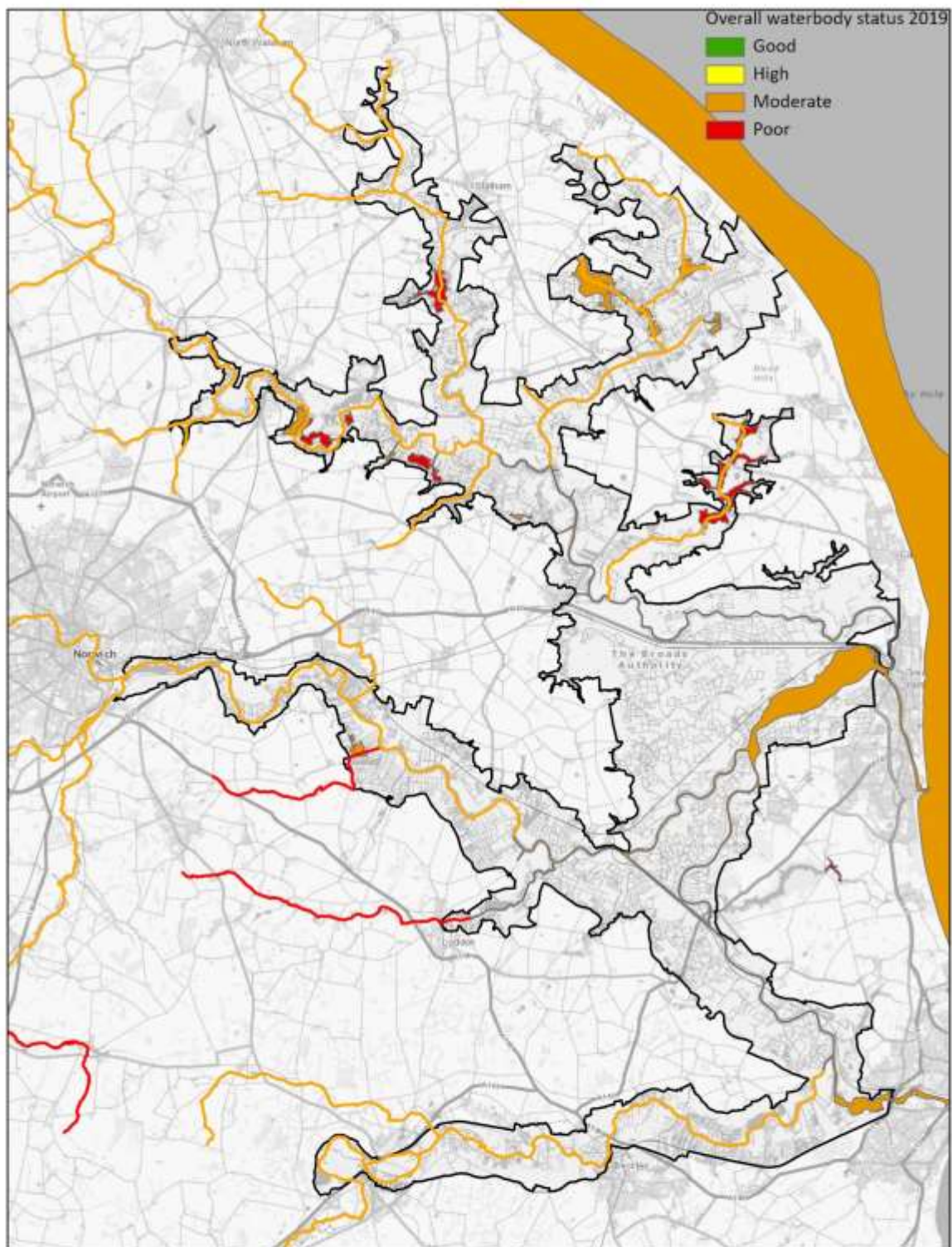
Phosphate status of waterbodies in the Broads



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Map 7c

Overall status of waterbodies in the Broads



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3.7.3 Drinking Water safeguard Zones Nitrate Vulnerable Zones

A Nitrate Vulnerable Zone (NVZ) is designated where land drains and contributes to the nitrate found in “polluted” waters. Polluted waters include:

Surface or ground waters that contain at least 50mg per litre (mg/l) nitrate

Surface or ground waters that are likely to contain at least 50mg/l nitrate if no action is taken

Waters which are eutrophic, or are likely to become eutrophic if no action is taken

Drinking Water Safeguard Zones are designated areas in which the use of certain substances (including fertilisers, pesticides or other chemicals) must be carefully managed to prevent the pollution of water that is abstracted for use as drinking water.

Map 8

Drinking water safeguard zones and nitrate vulnerable zones



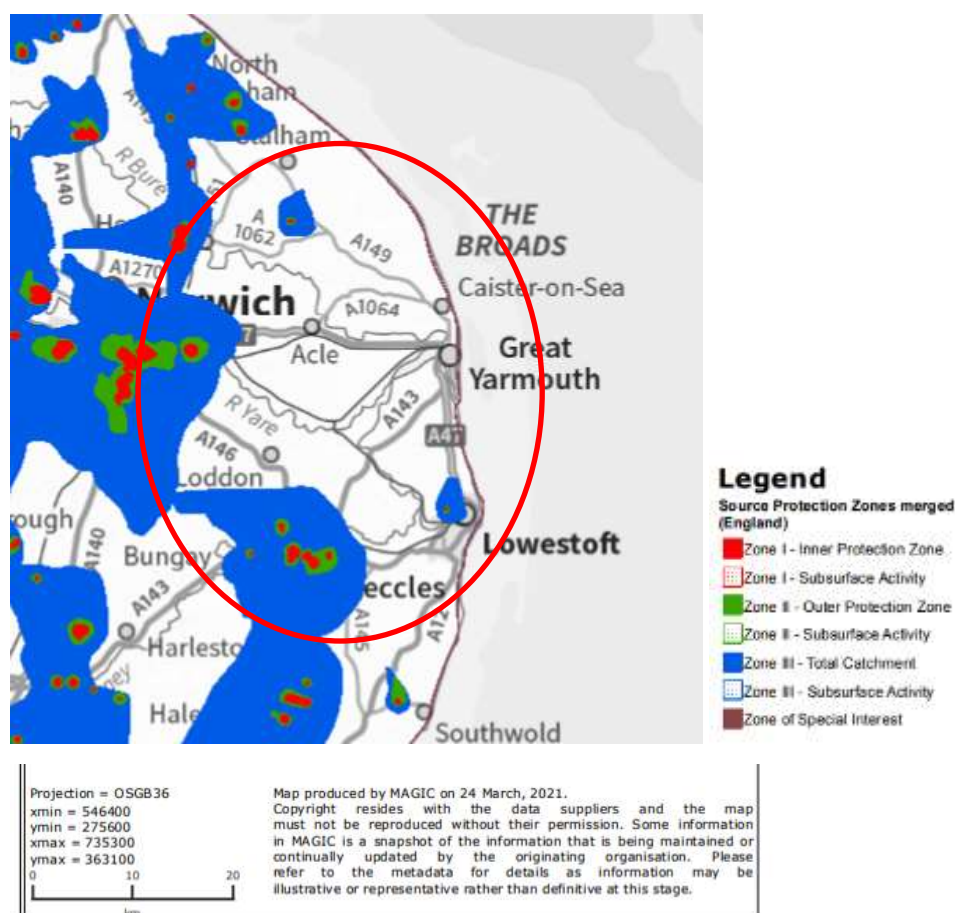
Source: [Check for Drinking Water Safeguard Zones and NVZs \(data.gov.uk\)](https://data.gov.uk/check-for-drinking-water-safeguard-zones-and-nvzs)

3.7.4 Source Protection Zones

The Environment Agency have defined Source Protection Zones (SPZs) for 2000 groundwater sources such as wells, boreholes and springs used for public drinking water supply. These zones show the risk of contamination from any activities that might cause pollution in the area. The closer the activity, the greater the risk. The maps show three main zones (inner, outer and total catchment) and a fourth zone of special interest, which we occasionally apply, to a groundwater. See map 9. Source: [Magic Map Application \(defra.gov.uk\)](https://defra.gov.uk/magic-map-application).

Map 9

Source protection zones



3.8 Climate Change

Climate change and the emissions of greenhouse gases that contribute to climate change are a matter of concern for the Broads Authority, both in terms of mitigation and adaptation to climate change. Our approach is not to assign blame to a particular group, but it is worth noting that two significant direct emitters are the traffic on the A47 and Cantley Sugar Factory.

Figure 2 includes graphs and tables are taken from [Towards a GHG Reduction Strategy for the Broads – Identifying and Prioritising Actions Final Report On Behalf of: The Broads Authority May 2010](#).

Please note that we will soon have an updated footprint for the Broads. We are looking at a consumption based rather than emissions-based footprint, so this may look a little different and will be presented in subsequent Sustainability Appraisals.

Figure 2

Extracts from the greenhouse gas reduction strategy for the Broads.

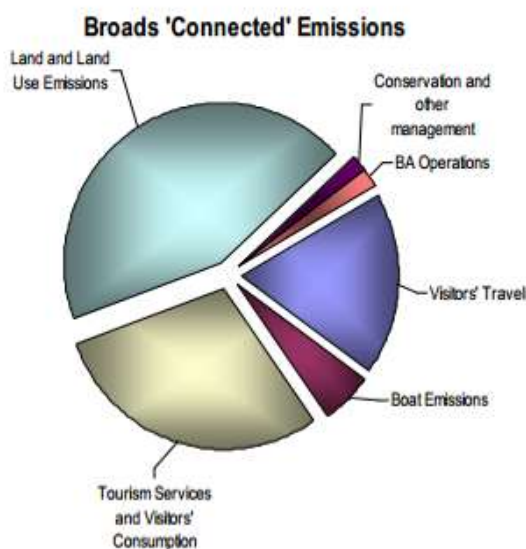
Caveats explained, the data suggests emissions at the various levels with the following approximate magnitudes:

- Broads Authority operations (Level1): **~1,900 tCO₂e³**;
- Activities and operations connected with Broads services (including the above): **~131,000 tCO₂e**; and
- Other activities in the Executive Area (but not specifically connected with the Broads itself): **~359,000 tCO₂e**.

In addition to GHG emissions, the carbon stored in soils and vegetation within the Broads Executive Area has also been estimated. This suggests a total carbon store within the Broads Executive Area of the order of **40 million tCO₂e**.

