

Appendix 2: Baseline Data

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2.1 Introduction

This aims to provide a base line to support the Sustainability Appraisal and the Local Plan. It describes the state of the environment as well as some economic and social aspects of the area. Some of the data in the following report is based on the 2021 Census.

2.2 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 and 29 candidate County Geodiversity Sites. 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](#) for national and local protected sites. Table 1 shows the condition of SSSI in the Broads area. (Source: [Natural England](#), December 2023).

Table 1
SSSI condition in Broads (December 2023)

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%
Croswick 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%
Geldeston Meadows	0.00%	0.00%	0.00%	97.18%	2.82%

SSSI Name	% meeting area of favourable or unfavourable recovering	% Area favourable	% Area unfavourable recovering	% Area unfavourable no change	% Area unfavourable declining
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 saltwater incursion and tidal saltwater flooding. Water quality is also an issue – the main threat comes from wastewater 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.

2.3 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

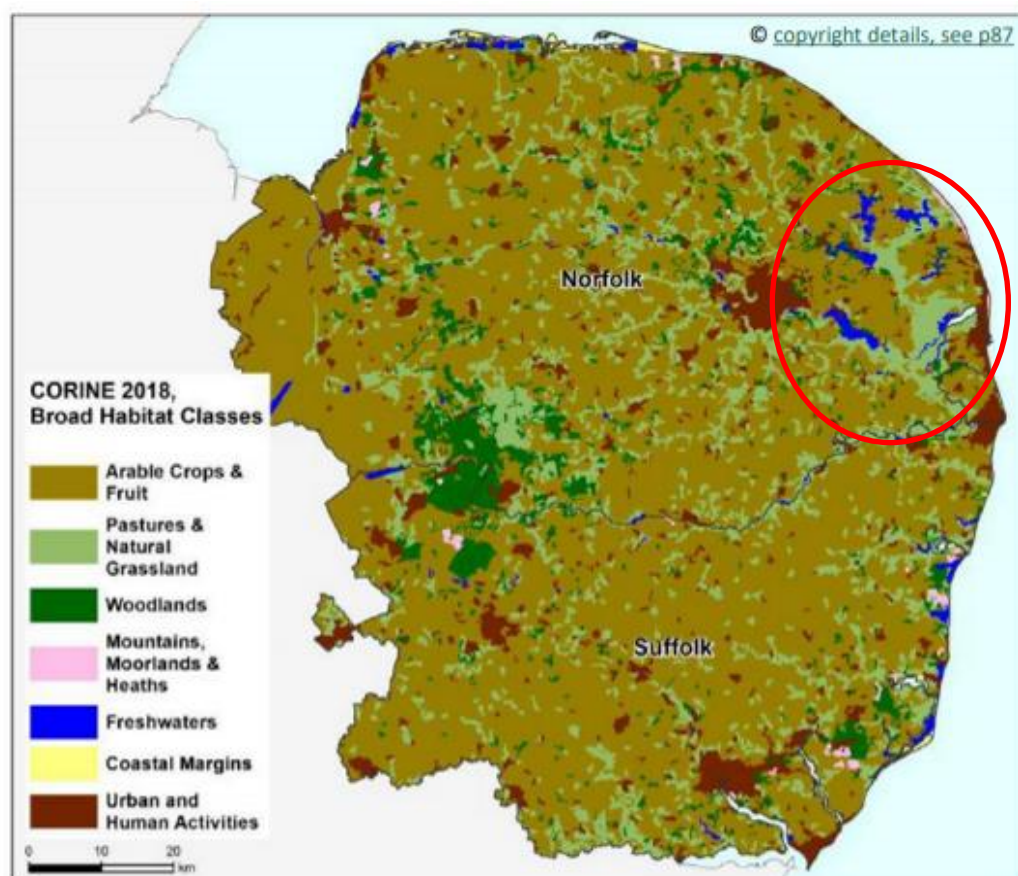


Table 2

Broads' habitats by type (data)

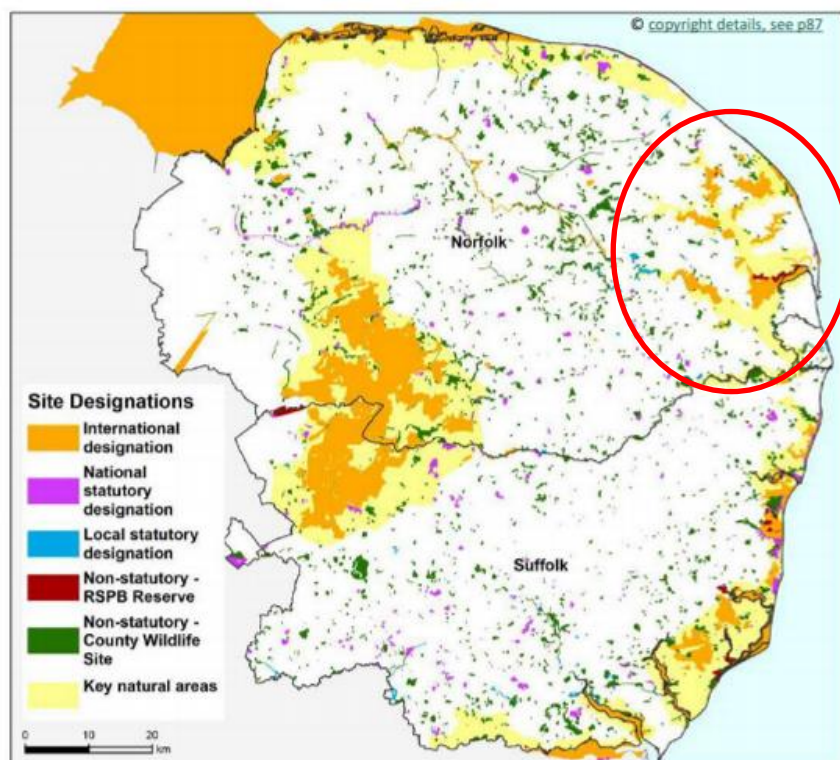
LAND TYPES BY AREA (Ha)	Norfolk	Suffolk	England TOTAL	The Brecks	Broads NP	N&S AONBs TOTAL
Arable crops and Fruit	380,622	280,916	5,759,358	55,206	6,623	45,954
Pastures and Natural Grassland	71,618	41,734	3,967,464	15,077	15,358	14,336
Heaths (Mountains, Moors & Heaths)	1,198	1,732	671,428	407	111	1,935
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



2.4 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.

2.5 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 Policies Maps that show various cultural heritage assets: [Local Plan for the Broads \(broads-authority.gov.uk\)](https://www.broads-authority.gov.uk)

a. Conservation Area Appraisals Reviewed

(Source: Broads Authority Historic Environment Officer)

Table 3

Conservation Area Appraisals Reviewed

Conservation Area Review	Adopted
Beccles	July 2014
Belaugh	October 2021
Bungay	January 2022
Coltishall and Horstead	August 1983 (currently under review by BDC)
Ditchingham	March 2013
Ellingham	March 2013
Geldeston	March 2013
Halvergate Marshes	March 2015

Halvergate and Tunstall	September 2023
Horning	December 2012
Langley Abbey	February 2014
Loddon and Chedgrave	December 2016
Ludham	August 2020
Neatishead	May 2011
Norwich Bracondale	March 2011
Norwich St Matthews	March 2007
Norwich City Centre	September 2007
Oulton Broad	July 2015
Salhouse	April 2004
Somerleyton	March 2011
Stalham Staithe	March 2017
Thorpe St Andrew	December 2007
Trowse with Newton	September 2012
West Somerton	November 2018
Wroxham	July 2010

b. Number of Listed Buildings at Risk

(Source: Broads Authority Historic Environment Officer)

Grade I	1
Grade II*	5
Grade II	13
SAM	2
Total	21

2.6 Geodiversity

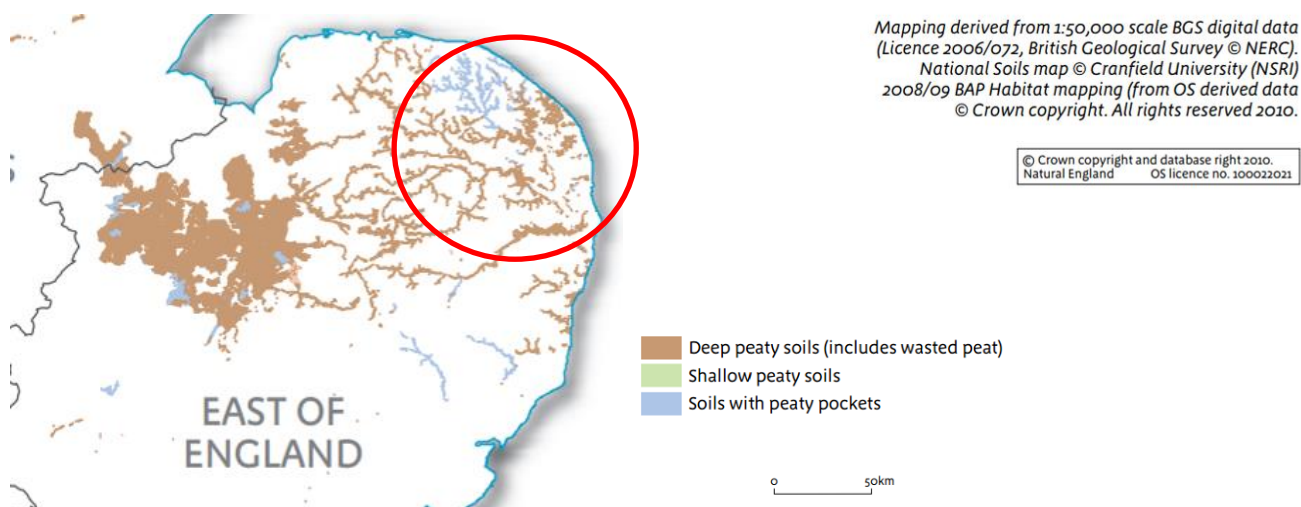
2.6.1 Peat

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

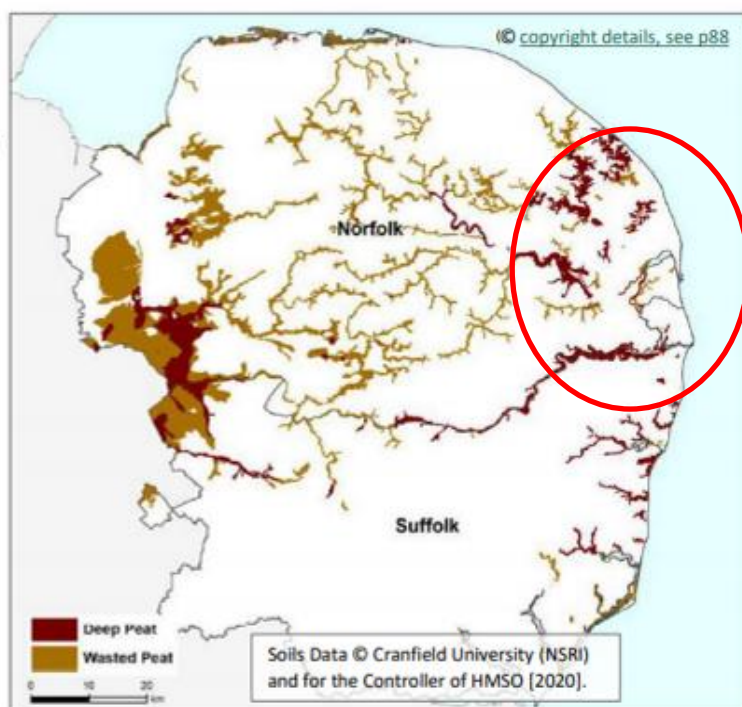
Source: [England's peatlands – carbon storage and greenhouse gases, Natural England \(2010\)](#).



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

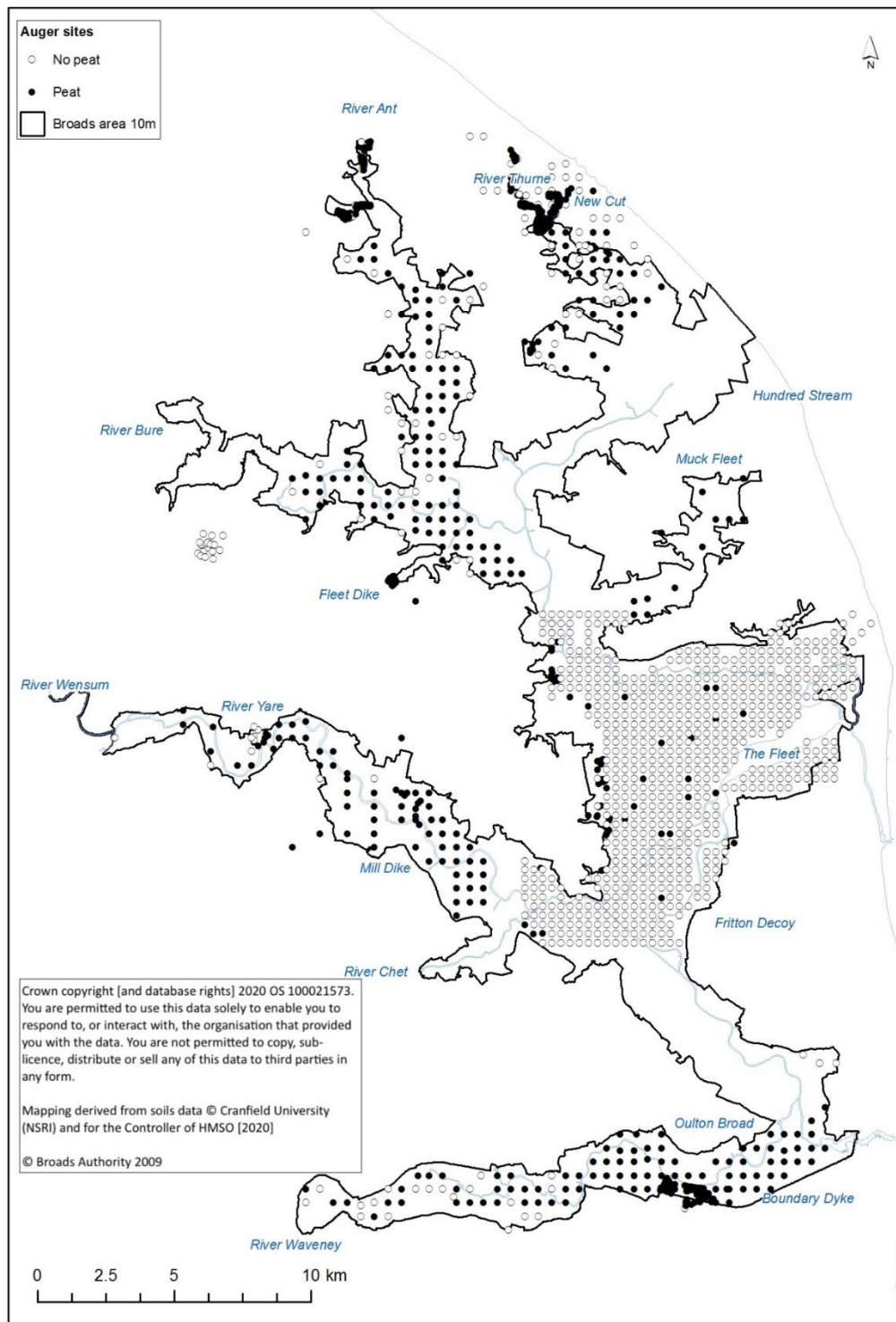
Location of deep and wasted peat.



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

Map 5

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



2.6.2 Bedrock and Soils

Map 6 show that the Broads lie on Crag Group bedrock and Aluvium soil. Source: [Norfolk's Earth Heritage - valuing our geodiversity](#) (2010).

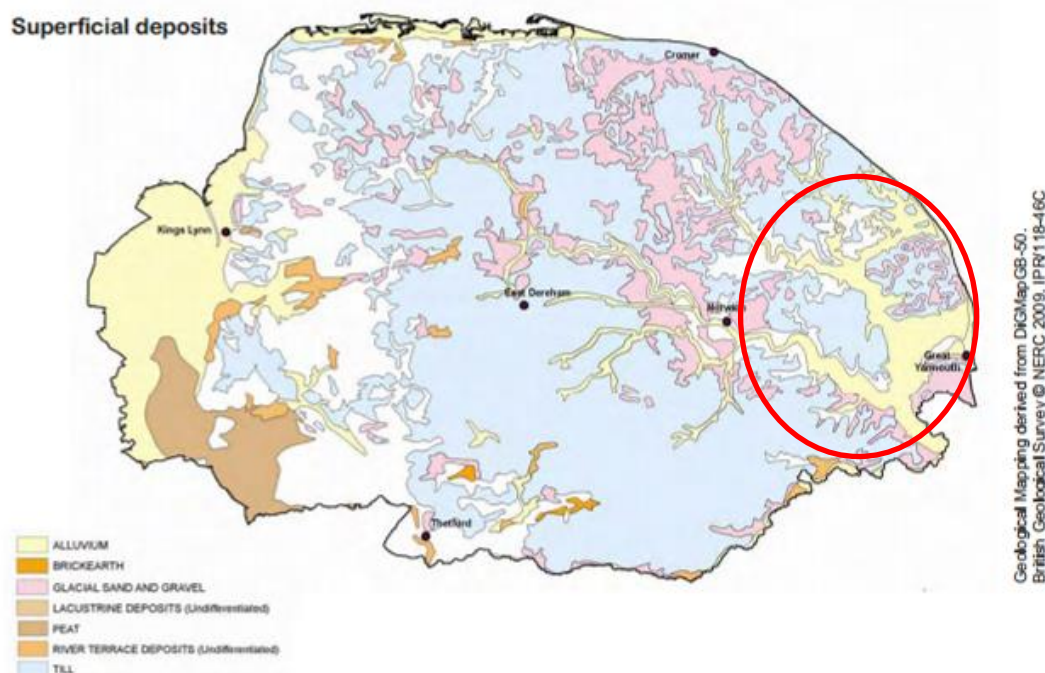
Map 6

Bedrock deposits



Map 7

Bedrock deposits



2.6.3 Norfolk Geodiversity Audit

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

2.6.4 Soils

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

2.7 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.

2.7.1 Water Supply

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

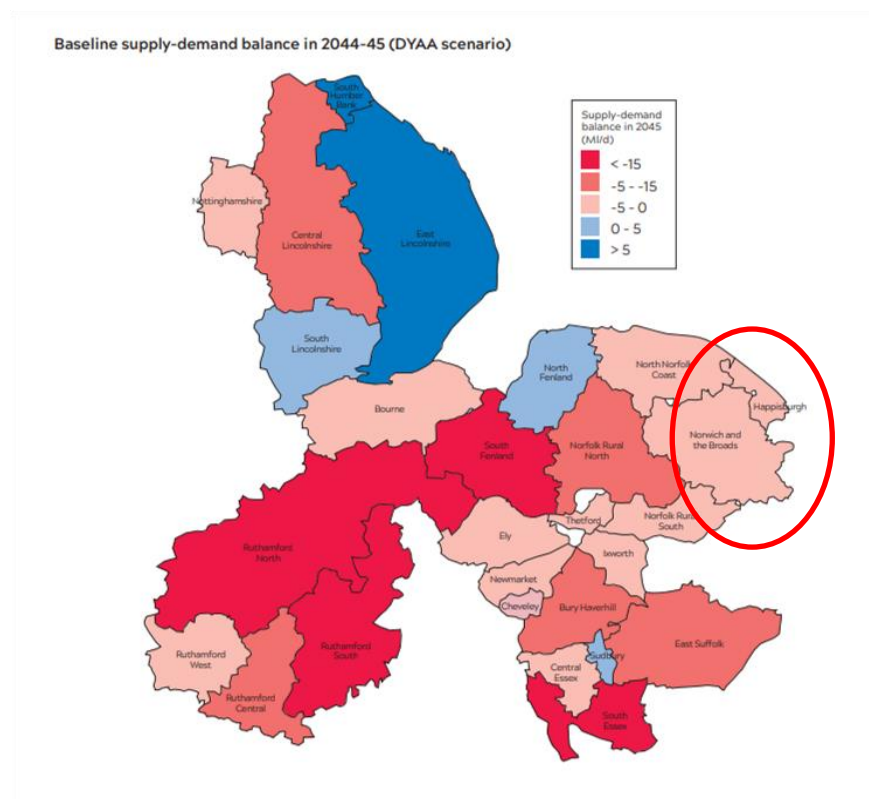
Please note that at the time of writing, a 2024 update was being consulted on.