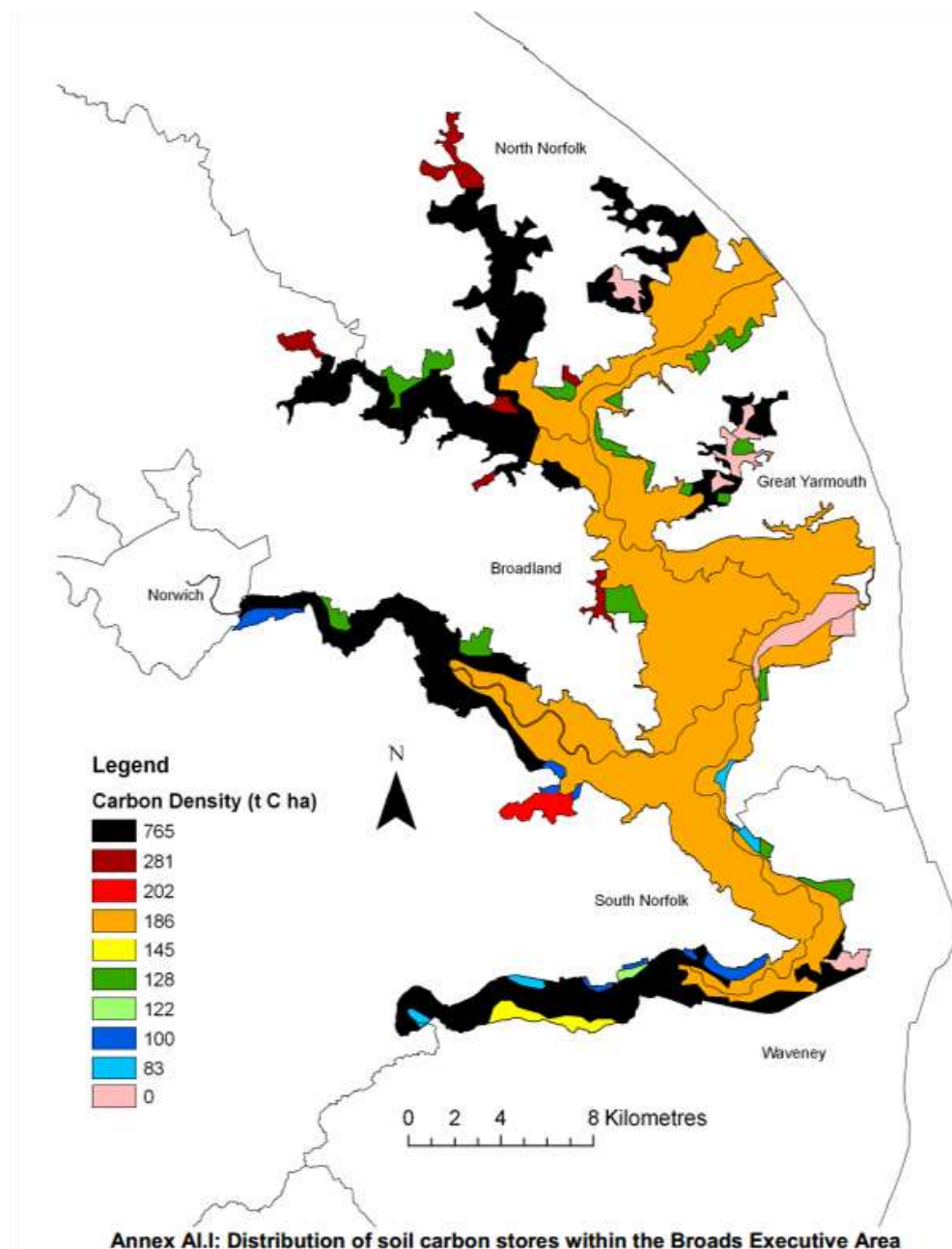
Broads Emissions	Level 2a: estimated magnitude of GHG emissions 'connected with' the Broads	Level 1: Broads Authority Operations	1,900	131,000
		Other management and organisations	1,900	
		Tourism and Recreation	54,000	
		Land and Land Use	73,500	
	Level 2b: estimated magnitude of emissions 'NOT connected with' the Broads	Emissions from industry & commerce*	75,000	360,000
		Emissions from domestic sources	55,000	
		Emissions from transport**	76,000	
		Point source emissions (British Sugar Cantley factory)	154,000	
Broads Carbon Stores		Soil	38,800,000	39,900,000
		Vegetation	1,100,000	

BA Operations	BA Operations	1,900
Tourism and Recreation	Visitor's Transport	18,920
	Boat Emissions	5,500
	Services	30,000
Land and Land Use	Land Use Emissions	73,500
	Conservation and other management	1,900
TOTAL		~131,000



Map 10

Soil carbon stores in the Broads Authority



3.9 Flooding

In the longer term, a critical issue for the Broads is the potential impacts of climate change, particularly the anticipated and possible rises in sea level. These have the potential to affect the character and integrity of the area through breaches of the coast, increase water and soil salinity, and temporary and permanent flooding. More immediate issues include the protection of water resources and water quality. Elevated water levels are already a problem in many of the river valleys. Parts of the Yare Broads and Marshes SSSI, SAC, SPA and Ramsar site are already in an unfavourable condition and one of the management principles is 'Sympathetic management of water levels is necessary for the maintenance of optimal water depths throughout the year,

according to the requirements of the plant and animal species present'. A report on the future impacts of climate change on flood risk was published by the Broadland Futures Initiative.

The implementation of the Water Framework Directive will also be important. The Environment Agency produces a number of plans and programmes to address these issues. In particular, the Broadland Rivers Catchment Flood Management Plan (CFMP) and the Broadland Rivers Catchment Abstraction Management Strategy will exert a considerable influence on the Broads Plan and the Local Plan. In overall terms, this catchment-based approach to water management will be critical for the future of the Broads.

As a low-lying wetland area sited almost wholly within the flood plains of the rivers Yare, Bure, Ant, Thurne and Waveney, over 85% of the Broads area is at risk from flooding. The [flood zone maps](#) produced by the 2017 and 2018 SFRA show the extent of flooding in the Broads (these are interactive PDFs, but you will need to save them first before clicking layers on or off).

Flooding can occur as a result of high river flows or, more frequently, high sea levels and the risk of flooding will increase with sea level rise, more intense rainfall and the other changes predicted as a consequence of climate change. The impacts of such flooding are often minor, as buildings and occupiers have adapted to the usually low levels and speeds of flood water in the Broads. History shows, however, that this is not always the case and the effects can occasionally be devastating to communities and to wildlife and biodiversity within the Broads, with the latter being particularly affected by saline intrusion into the freshwater system.

Flood alleviation and management are constant issues for the Broads. Much of the flooding occurs from tidal surges, which damage property and introduce brackish water into fresh water habitats. Flood defences require regular maintenance and will need to be strengthened in areas of special risk. In particular, continued flood management is required to sustain those areas that currently rely on earth embankments for flood defence.

There are c.240km of flood banks protecting approximately 21,300 hectares, almost wholly within the designated Broads area, containing more than 1,700 properties of which more than 1,000 are residential. This network of flood defences was subject to a 20-year programme (Broadland Flood Alleviation Project) of repair and strengthening.

Flood risk to existing property in the Broads area, however, remains significant and widespread. The anticipated future increase in serious flood events as a result of sea level change, climate change, and continuing settlement and erosion of flood defences, adds impetus to the need to take a very cautious approach to developing in the flood plain which makes up most of the Broads area.

As part of the BFI the Environment Agency are reviewing and updating the hydraulic modelling for fluvial, tidal and coastal flooding relevant to the Broads area. This work is underway, but due to the size of the project it is not due to be completed for some time (around the end of 2023). As well as informing the BFI this modelling will update our understanding of flood risk to communities in the Broads and help us identify locations where flood risk management could be improved.

The Environment Agency are also currently working on the following flood risk management projects in the Broads Authority area.

Great Yarmouth flood defences Project - The Environment Agency is currently delivering the Great Yarmouth flood defences Epoch 2 (2016 –2021) project to refurbish and improve approximately 4km of flood defences and the supporting quayside in the town to help manage the flood risk to around 2000 homes and 700 businesses. Epoch 3 (2021-2026) is at an early stage of business case development. A substantial amount of partnership funding will again need to be secured in order for this project to progress as planned. Partners are beginning work to identify funding sources for Epoch 3 and to identify a sustainable income stream to meet future investment required to manage flood risk to the town.

Beccles Flood Risk Management Project - The Environment Agency is in the early stages of a project to investigate ways to reduce the number of people and properties at risk of flooding from the River Waveney in Beccles. We have undertaken an 'initial assessment' report which produced a number of potential ways to improve the management of flood risk in Beccles. Options include maintaining the existing flood wall but replacing the flood boards with flood gates and individual Property Flood Resilience (PFR) measures i.e. flood doors or barriers, air brick covers. The EA will be undertaking a number of surveys and additional assessments of the existing defences in Beccles. This along with information from the flooding in December 2020 will help to inform the projects next steps.

Bungay Flood Risk Management Project – The EA is in the early stages of a project in Bungay. They are updating our flood risk model of the River Waveney to help improve our understanding of flood risk in Bungay and the surrounding area. This update will use information obtained from the December flood event to make the modelling as representative as possible. This modelling will help inform an 'initial assessment' to explore options to manage the flood risk, working with the community and partners, such as East Suffolk Council, Suffolk County Council and Norfolk County Council.

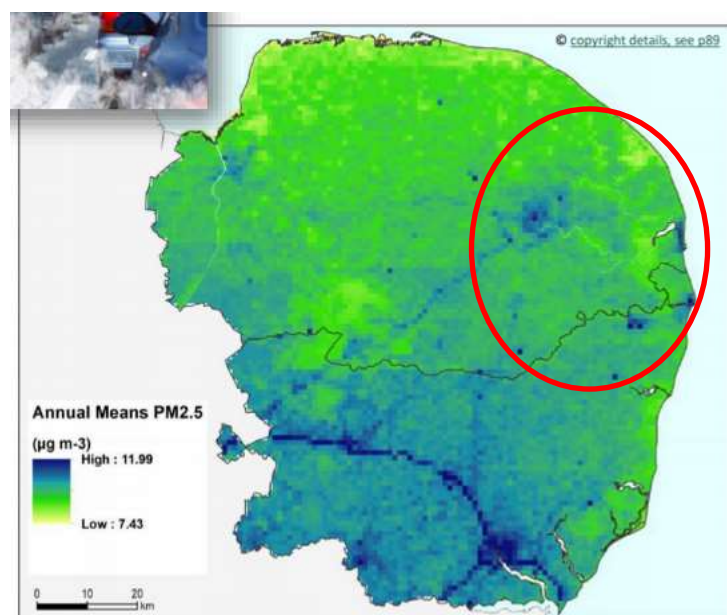
3.10 Air

There are no air quality management areas currently declared for breaching Government objective threshold limits for air pollutants in the Broads. However, there are areas, such as just north of the bridge in Hoveton, where congested traffic has adverse air quality impacts.