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 8

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 8.4: Suffolk Northern Central balance of supply

Northern 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

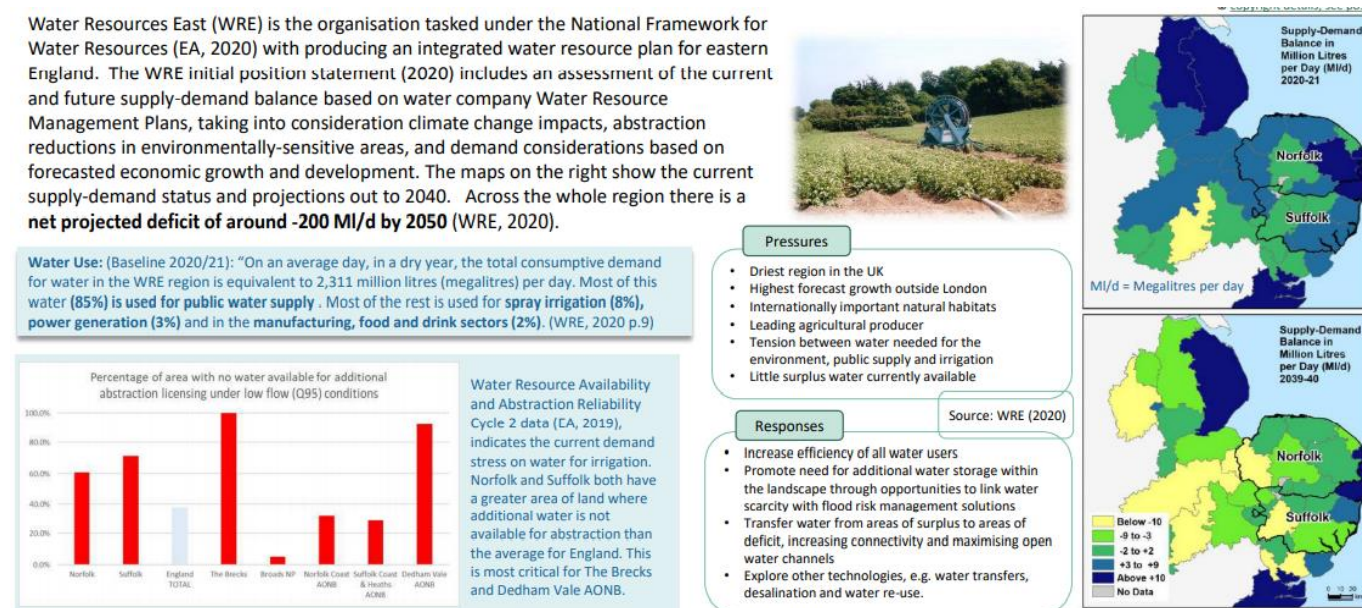
The balance of supply with target headroom ranges from 19.16 Ml/d at the end of AMP6 to 17.76 Ml/d at the end of the 25 year planning horizon and 15.99 Ml/d at the end of the 40year planning horizon.

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.



2.7.2 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 wastewater 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.

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.

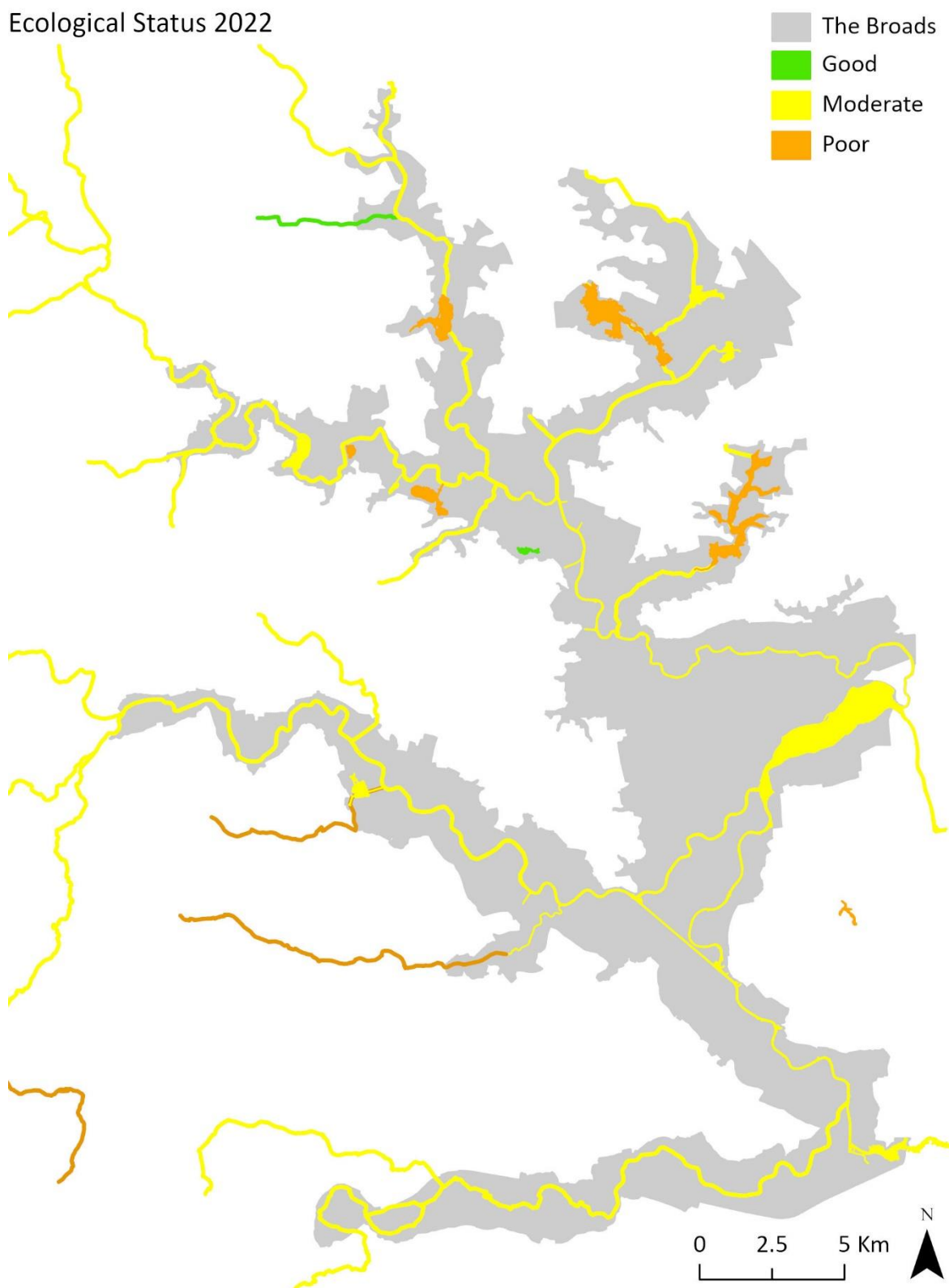
Map 9a, b, c shows the ecological and phosphate status of waterbodies in the Broads (and wider area) in 2019 as moderate. Note that the ecological map was updated in 2022.

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 9a

Ecological status of waterbodies in the Broads

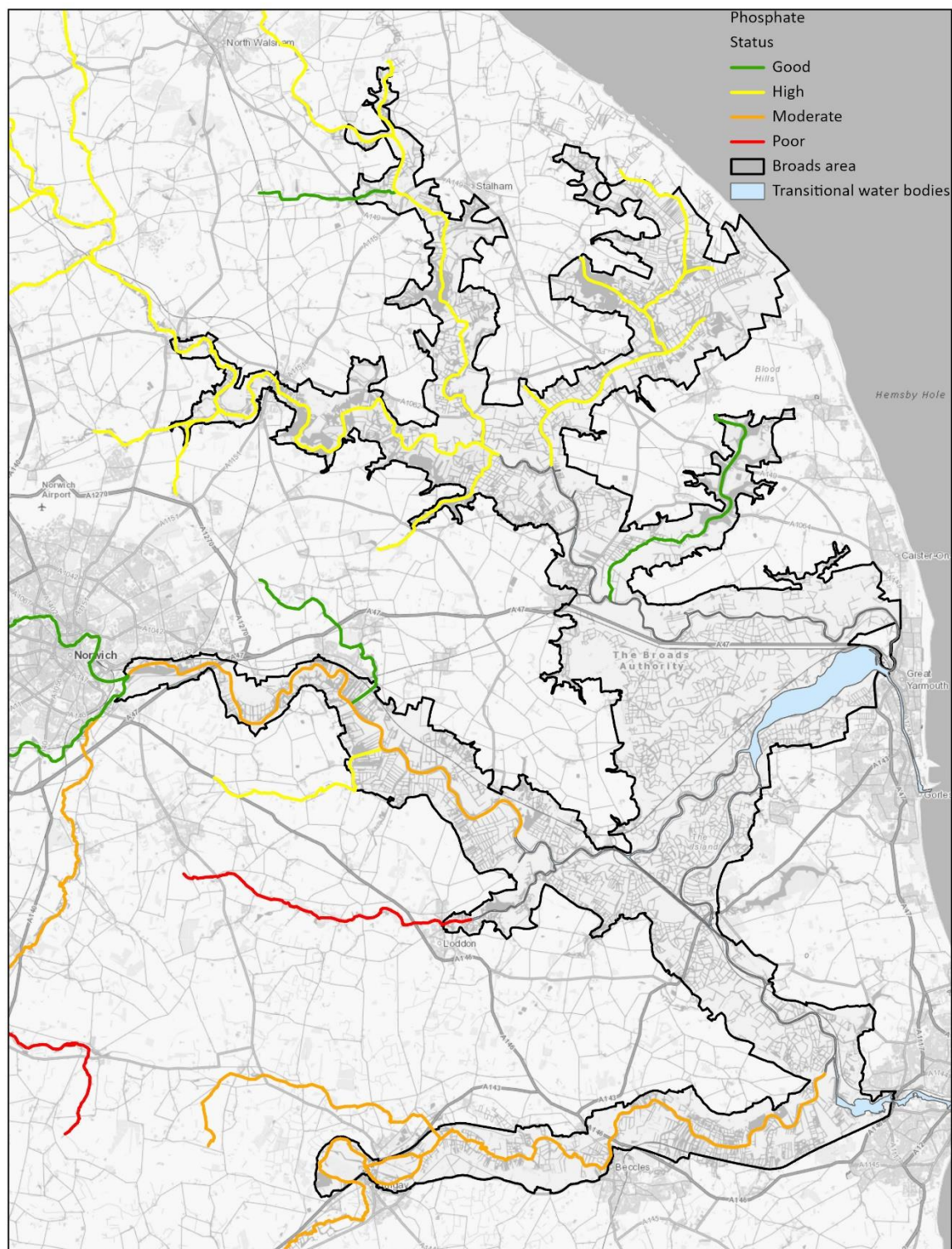
Ecological Status 2022



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Map 9b

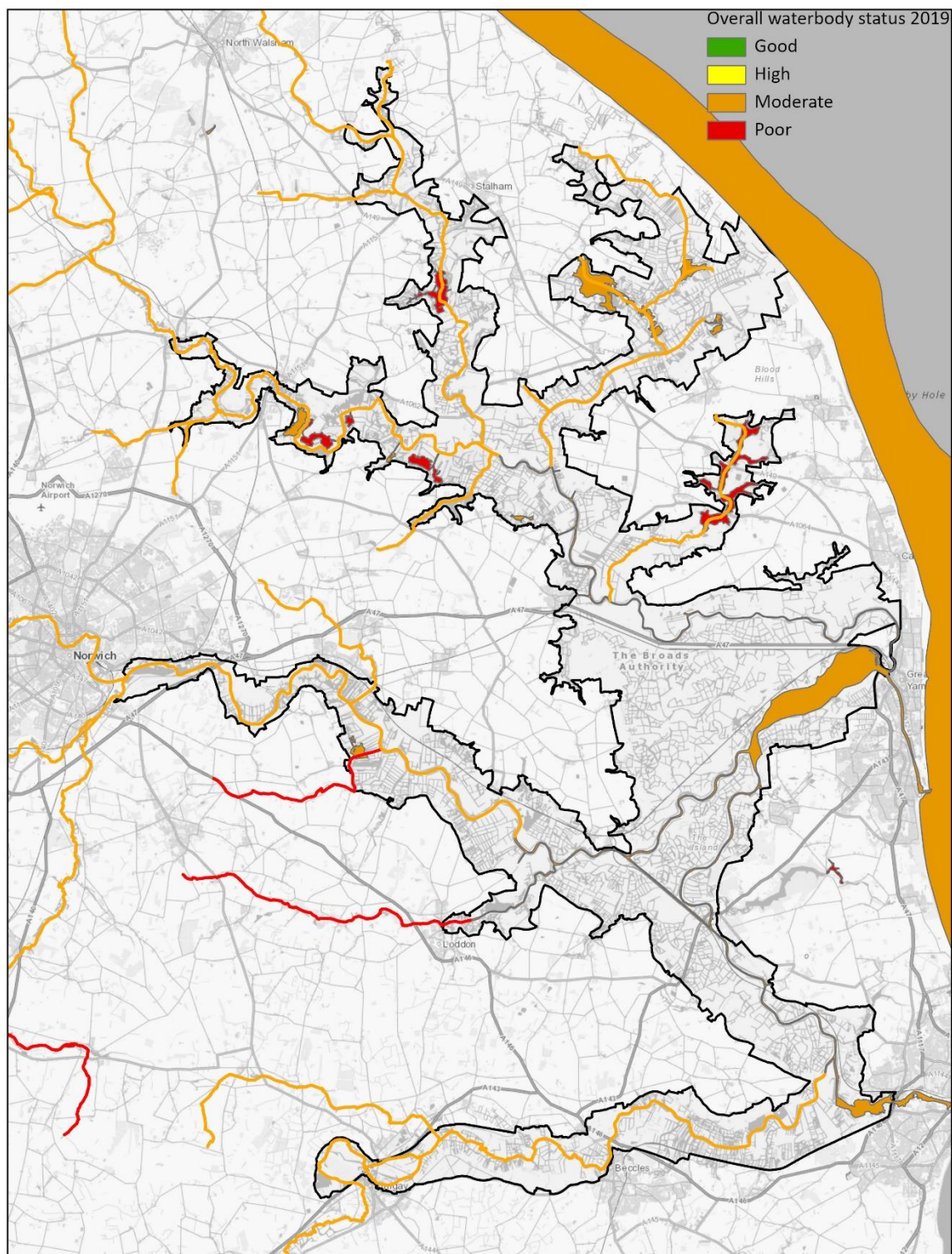
Phosphate status of waterbodies in the Broads



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Map 9c

Overall status of waterbodies in the Broads



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2.7.3 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.

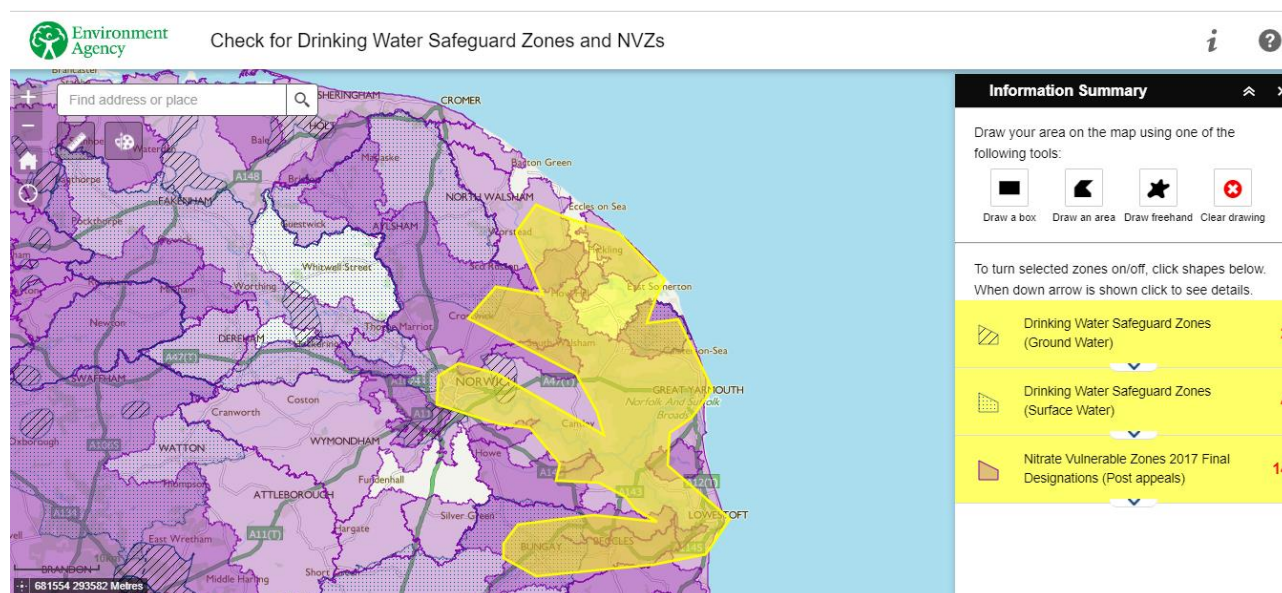
Surface or ground waters that are likely to contain at least 50mg/l nitrate if no action is taken.

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 10

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)

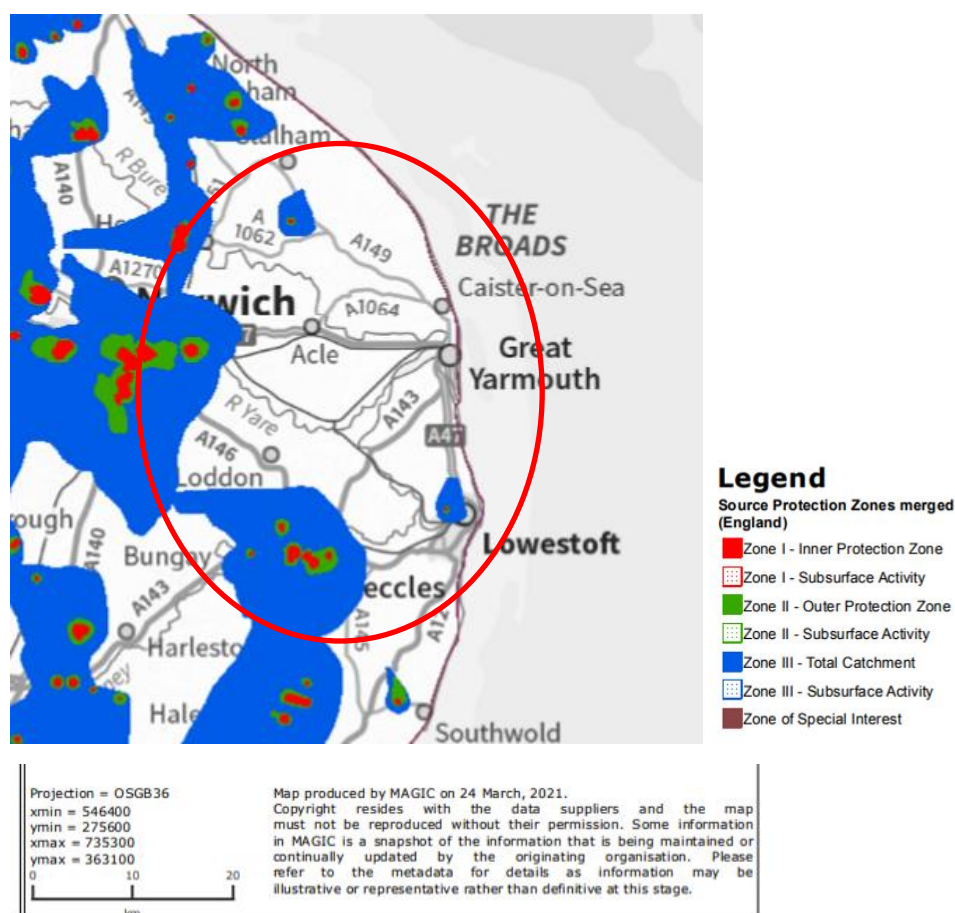
2.7.4 Source Protection Zones

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 11

Source protection zones



2.8 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.