Map 11 is taken from the [Natural Capital Evidence Compendium for Norfolk and Suffolk](#) (2020). It shows that the annual PM2.5 levels are greater in the urban areas.

Map 11

PM2.5 levels



The easy to use [interactive map](#) allows you to explore emissions data from the UK National Atmospheric Emissions Inventory for 2018. The maps have not been copied over to this document.

3.11 Material Assets

Notwithstanding the generally rural and undeveloped appearance of most of the Broads area, it does contain a great deal in the way of physical infrastructure, including important sections of the road network (including the A47 Acle Straight and Postwick Bridge); railway lines; waterworks and public water supply reservoir at Trinity Broads; 240km of flood defences; a 200km navigation with around 30 bridges (including many swing or lifting bridges) and many moorings (including around 8910.3mof visitor mooring spaces provided by the Broads Authority).

3.12 Minerals and Waste

The Minerals and Waste designations in the Broads are shown on these maps. We will ensure we consider and include such designations as we produce the Local Plan.

[Nature conservation & heritage assets - North East](#)

[Nature conservation & heritage assets - North West](#)

[Nature conservation & heritage assets - South](#)

3.13 Ecosystem Services

The [Natural Capital Evidence Compendium for Norfolk and Suffolk](#) (2020) identifies ten nationally important assets such as soil quality, peat and high productive aquifers. These are shown on map 12.

Map 12

National important assets

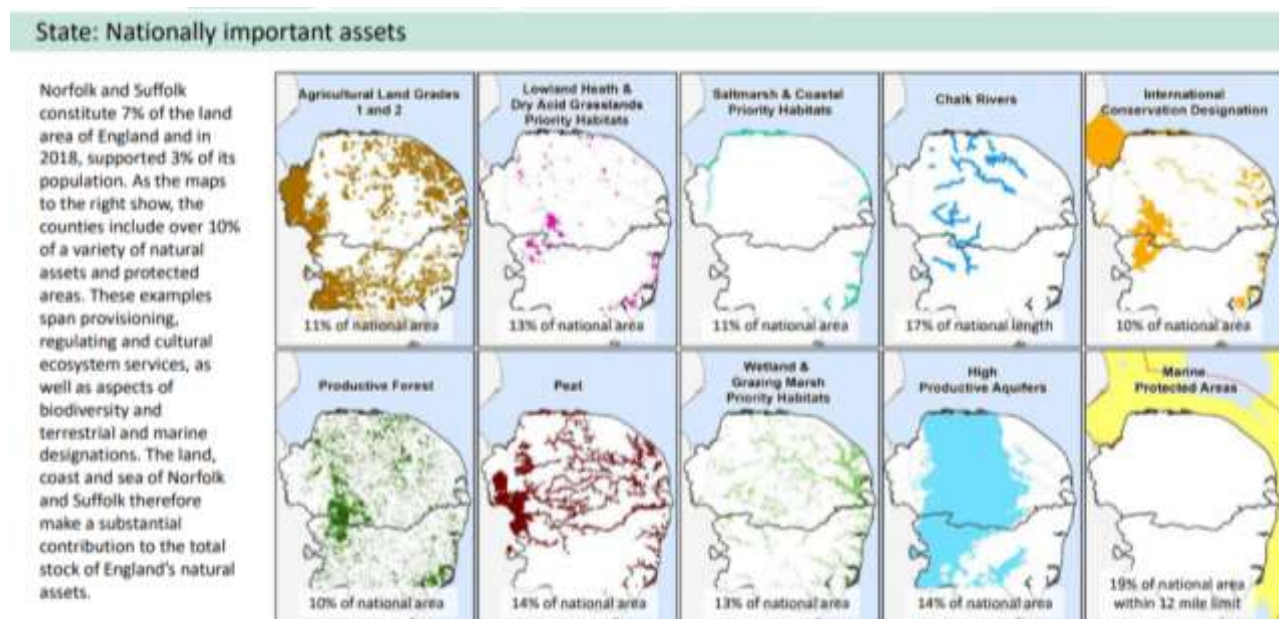


Figure 3, from the Compendium, shows the outcome of comparing the ten nationally important assets, shown above, against the key findings of the risk review.

Figure 3

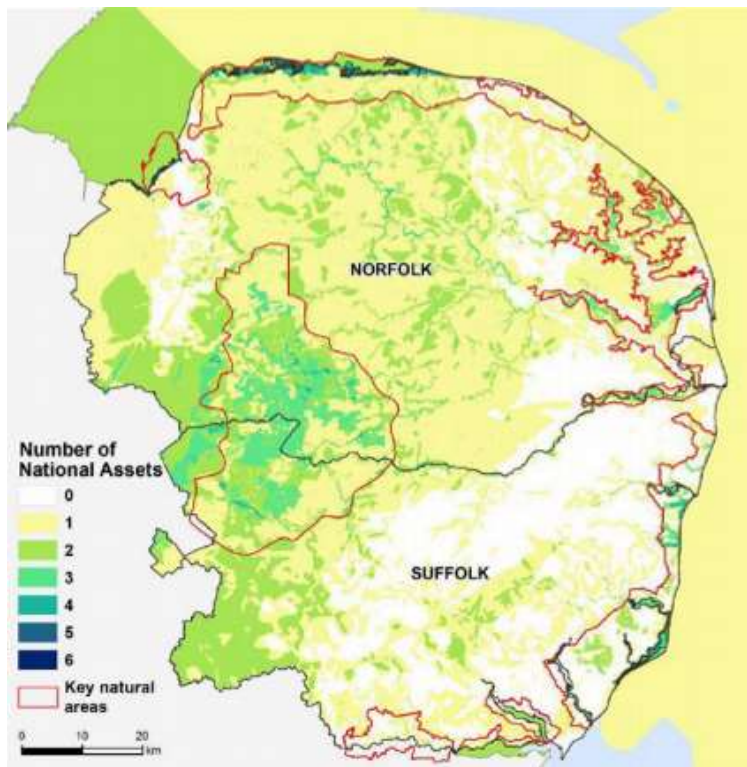
Risk of nationally important assets

Risk Category	Nationally Important Assets
High	High productive aquifers
	Peat
	Saltmarsh & coastal habitats
	Wetlands & grazing marsh
	Grade 1 & 2 agricultural land
Medium	Productive forest
	Chalk rivers
	Marine Protected Areas
	International conservation designations
Low	Lowland heath & dry acid grasslands

Map 13 overlays the ten important assets and shows that much of the Broads is covered by at least one asset. The Compendium suggests that 'initiatives in areas currently without such assets (the 'white space' on the map) might well improve quality further afield and indeed may be places where the greatest benefits could be achieved from investments in the local environment'.

Map 13

Overlay of the ten important assets



3.14 Recreation and Economy

Figure 4 is from the STEAM Report 2020, shows facts and figures about tourism in the Broads and surrounding area (area of influence).

Figure 4

STEAM Report data from 2020. This data compares some indicators, as assessed, in 2020 to the same indicators in 2019. As we all know, there were lockdowns and restrictions of access and movement during a lot of 2020 due to COVID19 and that is why many figures are shown as negative. For example, visitor numbers for all visitor types in 2019 were around 13 million, whereas in 2020, this was around 7 million. All data tends to show that 2020 was 42% less than 2019. Anecdotally though, the times between lockdowns were fairly intense with visitors.



3.15 Demographic Profile

According to the 2011 Census, the population of the Broads Executive Area is 6,300 which is 6.7% (400 people) greater than the 2001 Census. With an area of 290 km², the population density is 21.7 per km². The population is markedly elderly, as shown in the Graph 1.

Graph 1

Census age profile

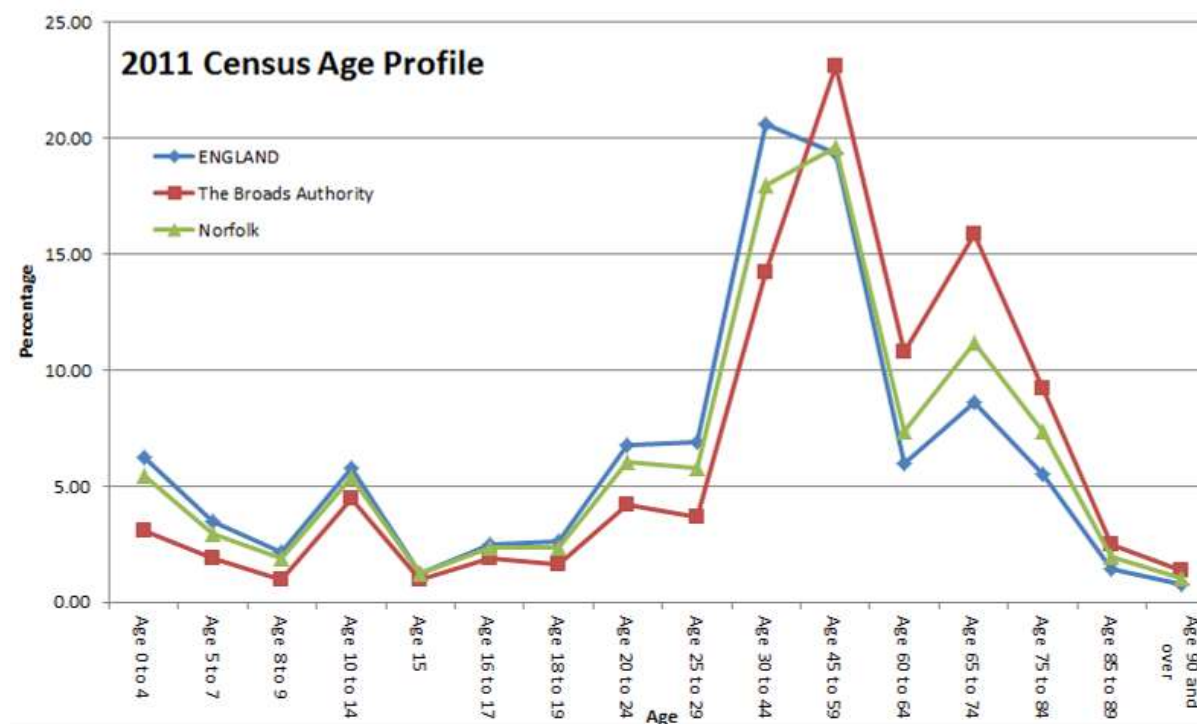


Table 4

Population comparisons between the 2001 and 2011 Census.

2001 Population	2011 Population	Population change	Population change (%)	Area (km ²)	2011 Population density (per km ²)
5,900	6,300	400	6.7	290	21.7

Compared to the other National Parks, the Broads has the second greatest increase in population (South Downs increase was 6.8%). Exmoor had a 5.5% decrease in population.

With regards to the percentage change in size of usual resident population by age between 2001 and 2011, Census 2011 information is shown in the table 5.

Table 5

Percentage change in size of usual resident population by age between 2001 and 2011

Age	0 - 14	15 - 29	30 - 44	45 - 59	60 - 74	75 and over
Change	-11.4	6.7	-13.8	-5.0	41.6	23.8

Compared to the other National Parks, the Broads had the greatest increase in change in the age category 75 and over.

The Broads Authority has the least percentage of households with dependent children when compared to the national average, neighbouring districts and other National Parks. Table 6 shows data from the 2011 Census.

Table 6

Percentage of households with dependent children

Area	Dependent children in household: All ages %	Dependent children in household: Age 0 to 4 %
The Broads Authority	16.2	5.2
National Park Average	21.7	7.1
Broadland	26.3	9
Great Yarmouth	27.6	10.6
South Norfolk	26.7	10
North Norfolk	20.7	7.4
Waveney	25.3	9.7
Norwich	23.3	11
England	29.1	11.8

Turning to Country of Birth, table 7 sets out the findings of the 2011 Census. The Broads is similar in Country of Birth to the other more rural districts in Norfolk.

Table 7

Country of birth (percentages)

Area	England	Northern Ireland	Scotland	Wales	United Kingdom not otherwise specified	Ireland	Other EU	Other countries
The Broads Authority	93.4	0.1	1.2	0.7	0.0	0.3	1.6	2.7
National Park Average	78.3	0.29	1.65	14.78	0.01	0.34	1.73	2.86
Broadland	93.6	0.3	1.3	0.7	0	0.3	1.4	2.5 Bottom of Form
Great Yarmouth	91.3	0.3	1.4	0.5	0	0.4	3.5	2.7 Bottom of Form
South Norfolk	92.9	0.3	1.3	0.7	0	0.3	1.8	2.8 Bottom of Form
North Norfolk	93.6	0.3	1.2	0.8	0	0.3	1.7	2.1 Bottom of Form
Waveney	94	0.2	1.3	0.7	0	0.3	1.5	2 Bottom of Form
Norwich	84.8	0.4	1.3	0.6	0	0.5	4.6	7.8 Bottom of Form
England	83.5	0.4	1.3	1	0	0.7	1.9	9.4 Bottom of Form

3.16 Economic Activity

On the subject of Economic Activity, table 8 shows the economically active and inactive according to the 2011 Census.

Table 8

Economically active and inactive according to the 2011 Census (percentage)

	Part-time	Full-time	Self-employed	Unemployed	Full-time student
The Broads Authority	13.1	30.9	16.3	3.0	1.7
National Park Average	13.9	30.5	20.1	2.4	1.9
England	13.7	38.6	9.8	4.4	3.4

The Broads area is on a par with other National Parks. Like the National Park average, the Broads has fewer full time but more people self-employed when compared to England's average.

Table 9

Economically Inactive and unemployed.

	Economically inactive %					Unemployed %	
	Retired	Student	Looking after home or family	Long-term sick or disabled	Other	Never worked	Long-term
The Broads Authority	24.2	2.6	3.1	3.5	1.5	0.3	1.0
National Park Average	20.3	3.3	3.1	2.8	1.6	0.2	0.9
England	13.7	5.8	4.4	4.0	0.8	0.7	1.7 Bottom of Form

The Broads area has a higher proportion of retirees and a lower proportion of students.

Table 10

Professions

	Managers, directors, senior officials	Professional	Associate professional and technical	Admin and secretarial	Skilled trades	Caring, leisure and other service	Sales and customer service	Process, plant and machine operatives	Elementary
The Broads Authority	18.1	16.4	11.0	10.2	14.4	9.0	5.5	5.9	9.4
National Park Average	15.3	17.4	10.5	8.5	18.9	8.5	5.3	5.1	10.4
England	10.9	17.5	12.8	11.5	11.4	9.3	8.4	7.2	11.1 Bottom of Form

With regards to general occupations of residents in the Broads Area, according to the 2011 Census, the Broads has a high proportion of Managers and a low proportion of Elementary Occupations when compared to both England and other National Parks.

Table 11

Detailed occupation data

Area name	A Agriculture, forestry and fishing	B Mining and quarrying	C Manufacturing	D Electricity, gas, steam and air conditioning supply	E Water supply; sewerage, waste management and remediation activities	F Construction	G Wholesale and retail trade; repair of motor vehicles and motor cycles	H Transport and storage	I Accommodation and food service activities	J Information and communication	K Financial and insurance activities	L Real estate activities	M Professional, scientific and technical activities	N Administrative and support service activities	O Public administration and defence; compulsory social security	P Education	Q Human health and social work activities	R, S, T, U Other
The Broads Authority	3.8	0.9	9.7	0.4	0.8	7.8	13.9	3.6	7.2	2.6	3.1	1.6	6.7	5.5	4.9	9.3	12.5	5.8
National Park Average	7.5	0.5	6.9	0.4	0.6	8.1	12.9	3.0	10.7	2.4	1.9	1.6	6.4	4.2	5.1	10.3	11.4	5.9
Broadland	1.4	0.3	8.8	0.5	0.7	9.7	17.6	4.0	4.8	2.6	6.4	1.4	5.2	4.1	5.8	8.9	13.3	4.6
Great Yarmouth	1.1	1.6	9.4	0.6	0.7	8.1	18.0	4.9	9.5	1.2	2.0	0.9	4.8	4.7	4.4	7.7	14.7	5.4
North Norfolk	3.7	0.3	9.3	0.5	0.7	9.1	17.5	3.7	7.9	1.6	2.3	1.4	4.9	4.6	4.2	9.2	13.1	5.8
Norwich	0.3	0.1	6.9	0.2	0.6	6.3	17.2	3.6	7.5	3.4	6.4	1.3	5.9	4.7	4.7	11.5	13.9	5.5
South Norfolk	3.0	0.2	9.3	0.3	0.6	8.8	16.1	3.8	4.3	2.5	5.2	1.6	6.5	3.9	5.4	10.6	13.4	4.5
Waveney	1.6	1.1	11.6	1.1	1.1	9.3	17.4	4.1	7.1	1.4	2.0	1.2	5.1	4.5	4.8	9.0	12.9	4.8

More detailed occupation data from the 2011 census shows the main industry in the Broads wholesale and retail trade.

With regards to out of work benefits claimants³, table 12 shows the claimants for February and October 2021 and March 2022. The trend can be seen on [nomisweb](#) by adding the ward name.

Table 12

Out of work benefits claimants

Ward	Out of work benefits Feb 2021	Out of work benefits Oct 2021	Out of work benefits March 2022
33UCGN: Acle	4.3%	2.7%	2.4%
33UCGQ: Blofield with South Walsham	3.4%	1.9%	2.0%
33UCGR: Brundall	4.1%	2.6%	2.1%
33UCGT: Buxton	2.7%	2.0%	1.7%
33UCGU: Coltishall	3.8%	2.6%	2.1%
33UCHE: Marshes	3.9%	2.6%	2.8%
33UCHQ: Thorpe St Andrew South East	4.2%	2.5%	2.3%
33UCHR: Wroxham	3.7%	1.8%	2.0%
33UDFY: Bradwell North	4.3%	2.3%	2.2%
33UDGB: Caister South	6.4%	4.0%	3.7%
33UDGE: East Flegg	6.7%	2.9%	3.6%
33UDGF: Fleggburgh	4.3%	3.0%	2.4%
33UDGL: Ormesby	6.3%	3.7%	3.9%
33UDGP: West Flegg	5.1%	2.9%	2.8%
33UFGY: Happisburgh	4.9%	3.0%	3.0%
33UFHB: Hoveton	5.1%	3.2%	3.0%
33UFHM: Scottow	3.1%	1.7%	1.6%
33UFHR: Stalham and Sutton	5.6%	3.8%	4.3%
33UFHX: Waterside	4.9%	2.8%	2.9%

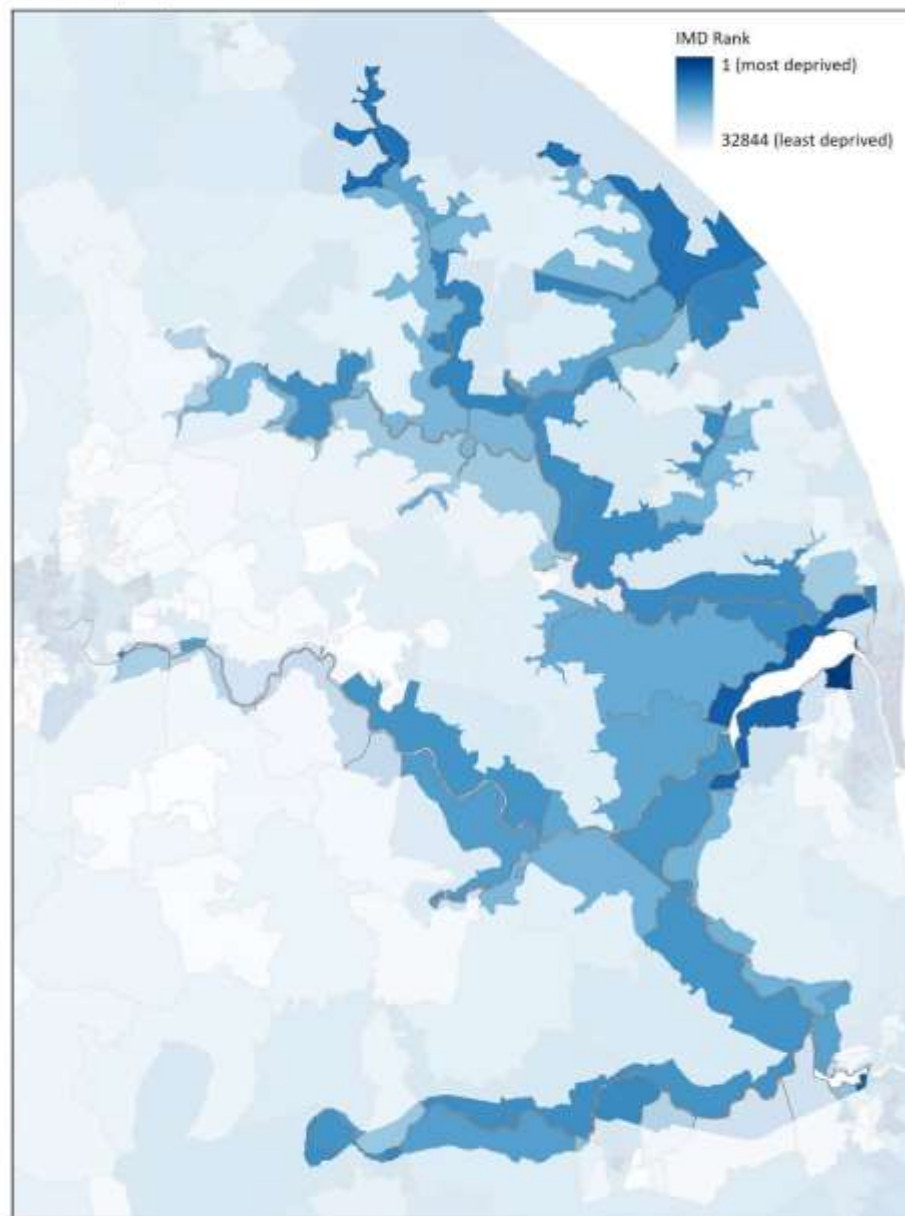
³ The Claimant Count is the number of people claiming benefit principally for the reason of being unemployed. This is measured by combining the number of people claiming Jobseeker's Allowance (JSA) and National Insurance credits with the number of people receiving Universal Credit principally for the reason of being unemployed. Claimants declare that they are out of work, capable of, available for and actively seeking work during the week in which the claim is made. The measure of the number of people receiving Universal Credit principally for the reason of being unemployed is still being developed by the Department for Work and Pensions. Consequently this component of the total Claimant Count does not yet correctly reflect the target population of unemployed claimants and is subject to revisions. For this reason the Claimant Count is currently designated as Experimental Statistics. The Claimant Count is mostly derived from DWP administrative systems. For various reasons, e.g. a claimant's National Insurance number is not known, a small number of claims have to be dealt with manually. These clerical claims do not have as much detail as the computerised claims and therefore, whilst part of the claimant count by sex table, cannot be included the age breakdown. www.nomisweb.co.uk