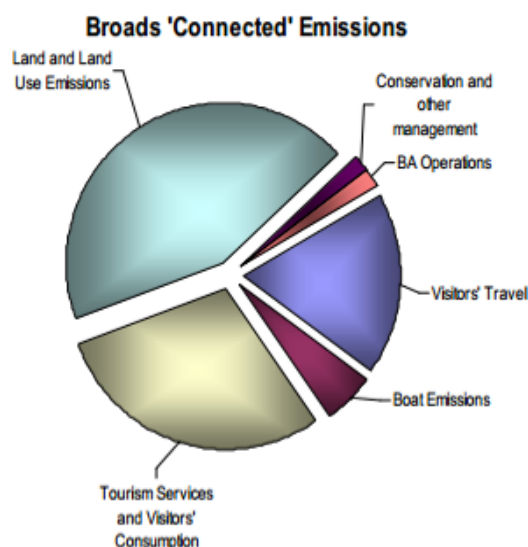
Caveats explained, the data suggests emissions at the various levels with the following approximate magnitudes:

- 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**.

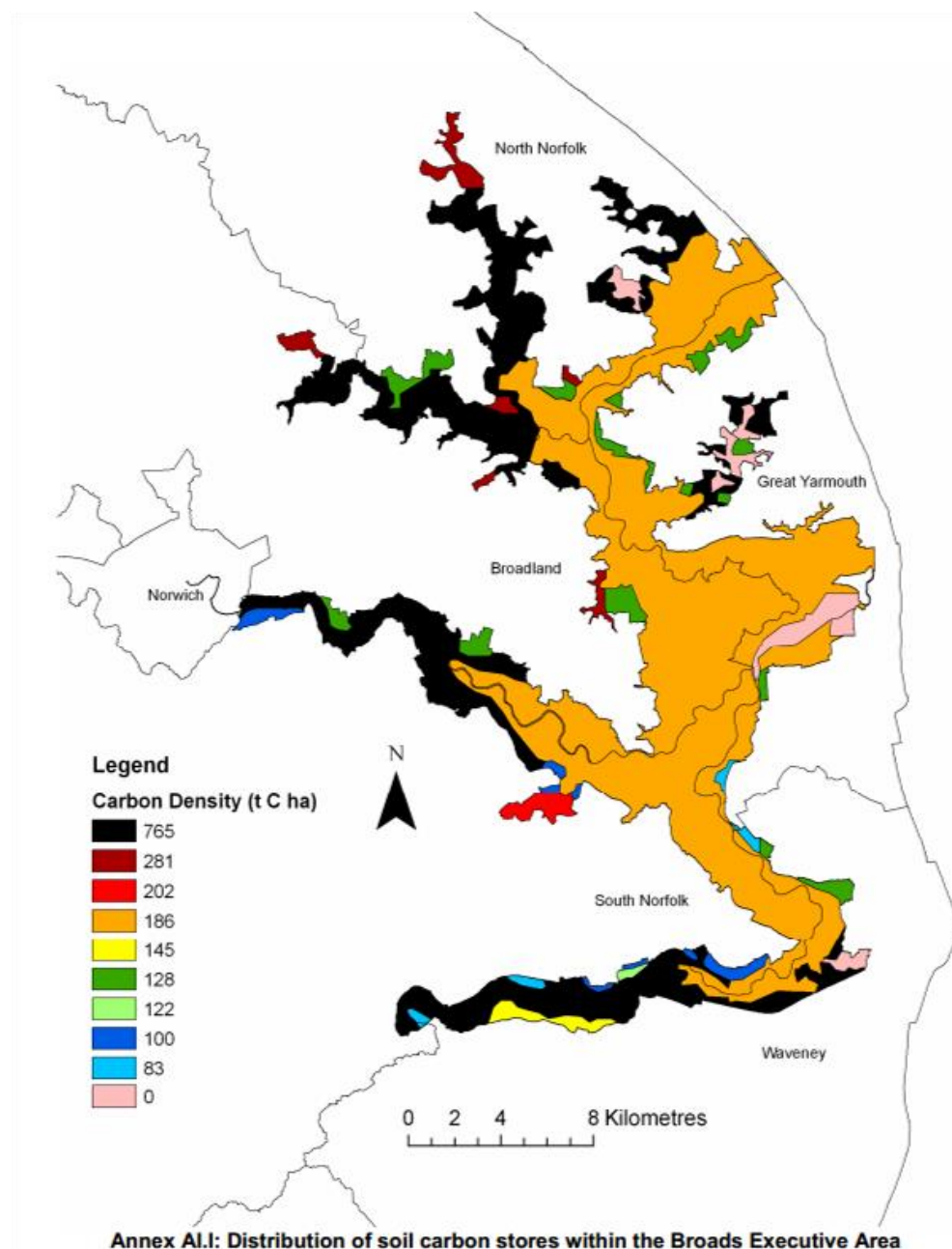
Broads Emissions	Level 2a: estimated magnitude of GHG emissions 'connected with' the Broads	Level 1: Broads Authority Operations	1,900	131,000
		Other management and organisations	1,900	
		Tourism and Recreation	54,000	
		Land and Land Use	73,500	
	Level 2b: estimated magnitude of emissions 'NOT connected 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 12

Soil carbon stores in the Broads Authority



2.9 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, around 83% 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 freshwater 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 Broad's 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. 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.

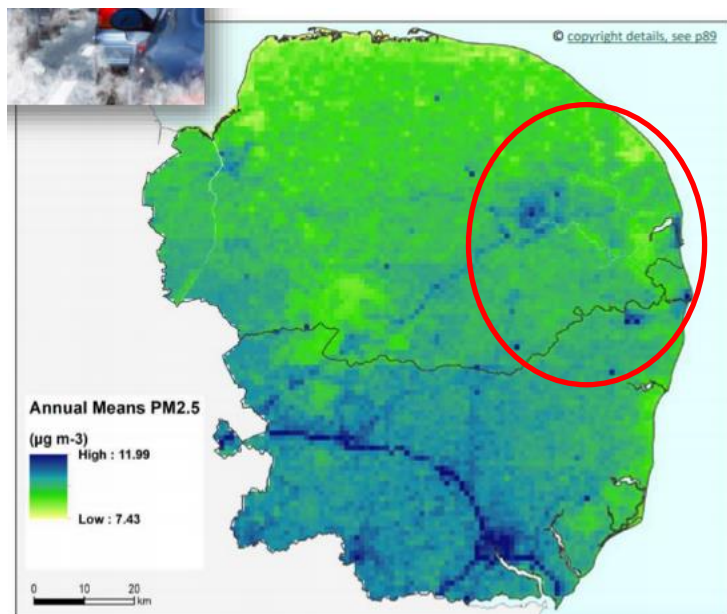
2.10 Air

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.

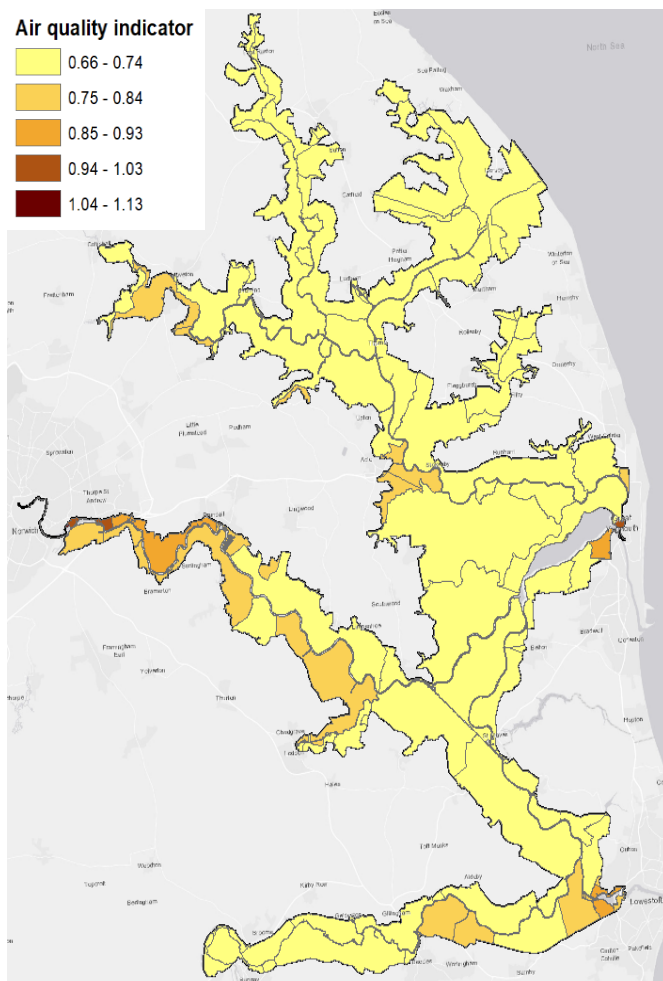
Map 11 is taken from the [Natural Capital Evidence Compendium for Norfolk and Suffolk](#) (2020). It shows that the annual PM2.5 levels are greater in the urban areas.

Map 13

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.



Map14:

A measure of the estimated concentration of four air pollutants (nitrogen dioxide, benzene, sulphur dioxide and particulates) for Isoas associated with the Broads, based on data from the UK air information resource. Light yellow indicate low scoring air pollution areas and dark brown high scoring areas - [Norfolk insight](#).

2.11 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).

2.12 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](#)

2.13 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 15

National important assets

State: Nationally important assets

Norfolk and Suffolk constitute 7% of the land area of England and in 2018, supported 3% of its population. As the maps to the right show, the counties include over 10% of a variety of natural assets and protected areas. These examples span provisioning, regulating and cultural ecosystem services, as well as aspects of biodiversity and terrestrial and marine designations. The land, coast and sea of Norfolk and Suffolk therefore make a substantial contribution to the total stock of England's natural assets.

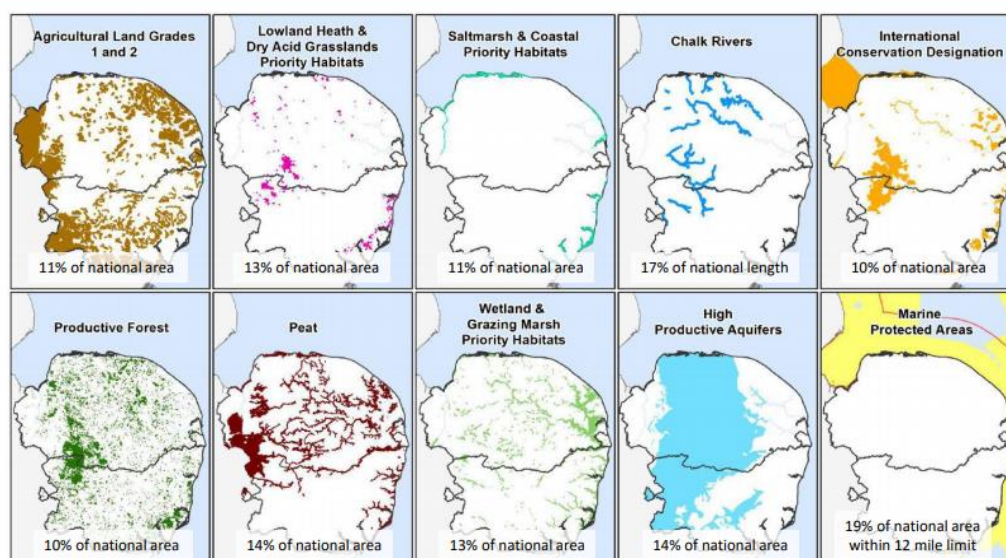


Figure 3, from the Compendium, shows the outcome of comparing the ten nationally important assets, shown above, against the key findings of the risk review.

Figure 3

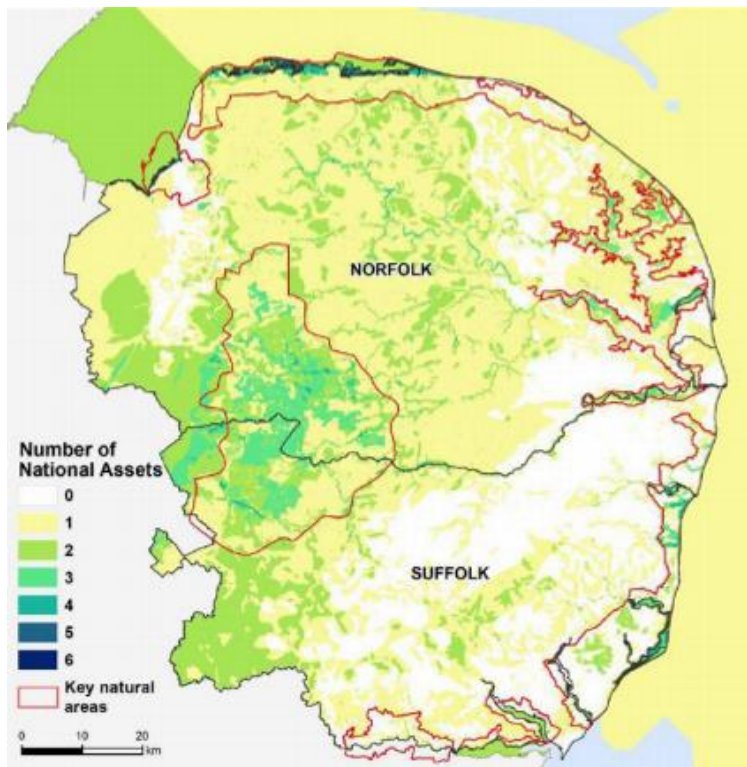
Risk of nationally important assets

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 16

Overlay of the ten important assets



3.14 Recreation and Economy

Figure 4 is from the STEAM Report 2023, shows facts and figures about tourism in the Broads and surrounding area (area of influence).

Figure 4

STEAM Report data from 2022. This data compares some indicators, as assessed, in 2022 to the same indicators in 2021.



2.15 Demographic Profile

According to the 2021 Census, the population of the Broads Executive Area is 6,271. With an area of 290 km², the population density is 21.62 per km². The population is markedly elderly, as shown in the Graph 1.

Figure 5

Census age profile

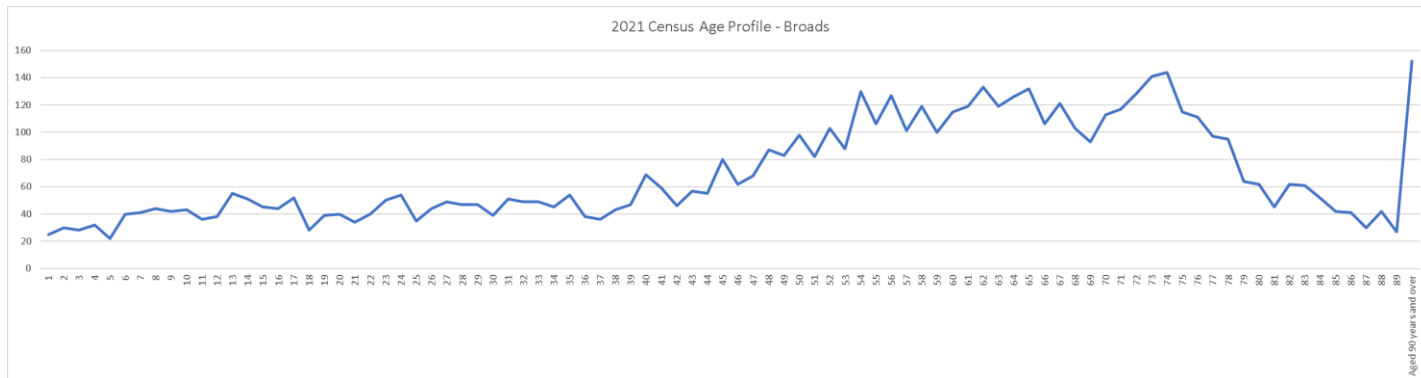


Figure 6

Shows the age and gender population breakdown within the Broads compared to England and Wales. This shows the Broads has an older population.

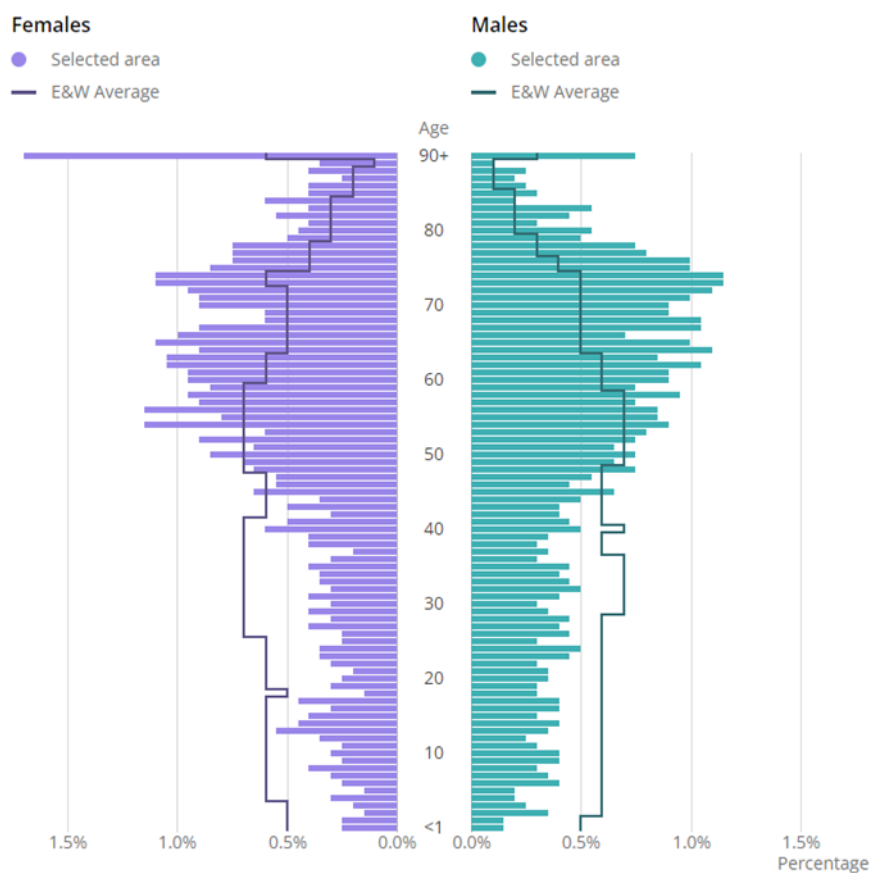


Table 4

Population comparisons between the 2001 and 2011 and 2021 Census.

2001 Population	2011 Population	2021 Population
5,900	6,271	6,279

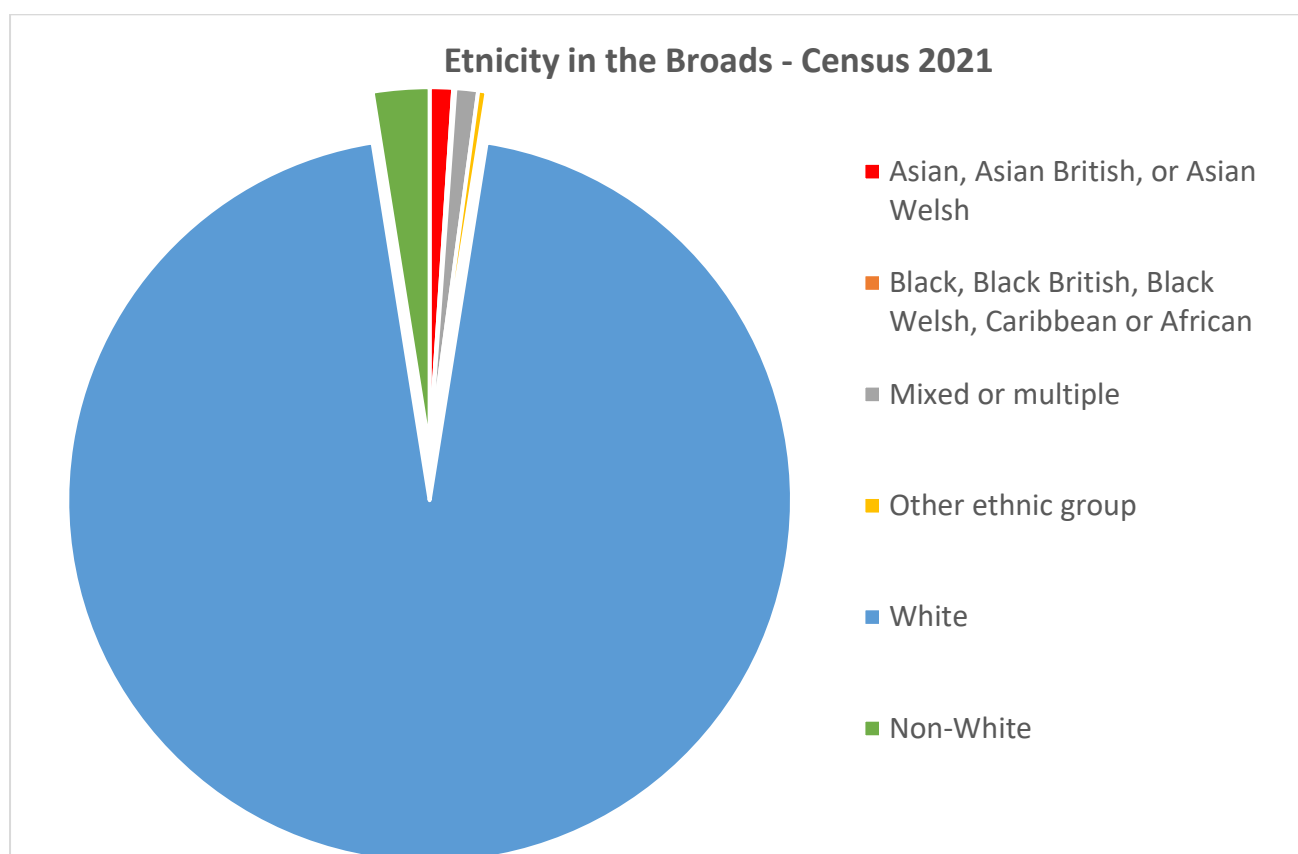
With regards to the percentage change in size of usual resident population by age between 2011 and 2021, Census 2021 information is shown in the table 5.