Ward	Out of work benefits Feb 2021	Out of work benefits Oct 2021	Out of work benefits March 2022
33UFHY: Waxham	4.9%	2.4%	2.4%
33UHHA: Chedgrave and Thurton	4.9%	3.5%	3.0%
33UHBF: Ditchingham and Broome	2.7%	2.3%	1.9%
33UHHG: Earsham	3.3%	3.1%	2.1%
33UHHK: Gillingham	4.4%	3.4%	3.5%
33UHHQ: Loddon	5.2%	3.4%	3.5%
33UHHY: Rockland	3.3%	2.7%	1.5%
33UHJC: Stoke Holy Cross	3.1%	2.3%	2.0%
33UHJF: Thurlton	4.6%	2.4%	3.4%
42UHFY: Beccles North	5.8%	2.4%	3.9%
42UHGB: Bungay	5.7%	4.4%	3.9%
42UHGD: Carlton Colville	3.7%	2.8%	2.4%
42UHGE: Gunton and Corton	4.6%	2.4%	2.5%
42UH GK: Lothingland (GYBC)	6.4%	3.6%	3.5%
42UHGN: Oulton Broad (Whitton)	5.1%	3.5%	3.9%
42UHGT: Wainford	4.2%	3.1%	1.5%
42UHGW: Worlingham	3.3%	2.2%	2.3%

3.17 Deprivation

Indices of Multiple Deprivation are often used to highlight those areas most likely to suffer from social exclusion. Map 14, 15 and 16 reflect the most recent Indices of Multiple Deprivation data (2019) at Lower Super Output Area. The English Indices of Deprivation 2019 provide a relative measure of deprivation at small area level across England. Areas are ranked from least deprived (green) to most deprived (red) on seven different dimensions of deprivation and an overall composite measure of multiple deprivation. There are several data sets, however three are displayed in map format at maps 14, 15, 16.

Index of Multiple Deprivation



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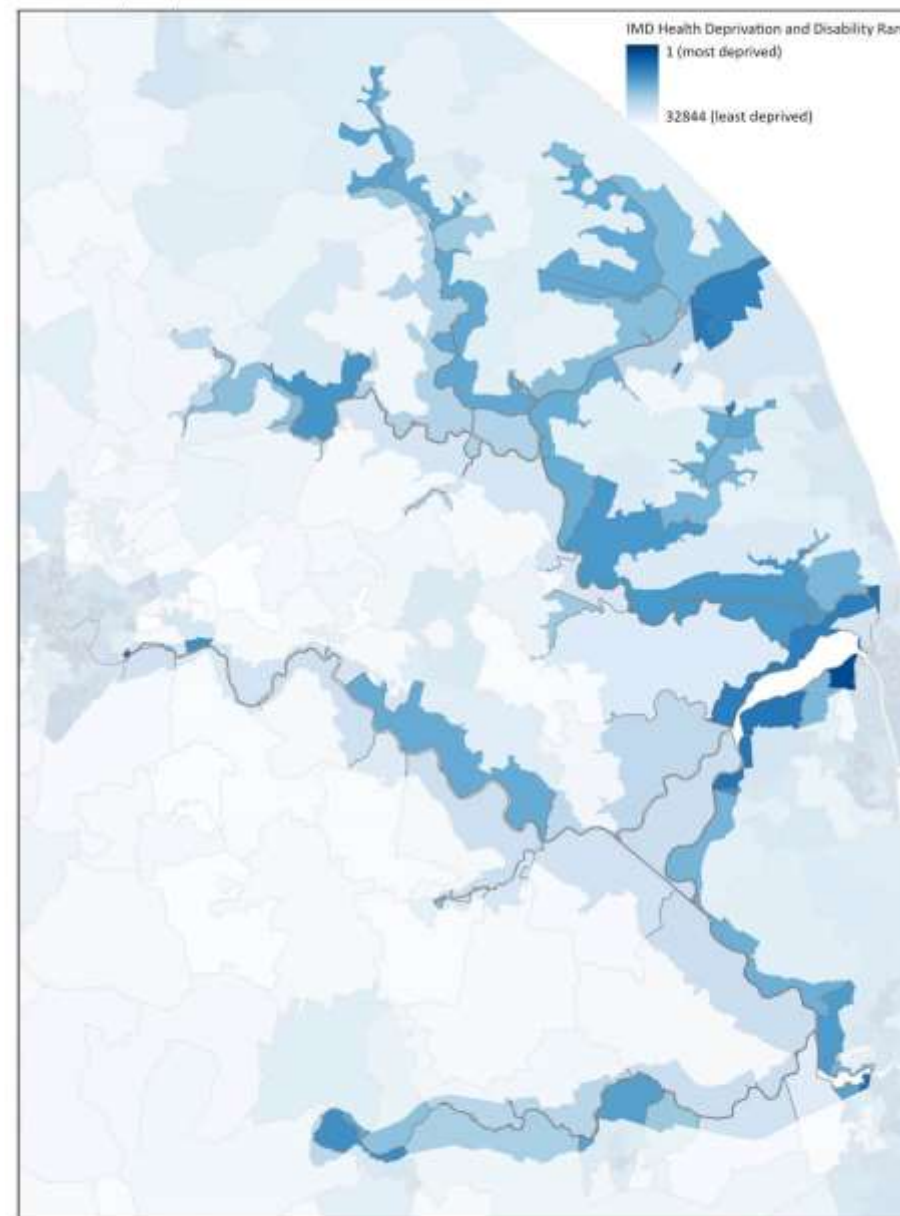
Map 14

Index of Multiple Deprivation for the Broads.

The IMD 2010 was constructed by combining the seven transformed domain scores, using the following weights:

- *Income (22.5%)
- *Employment (22.5%)
- *Health and Disability (13.5%)
- *Education, Skills and Training (13.5%)
- *Barriers to Housing and Services (9.3%)
- *Crime (9.3%)
- *Living Environment (9.3%)

Index of Multiple Deprivation



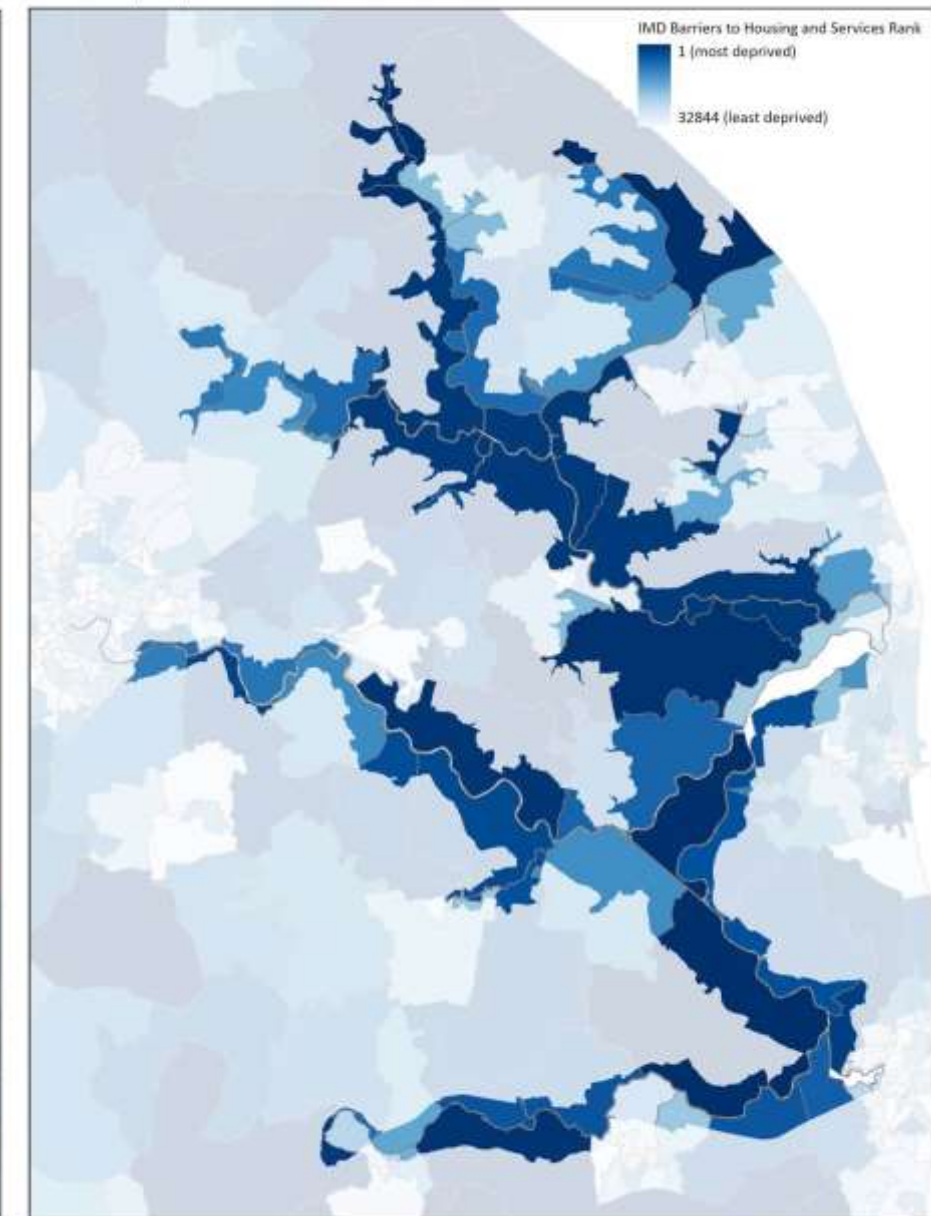
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Map 15

Health Deprivation and Disability Rank for the Broads Authority

In the main, the Broads area reflects the rest of the surrounding areas.