Table 5

Percentage change in size of usual resident population by age between 2011 and 2021

Age	0 - 14	15 - 29	30 - 44	45 - 59	60 - 74	75 and over	Total
2011	655	778	892	1451	1672	823	6271
2021	552	648	737	1434	1810	1098	6279
Change	-103	-130	-155	-17	138	275	+8

In terms of ethnicity, the population of the Broads is mostly white.

Figure 7

2.16 Economic Activity

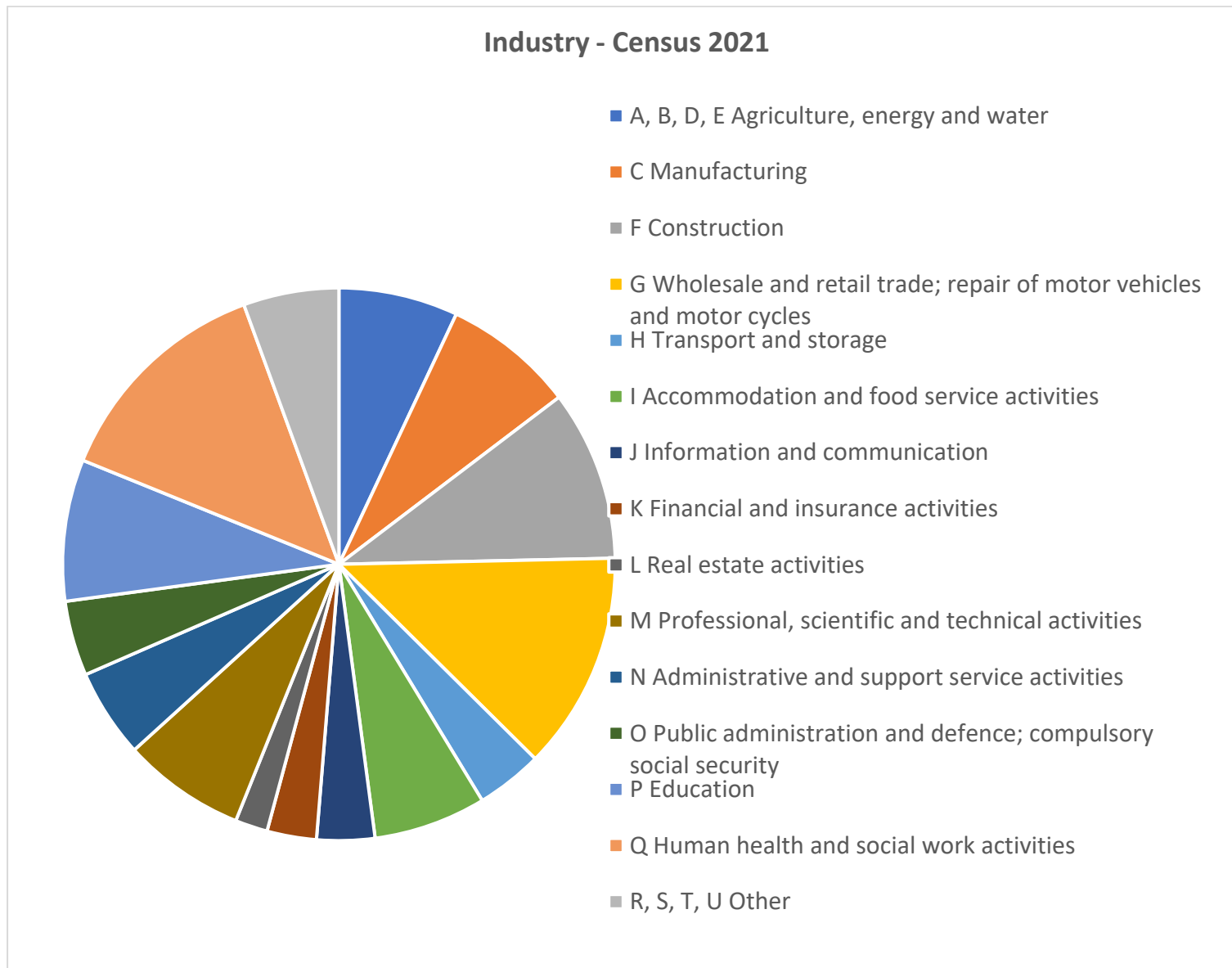
Table 6

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 - 2011	18.1	16.4	11.0	10.2	14.4	9.0	5.5	5.9	9.4
The Broads Authority - 2021	20.0	17.8	13.2	9.0	13.2	7.6	6.0	5.7	7.6
National Park Average	18.4	18.9	11.3	7.5	17.2	8.3	5.6	4.5	9.1
England and Wales	12.8	20.2	13.2	9.3	10.3	9.4	7.5	7.0	10.5

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.

Figure 8 Detailed occupation data: 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 June, August, November 2023. The trend can be seen on [nomisweb](#) by adding the ward name.

Table 7

Out of work benefits claimants

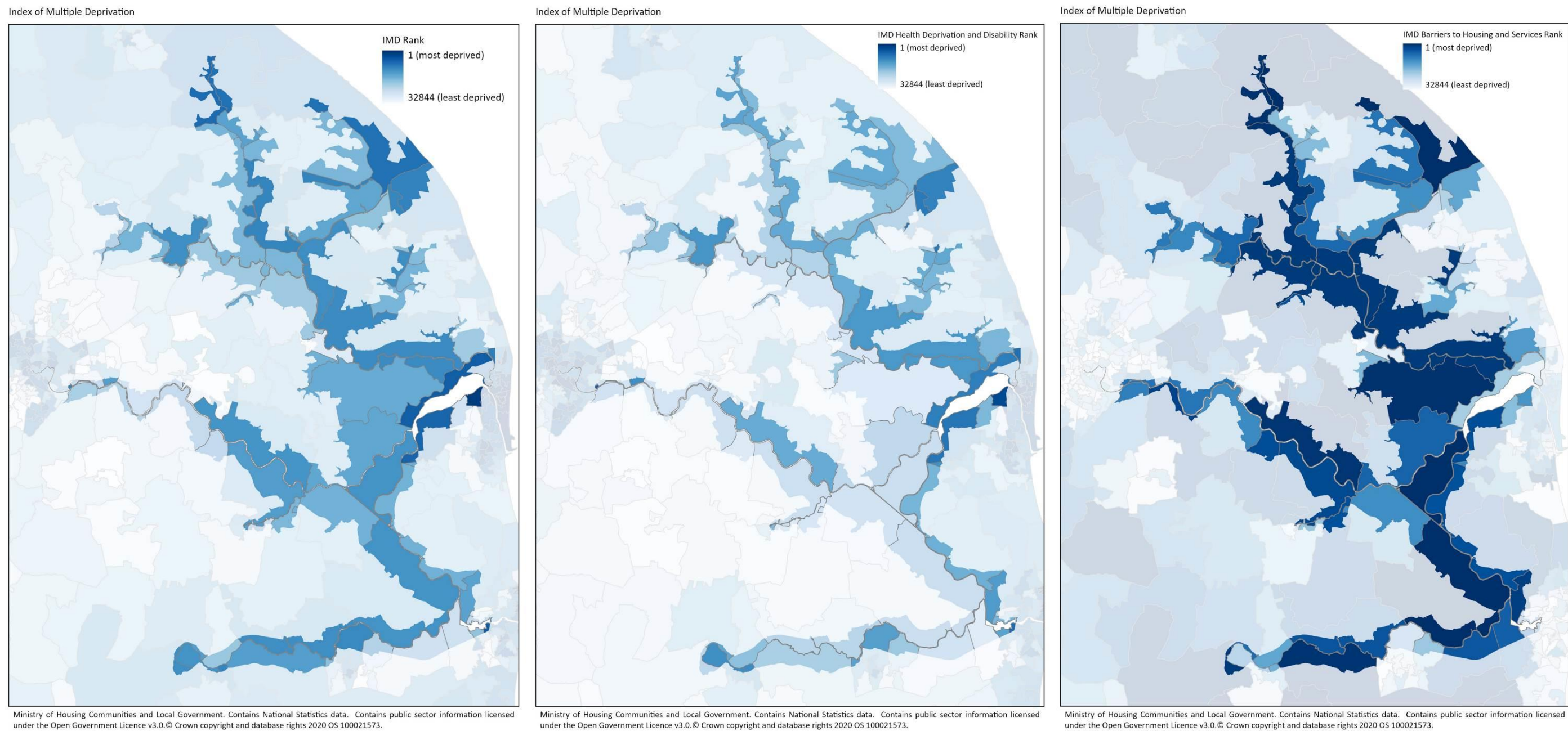
Ward	Out of work benefits Jun 2023	Out of work benefits Aug 2023	Out of work benefits Nov 2023
33UCGN: Acle	1.8%	2%	1.9%
33UCGQ: Blofield with South Walsham	1.7%	1.4%	1.4%
33UCGR: Brundall	1.6%	1.7%	1.7%
33UCGT: Buxton	1.6%	1.5%	1.7%
33UCGU: Coltishall	1.6%	1.3%	2.3%
33UCHE: Marshes	2.3%	1.8%	2.0%
33UCHQ: Thorpe St Andrew South East	1.8%	1.9%	1.9%
33UCHR: Wroxham	1.5%	1.9%	1.9%
33UDFY: Bradwell North	1.9%	1.7%	1.8%
33UDGB: Caister South	3.2%	2.7%	2.8%
33UDGE: East Flegg	2.2%	2.2%	2.5%
33UDGF: Fleggburgh	1.9%	1.8%	1.7%
33UDGL: Ormesby	2.7%	2.7%	2.8%
33UDGP: West Flegg	2.3%	2.3%	2.9%
33UFGY: Happisburgh	1.9%	2.1%	1.9%
33UFHB: Hoveton	2.7%	3.0%	3.0%
33UFHM: Scottow	1.1%	0.9%	1.3%
33UFHR: Stalham and Sutton	3.1%	2.9%	3.5%
33UFHX: Waterside	2.0%	1.9%	1.9%