Index of Multiple Deprivation



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Map 16

Barriers to housing and services for the Broads

Map 16 shows much dark blue, although in Norfolk, the Broads is not alone in having barriers to houses and services. .

3.18 Housing

3.18.1 Accommodation Type

According to the 2011 Census, the Broads Area has the accommodation types set out in tables 13 and 14.

Table 13

Accommodation types

	Whole house or Bungalow						Flat, maisonette or apartment		Caravan or other mobile or temporary structure	
	Detached		Semi-detached		Terraced (inc. end terrace)					
	Number	%	Number	%	Number	%	Number	%	Number	%
The Broads Authority	1,900	53.6	700	19.3	400	11.9	440	12.1	110	3.2
National parks	89,800	44.2	50,430	24.8	39,500	19.4	21,100	10.4	2,420	1.2
England and Wales	5,512,300	22.6	7,506,350	30.7	6,028,300	24.7	5,276,620	21.6	106,010	0.4

A greater number proportion of residents in the Broads live in detached properties than in other National Parks and nationally, with fewest in terraced properties.

Table 14

Property ownership

	Owned: Owned outright	Owned: Owned with a mortgage or loan	Shared ownership (part owned and part rented)	Social rented: Rented from council (Local Authority)	Social rented: Other	Private rented: Private landlord or letting agency	Private rented: Other	Living rent free
The Broads Authority	48.2	23.3	0.4	2.4	3.0	18.0	2.0	2.7
National Park Average	45.9	24.5	0.5	4.0	5.9	13.7	2.4	3.0

While the level of owner occupation is roughly similar to that for the English National Parks average, the level of outright ownership (without a mortgage) in the Broads is significantly higher than each of the comparator averages. The level of private renting in the Broads is higher, and the level of social housing (council and housing association, etc.) significantly lower, than the averages for the English National Parks.

3.18.2 Residential Development in the Broads

Housing development in the Broads typically comprises primarily replacement dwellings or conversion to dwellings and small infill development. This applies both to permanent residential properties and holiday accommodation. A small number of new houses are permitted each year. A major constraint on housing development is flood risk and the application of national planning policy in relation to this.

The number of dwellings permitted in the Broads is given below (taken from Broads Authority Annual Monitoring Report):

- 2021/2022 – 15 net new residential dwellings and 2 holiday homes.
- 2020/2021 – 7 net new residential dwellings and 0 holiday homes.
- 2019/2020 – 13 net new residential dwellings and 8 holiday dwellings.
- 2018/2019 – 6 net new residential dwellings and 7 holiday dwellings.
- 2017/2018 – 10 net new residential dwellings and 16 holiday dwellings.
- 2016/2017 – 4 net new residential dwellings and 8 holiday dwellings.

Settlements in the Broads are often dominated by the importance of the waterways, with their associated trades and activities. Villages are typically centred around the staithe, with building designs that reflect their special functions, whether connected with riverside trade or management of the land.

Housing costs in the Broads are generally very high, because of the attractiveness of the area. The high cost of housing could impact on the economy of the Broads, as it affects those traditional trades such as agriculture and boat manufacture. Reed and sedge cutters have also indicated the importance of the proximity of living close to the reed and sedge beds. Because of the relative remoteness of parts of the Broads, housing and services in general are in some cases less accessible than elsewhere in the Norfolk and Suffolk counties.

All six Housing Authorities in the Broads area have identified a need for additional local affordable housing, but it will be rarely possible to provide this within the Broads because of the flood risk in most of the area and high land values.

3.18.3 Household Composition

Table 15

Household composition

	One person household: Aged 65 and over	One person household: Other	One family only: All aged 65 and over	One family only: Married or same-sex civil partnership couple: No children	One family only: Married or same-sex civil partnership couple: Dependent children	One family only: Married or same-sex civil partnership couple: All children non-dependent	One family only: Cohabiting couple: No children	One family only: Cohabiting couple: Dependent children	One family only: Cohabiting couple: All children non-dependent	One family only: Lone parent: Dependent children	One family only: Lone parent: All children non-dependent	Other household types: With dependent children	Other household types: All full-time students	Other household types: All aged 65 and over	Other household types: Other
National Park Average	15.5	14.6	12.9	18.3	13.3	5.6	4.8	3.1	0.4	3.7	2.7	1.6	0.0	0.5	3.0
The Broads Authority	16.0	16.6	14.3	19.0	9.3	5.3	5.9	3.0	0.6	2.7	2.1	1.3	0.0	0.5	3.4
Broadland	14.1	12.3	12.6	16.8	16.2	6.3	5.5	3.9	0.5	4.9	2.7	1.3	0.0	0.3	2.6
Great Yarmouth	14.8	15.0	10.3	13.4	12.0	5.8	4.9	5.7	0.7	7.7	3.4	2.2	0.0	0.3	3.7
North Norfolk	17.9	13.2	15.2	16.5	11.1	5.0	4.9	3.8	0.5	4.3	2.7	1.4	0.0	0.6	2.8
Norwich	12.7	25.4	6.0	9.7	9.8	3.3	7.7	4.7	0.4	7.3	3.0	1.5	2.4	0.2	5.9
South Norfolk	13.5	12.8	12.5	16.8	16.4	5.7	6.0	4.1	0.5	4.9	2.6	1.3	0.0	0.4	2.5
Waveney	16.3	14.6	12.6	14.4	12.4	5.2	5.0	4.8	0.6	6.2	3.1	1.8	0.0	0.3	2.5

The percentage of one family only with no children in the Broads slightly higher than the National Park Average, but much higher than constituent councils. The percentage of lone parent with dependent children is much lower than constituent councils. Around a hundred residents live in around 10 private residential care homes in the Broads. There are no NHS, local authority, housing association, children's home, or psychiatric communal residential establishments in the Broads.

3.19 Access and Transport

3.19.1 Access

The Broads is a living and working environment, and because of its geography there is a high level of inter-dependence with the surrounding areas. Although the population within the area is small, and includes a high proportion of retirees, there are many adjacent villages and communities that are economically dependent on the Broads and are part of its social and cultural network. Conversely, many of those who live within the Broads boundaries rely on facilities and employment in the surrounding villages, towns and city.

Access to facilities and services is critical for the well-being of the local population and the continued enjoyment of the Broads by its many visitors. Improvement and maintenance of safe access for all to facilities, services and recreational facilities have been identified as a key issue.

Access to the Broads is of varied quality, and is difficult, without private transport, to many parts of the area. Due to the geography and network of waterways, much of the Broads area is also relatively difficult to access and the best – and sometimes only – way to reach certain parts of the system is by water. Moreover, links between land and water-based recreational provisions are not as plentiful as they might be. Nevertheless, there are 29km of Bridleways and 291km of footpaths. There are also many community transport schemes based in and around Broads villages. For example, Acle Area Ring and Ride flexi bus serves the villages of Martham, Ormesby, Rollesby, Thurne, Filby, Fleggburgh, Stokesby, Thrigby, Clippesby, Upton, Pilsen Green, South Walsham, Ranworth, Woodbastwick, Salhouse and Wroxham. Another example is Transport Plus which is a unique public transport service provided jointly by Norfolk County Council, East of England Ambulance Service and NHS Norfolk assisting adult members of the public to access essential health, social and wellbeing services. There is also Beccles and Bungay Area Community Transport.

The Broads area is crossed by a number of major transportation links, including the A47 trunk road east of Norwich, the A12 south of Great Yarmouth, and a number of other important roads. Despite this, access to the villages, rivers and Broads is usually off minor roads, as the area is predominantly rural in nature.

3.19.2 Car Ownership

Looking at car ownership figures from the 2011 Census, in the no, 1 and 2 cars or vans categories, the Broads area is similar to other rural districts of Norfolk. The proportion of households with 3 or more cars is greatest in the Broads when compared to the other areas in table 16.

Table 16

Car ownership (percentages)

	No cars or vans in household	1 car or van in household	2 cars or vans in household	3 cars or vans in household	4 or more cars or vans in household
The Broads Authority	12.4	40.7	32.3	10.3	4.3
National Park Average	11.9	40.8	33.6	9.6	4.1
Broadland	11.4	44.4	33.5	7.8	2.9
Great Yarmouth	27.2	44.8	21.2	5	1.8
South Norfolk	11.7	42.4	34.3	8.4	3.3
North Norfolk	16.2	46.1	28.1	6.9	2.7
Waveney	21.9	46.4	24.3	5.6	1.9
Norwich	33.4	47.6	15.8	2.5	0.7
England	25.8	42.2	24.7	5.5	1.9

Most visitors to the Broads arrive by private car, causing seasonal congestion during the summer travel period, particularly in and around towns acting as a focus for attractions and which provide easy access to the rivers or Broads. The result is increased pressure on the area in terms of demands for visitor attractions, accommodation, road space and parking. This creates a contradictory impression to visitors who expect the Broads to be tranquil and not an area of dense traffic and congestion.

3.19.3 Rail

There are three railway lines that cross the Broads – these serve many of the smaller settlements between Norwich, Great Yarmouth and Lowestoft. The Bittern Line goes north from Norwich via Wroxham, whilst the Wherry Line service runs from Norwich to Great Yarmouth and Lowestoft. Service improvements on the latter resulted in a marked increase in the use of the line. There is also a route from Lowestoft south to Ipswich, with a connection to London Liverpool Street, giving a total journey time of less than three hours.

3.19.4 Air

Norwich International Airport is within a few miles of the western edge of the Broads and offers an increasing number of commercial and low-cost flights. However, air traffic from the airport remains relatively low, and the Broads has as yet not suffered the adverse impacts of air traffic on tranquillity and quiet enjoyment that affect several UK national parks. Stansted Airport is well connected to the area by rail and road.

3.19.5 Travel to work by Car

According to the 2001 Census, the Broads has a higher level of travel to work by car, and a lower level of travel on foot than the English National Parks', Norfolk county's and England's averages. The level of cycling to work in the Broads is about the national average, but this is around half the Norfolk average though higher than any of the English National Parks. At the time of writing, 2011 Census Travel to Work data was not available.

3.19.6 Road Traffic Incidents

Maps 17 and 18 show data relating to road traffic collisions in the Broads Authority Area.

Norfolk

Source: Norfolk County Council.

Covering 30/11/2016 to 30/11/2021

Legend:

The icons with the red outlined shapes and "P" are collisions involving pedestrians.

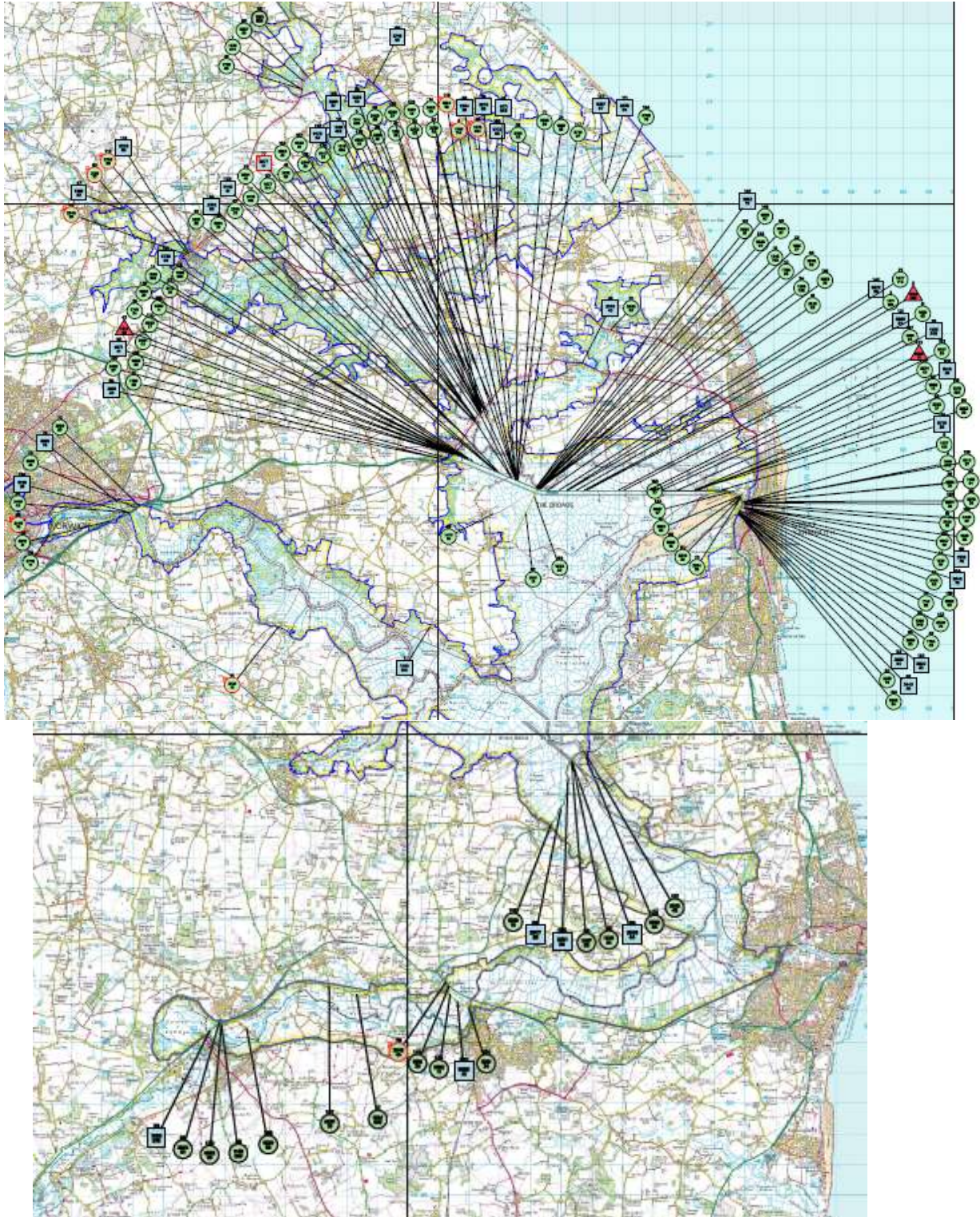
Fatal Collision:  Serious Collision:  Slight Collision: 

Numbers inside the shapes are accident references.

Map 17

Traffic incidents in the Norfolk part of the Broads

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Suffolk

Map 18

Traffic incidences in Suffolk part of the Broads Authority

Source: Suffolk County Council.

Covering 01/09/2019 to 31/08/2021

TRAFFMAP
AccsMap - Accident Analysis System

SELECTION RESULTS

Run on: 03/12/2021

Accidents between dates 01/09/2016 and 31/08/2021 (60) months

Selection: Notes:

Selected using Manual Selection

Police Ref.	Date	Cas.	Ser.	P2W	Cycs	Peds	Ch	OAPs	Vis.	Manv.	Road Cond.	Time	Location
16142741	26/12/2016	1	Slight	0	0	0	0	0	Light	No turn	Dry	1400	CHERRY TREE FARMLAND ROAD
17151970	31/01/2017	1	Serious	1	0	0	0	0	Dark	No turn	Wet/Damp	1715	B & MGEORGE WESTWOOD WAY (A145)
17184221	19/05/2017	3	Slight	0	0	0	1	0	Light	No turn	Dry	1223	BECCLES NEW BRIDGE
17198351	14/06/2017	2	Slight	1	0	0	0	0	Light	No turn	Dry	1240	NORWICH ROAD (A146)
17227059	12/09/2017	1	Slight	0	0	0	0	0	Light	No turn	Dry	1921	BECCLES ROAD A146
17231256	14/10/2017	1	Slight	1	0	0	0	0	Light	No turn	Dry	1118	GEORGE WESTWOOD WAY A145
18268983	02/02/2018	3	Slight	0	0	0	0	1	Dark	No turn	Wet/Damp	1705	NORWICH ROAD A146
18290034	01/05/2018	1	Serious	0	0	0	0	1	Light	No turn	Dry	1700	A146 AT JN WITH GEORGE WESTWOOD WAY
18320993	28/07/2018	2	Slight	0	0	0	0	0	Light	No turn	Dry	1211	A146 NEAR JN WITH A145
18355200	20/12/2018	1	Slight	0	0	0	0	0	Light	No turn	Dry	0807	BECCLES (A146) 100 METRES EAST OF JUNCTION WITH GEORGE WES
19813071	11/01/2019	1	Slight	0	0	0	0	0	Dark	Both	Dry	1653	MORRISONS CAR PARK
19815036	09/02/2019	1	Slight	0	0	0	0	0	Dark	No turn	Wet/Damp	2000	NORWICH ROAD (A146)
19865429	30/06/2019	1	Serious	1	0	0	0	0	Light	Right	Dry	1635	NORWICH ROAD (A146)
19911399	30/09/2019	3	Slight	0	0	0	0	1	Light	No turn	Dry	0951	A146
19921583	02/11/2019	5	Slight	0	0	0	3	0	Light	No turn	Wet/Damp	1315	NORWICH ROAD (A146)
19923697	10/11/2019	1	Slight	0	0	0	0	0	Light	No turn	Dry	1210	GEORGE WESTWOOD WAY NEAR JUNCTION WITH A146
19926695	26/11/2019	1	Slight	0	0	0	0	1	Light	No turn	Wet/Damp	1030	NORWICH ROAD (A146) - 68 METRES FROM JUNCTION WITH UNCLA
19930537	04/12/2019	2	Serious	0	0	2	0	0	Dark	No turn	Wet/Damp	1958	NORWICH ROAD (A146)
20942645	25/02/2020	2	Slight	0	0	0	0	0	Dark	No turn	Wet/Damp	1635	NORWICH ROAD (A146)
20944675	13/03/2020	1	Slight	0	1	0	0	1	Light	No turn	Dry	1726	WATCH HOUSE HILL (B1062) - 75 METRES FROM JUNCTION WITH V
20947853	24/04/2020	1	Slight	0	1	0	0	1	Light	No turn	Dry	1628	BECCLES ROAD (B1062) - 58 METRES FROM JUNCTION WITH UNCLA
20996649	18/10/2020	1	Slight	0	1	0	0	0	Light	No turn	Wet/Damp	1200	NORTHGATE
211070001	25/06/2021	2	Slight	0	0	0	0	1	Light	Right	Dry	1136	MORRISONS EXIT AT JUNCTION WITH GEORGE WESTWOOD WAY
Column Totals		38		4	3	2	4	7					
No. of Accidents				4	3	1	2	7					

Total number of accidents listed: 23

3.19.7 Water

Table 19

Public moorings (m) in the Broads. (Source: Broads Authority Asset Management figures).

	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/8	2018/9	2019/202	2020/21
Total Length	7778.6m	7824.6m	7847.6m	7814.5	7568.50	7568.50	7760.30	8456.3	8625.8	8636.8	8741.8

3.19.8 Boat Usage

Table 20

Boat usage

Source: Broads Authority Tolls Team. [November 2021](#)

Annual Boat Numbers as at 1st November

PRIVATE BOATS	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Motor Cruisers	4,945	4,967	5,059	5,091	5,086	5,110	5,079	5,083	5,004	5,237
Auxiliary Yachts	1,188	1,166	1,168	1,152	1,127	1,132	1,093	1,107	965	1,048
Day Launches	542	521	514	504	495	556	574	558	562	582
Outboard Dinghies	1,058	1,043	1,062	1,016	962	1,064	1,060	1,058	1,051	1,140
Workboats	179	188	180	172	156	158	156	153	144	142
Passenger Vessels SPB	<i>Small Passenger Boats (Charitable Trusts & Ferries)</i>					22	21	23	13	19
TOTAL MOTOR BOATS:	7,912	7,885	7,983	7,935	7,826	8,042	7,983	7,982	7,739	8,168
Sailing Craft	1,262	1,214	1,230	1,191	1,107	1,076	1,081	1,023	844	920
Rowing Craft	1,701	1,636	1,578	1,532	1,513	1,483	1,513	1,545	1,800	2,039
Houseboats	23	33	27	33	45	45	49	52	49	52
Total	10,898	10,768	10,818	10,891	10,491	10,646	10,626	10,602	10,432	11,179
HIRE BOATS	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Motor Cruisers	894	889	842	821	789	802	806	801	734	729
Auxiliary Yachts	46	46	47	43	44	45	46	44	39	45
ALL CABIN HIRE BOATS:	940	915	889	864	833	847	852	845	773	774
Day Launches	294	289	299	290	295	290	301	297	261	326
Outboard Dinghies	4	7	8	10	11	9	9	8	4	4
Passenger Vessels MCA	13	11	10	10	6	6	6	6	5	6
Passenger Vessels SPB	<i>Small Passenger Boats (Commercial)</i>					6	7	7	4	8
TOTAL MOTOR BOATS:	1,251	1,222	1,206	1,174	1,145	1,158	1,175	1,163	1,047	1,118
Sailing Craft	110	109	110	108	102	101	95	87	74	88
Rowing Craft	184	188	175	184	192	191	194	193	182	227
Houseboats	16	16	16	16	16	28	26	26	27	27
Total	1,561	1,535	1,507	1,482	1,455	1,478	1,490	1,469	1,330	1,460
Grand Total	12,459	12,303	12,325	12,173	11,946	12,124	12,116	12,071	11,762	12,639

The numbers of boats on the Broads has reduced gradually, although 2021 shows a peak in the last 9 years.

3.20 Health

Table 21

Those who completed the Census were asked to rate their health. Source: 2011 Census.

	Very Good Health	Good Health	Fair Health	Bad Health	Very Bad Health
Broadland	44.3	37	14	3.6	1.1
Great Yarmouth	40.3	36	16.6	5.5	1.6

	Very Good Health	Good Health	Fair Health	Bad Health	Very Bad Health
North Norfolk	38.9	37.8	17.2	4.8	1.4
Norwich	44.9	35.4	14.1	4.4	1.2
South Norfolk	46.4	35.8	13.4	3.5	1
Waveney	41.1	36.3	16.1	5.1	1.5
Broads Authority	39.9	38.1	16.0	4.8	1.3

3.21 Crime

Source: Norfolk Police, February 2022.

Crime data was exported from the Constabulary's crime management system using a purpose-built search query via a Connect Data Gateway (CDG)

This query used the date and time parameters of crime with an event date/time between 01/01/2021 00:00 and 31/12/2021 23:59 The query consisted of two search components

1 To return crimes recorded where the offence classification keyword 'marine' had been selected

2 To return crimes where the investigation summary includes one of the following marine related words boat, marina, river, dinghy, harbour, broad, outboard, kayak, canoe, vessel, yacht, mooring

The query was formatted to return distinct crimes to prevent duplications in the data

The crimes returned by the query search were case read to determine their inclusion or exclusion in the dataset Those where the marine related word was used in the context of a Broads crime were included, whereas crimes where the word appeared in a none marine or Broads related context were excluded

This data was then mapped across Norfolk and Suffolk and those that fell within the geographical locations of the Broads were extracted to become the final dataset that is presented in this document.

Between 1 st January 2021 to 31 st December 2021 there has been a total of 69 crimes reported across the Broads in Norfolk and Suffolk. This figure is a 23 reduction on the total crime reported across the Broads in 2020 (n=90). It should be noted that in 2019 the total was also lower at 73.

The average yearly crime reported on the Broads between 2018 - 2021 is 79 so the total for 2021 sits below this average (-13%).

The peak times for crime to be committed was during the summer months This is expected due to being the high season on the Broads when the public visit the area most for days out and holidays. In 2021 the summer months also coincided with the lifting of social restrictions following the Government's response to Covid. 19 Therefore, a peak in offending would also be expected due to the previous months being those in which restrictions had been placed on social activities.

Theft accounted for 44 of total crime committed in 2021 on the Broads Of the items stolen, boats, leisure batteries, and outboard engines collectively accounted for 56. Additional items stolen includes boat trailers, fuel, bilge pump, chart plotter, canoe, paddle boards and a generator.

There are three areas identified as repeat locations for crime in 2021 These are Brundall Whitton, and St Benet. Collectively they accounted for a third of crime reported on the Broads.

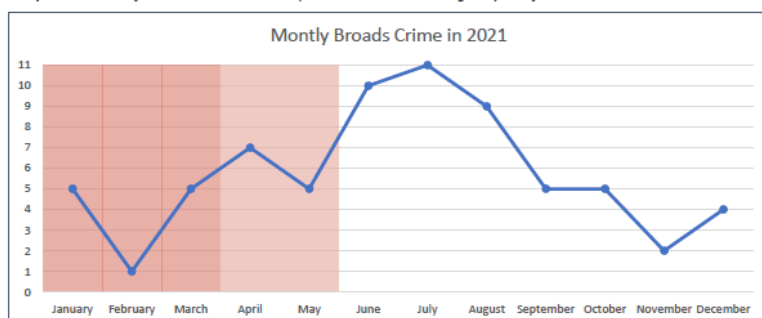
Of the five districts that cover the Broads, East Suffolk has reported the highest number of crime in 2021 (n=19, 28%). This is closely followed by North Norfolk (n=16, 23%).

In addition to the crimes reported on the Broads, there has been eight marine crimes along the River Wensum in Norwich's City Centre Half of these were theft/burglary offences where items stolen includes outboard engines and paddle boards.

Crime figures for the Broads in 2021



Graph 1: Number of Broads related crimes reported each month during the year of 2021*



*The months January to May have been shaded to highlight periods of time where social restrictions were in place as part of the Government's response to Covid-19 (5th Nov 2020 lockdown comes into force; 29th March 2021 outdoor gatherings of 6 or more/2 households allowed; 12th April 2021 Pubs open; 17th May 2021 30 can meet outside; 12th June 2021 all legal limits on social contact removed).

During the year 2021, there was a total of 69 crimes reported on the Broads. As shown in Graph 1, there was a peak in crimes occurring during the summer months of June to August. This coincides with the high season on the Broads in which there are more visitors and users of the waterways. Of those crimes reported, thefts accounted for 44% with the most common property stolen including boats, leisure batteries, and outboard engines. There were some areas in which higher rates of crime were recorded, these being Brundall, Whitton and St Benet. As a district, East Suffolk had the highest total number of crimes recorded, although this is closely followed by North Norfolk and then Great Yarmouth (see Table 2). The impact of Covid-19 restrictions and public hesitancy on social activity in 2021 should be considered when forecasting the data trends from 2021, which are notably lower than the four year average (n = 79).

Table 1: Total number for each of the top 10 crime types committed on the Broads in 2021

Crime Type	Number of Crimes
Other Theft	29
Other Criminal Damage	13
Public Fear Alarm or Distress	7
Assault without Injury	6
Burglary - Residential	3
Assault with injury	2
Burglary - Business And Community	2
Arson not endangering life	1
Criminal Damage to a Vehicle	1
Other Offences against the State or public order	1

Crime types have been categorised as per Home Office Counting Rules 'Sub Subgroup'

Table 2: Total number of crimes recorded for each district on the Broads in 2021

District	Number of crimes
North Norfolk	16
South Norfolk	9
Broadland	11
Great Yarmouth	14
East Suffolk	19

Mapping of Broads crime in 2021

Map 1: Locations of crimes reported in the area of the Broads in 2021. The Broads have been outlined using a dashed line.



STRATEGIC, BUSINESS & OPERATIONAL SERVICES

Norwich Marine Crime Only (River Wensum)

Map 2: Locations of marine related crimes reported on or along the banks of the River Wensum in Norwich only in 2021.



Table 3: Total number for each marine related crime type reported on or along the banks of the River Wensum in Norwich in 2021.

Crime Type	Number of Crimes
Assault without Injury	1
Attempted Burglary - Business And Community	1
Burglary - Residential	2
Other Criminal Damage	1
Other Theft	2
Public Fear Alarm or Distress	1

Crime types have been categorised as per Home Office Counting Rules 'Sub-Subgroup'

A total of eight marine related crimes were recorded in Norwich on or in close proximity to the banks of the River Wensum. Theft and burglary offences account for half of these crimes, with property stolen including outboard engines and paddle boards.

OFFICIAL

5

3.22 Qualifications

Table 22

Qualifications. Source: 2011 Census.

Area name	None	Level 1 highest	Level 2 highest	Apprenticeship highest	Level 3 highest	Level 4 highest	Other highest	School children and full-time students age 16 to 17	School children and full-time students 18 and over	Full-time students 18 to 74: economically active in employment	Full-time students 18 to 74: economically active unemployed	Full-time students 18 to 74: economically inactive
Broads Authority	23.8	12.3	15.6	5.3	11.1	27.9	4.0	1.8	1.7	0.8	0.1	0.8
National Park Average	19.8	11.8	15.6	3.9	11.2	33.6	4.0	2.4	2.0	0.8	0.1	1.1
Broadland	22.9	14.8	17.5	5.5	12.0	23.2	4.3	2.6	2.1	1.1	0.1	0.8
Great Yarmouth	32.8	15.7	16.1	4.7	10.6	14.2	5.9	2.6	2.5	1.0	0.3	1.2
North Norfolk	27.5	14.1	16.2	4.7	10.5	22.3	4.7	2.2	1.5	0.7	0.1	0.7
Norwich	22.6	12.8	13.8	2.6	15.2	27.7	5.2	1.9	11.6	3.3	1.0	7.3
South Norfolk	22.6	13.6	17.1	4.2	11.5	27.0	4.0	2.7	2.1	1.0	0.1	1.0
Waveney	29.8	14.2	16.2	5.4	11.7	17.9	4.7	2.6	2.1	0.9	0.3	0.9

The Broads has a greater proportion with no qualifications than the National Park Average.

3.23 Ethnic Group

Table 23

Ethnic Group. Source: 2011 Census.

	White: English/Welsh/Scottish/Northern Irish/British	White: Irish	White: Gypsy or Irish Traveller	White: Other White	Mixed/multiple ethnic group: White and Black Caribbean	Mixed/multiple ethnic group: White and Black African	Mixed/multiple ethnic group: White and Asian	Mixed/multiple ethnic group: Other Mixed	Asian/Asian British: Indian	Asian/Asian British: Pakistani	Asian/Asian British: Bangladeshi	Asian/Asian British: Chinese	Asian/Asian British: Other Asian	Black/African/Caribbean/Black British: African	Black/African/Caribbean/Black British: Caribbean	Black/African/Caribbean/Black British: Other Black	Other ethnic group: Arab	Other ethnic group: Any other ethnic group
The Broads Authority	96.4	0.6	0.0	1.6	0.2	0.1	0.2	0.2	0.1	0.0	0.0	0.0	0.3	0.1	0.1	0.0	0.0	0.0
National Parks Average	95.9	0.4	0.1	1.9	0.2	0.1	0.3	0.2	0.1	0	0	0.2	0.4	0.1	0	0	0	0.1

In general, the ethnicity of the community of the Broads is similar to other National Parks.