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 Jun 2023	Out of work benefits Aug 2023	Out of work benefits Nov 2023
33UFHY: Waxham	1.4%	1.5%	1.8%
33UHHA: Chedgrave and Thurton	2.4%	2.4%	2.9%
33UHHF: Ditchingham and Broome	2.0%	1.8%	1.8%
33UHHG: Earsham	2.3%	1.8%	2.2%
33UHHK: Gillingham	2.5%	2.4%	2.9%
33UHHQ: Loddon	3.0%	3.0%	3.6%
33UHHY: Rockland	1.1%	1.3%	1.4%
33UHJC: Stoke Holy Cross	1.7%	1.6%	1.8%
33UHJF: Thurlton	1.8%	1.8%	2.2%
42UHFY: Beccles North	2.8%	3.0%	3.0%
42UHGB: Bungay	3.1%	2.5%	2.8%
42UHGD: Carlton Colville	1.7%	1.6%	1.8%
42UHGE: Gunton and Corton	1.4%	1.8%	1.8%
42UHGK: Lothingland (GYBC)	2.5%	2.1%	2.6%
42UHGN: Oulton Broad (Whitton)	2.6%	2.4%	2.4%
42UHGT: Wainford	2.0%	2.4%	1.5%
42UHGW: Worlingham	1.7%	1.5%	1.8%

2.17 Deprivation

Indices of Multiple Deprivation are often used to highlight those areas most likely to suffer from social exclusion. Maps 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.



Map 17

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%)

Map 18

Health Deprivation and Disability Rank for the Broads Authority
In the main, the Broads area reflects the rest of the surrounding areas.

Map 19

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. .

2.18 Housing

3.18.1 Accommodation Type

According to the 2011 Census, the Broads Area has the accommodation types set out in tables 8 and 9.

Table 8

Accommodation types

	Total: All households		Detached		Semi-detached		Terraced		In a purpose-built block of flats or tenement		Part of a converted or shared house, including bedsits		Part of another converted building, for example, former school, church or warehouse		In a commercial building, for example, in an office building, hotel or over a shop		A caravan or other mobile or temporary structure	
	number	%	number	%	number	%	number	%	number	%	number	%	number	%	number	%	number	%
The Broads	3,058	100.0	1,567	51.2	622	20.3	382	12.5	233	7.6	27	0.9	90	2.9	23	0.8	114	3.7

A greater number proportion of residents in the Broads live in detached properties.

Table 9

Property ownership

Tenure of household	The Broads	National Park Average
Total: All households	100.0	100.00
Owned	72.0	70.19
Owned: Owns outright	52.3	48.39
Owned: Owns with a mortgage or loan	19.7	21.79
Shared ownership	0.3	0.52
Shared ownership: Shared ownership	0.3	0.52
Social rented	4.9	10.47
Social rented: Rents from council or Local Authority	2.0	3.81
Social rented: Other social rented	2.9	6.64
Private rented	22.7	18.77
Private rented: Private landlord or letting agency	19.1	14.56
Private rented: Other private rented	3.6	4.21
Lives rent free	0.1	0.05
Owns with a mortgage or loan or shared ownership	20.1	22.34
Private rented or lives rent free	22.7	18.81

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.

2.18.2 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):

- 2022/2023 – 3 net new residential dwellings and 1 holiday homes.
- 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.

2.18.3 Household Composition

Table 10

Household composition

One-person household: Aged 66 years and over	One-person household: Other	Single family household: All aged 66 years and over	Single family household: Married or civil partnership couple	Single family household: Cohabiting couple family	Single family household: Lone parent family	Single family household: Other single-family household	Other household types: With dependent children	Other household types: Other, including all full-time students and all aged 66 years and over
%	%	%	%	%	%	%	%	%
17.9	16.2	17.4	29.2	9.5	4.6	0.4	1.2	3.5

The majority are single family households.

2.19 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, Pilson 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.

2.19.2 Car Ownership

Looking at car ownership figures from the 2021 Census, the information for the Broads is similar to the National Park Average.

Table 11

Car ownership (percentages)

	No cars or vans in household	1 car or van in household	2 cars or vans in household	3 or more cars or vans in household
The Broads Authority	9.5	40.0	33.2	17.3
National Park Average	9.6	38.6	34.8	17.1

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.

2.19.3 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.

2.19.4 Air

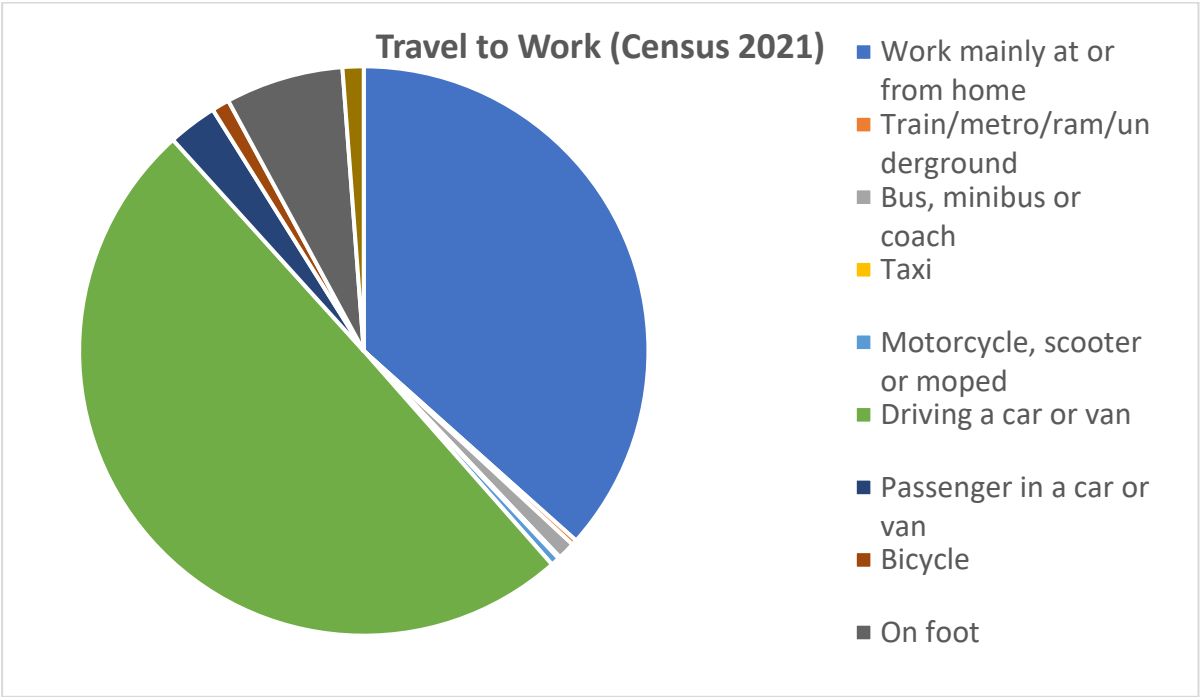
Norwich International Airport is within a few miles of the western edge of the Broads and offers an increasing number of commercial and low-cost flights. However, air traffic from the airport remains relatively low, and the Broads has as yet not suffered the adverse impacts of air traffic on tranquillity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

2.19.5 Travel to work by Car

According to the 2001 Census, the Broads has a higher level of travel to work by car than the English National Parks’ 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.

Figure 9

Travel to work



3.19.6 Road Traffic Incidents

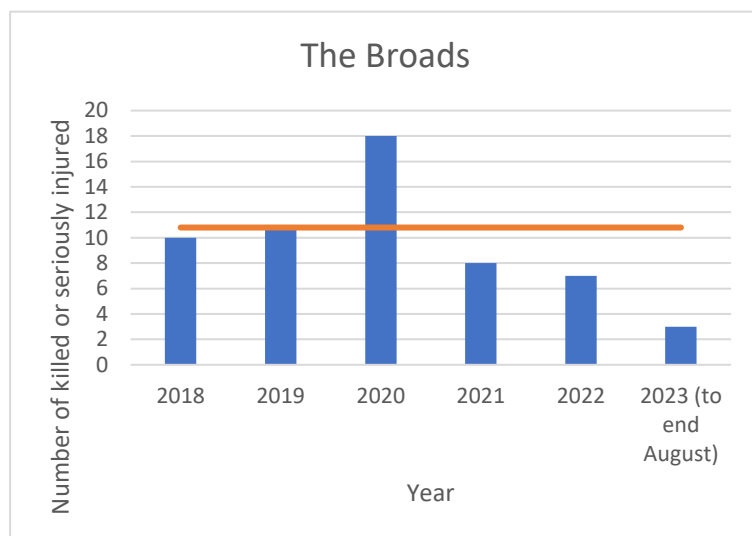


Figure 10: killed or seriously injured that happened on roads within the broads since 2018. The orange line represents the 5 year average - [reported road casualties](#).

Figure 10 shows the number of people that have been killed or seriously injured on roads within the Broads from 2018 – 2023, with an average of 10.8 across 5 years. Most killed or seriously injured casualties have happened on rural roads, with a larger proportion occurring on the A47 between Acle and Great Yarmouth. The year 2020 had a significantly higher number of killed or seriously injured casualties than the 5-year comparators.

2.19.8 Boat Usage

Table 12

Boat usage

Source: Broads Authority Tolls Team. November 2022

PRIVATE BOATS	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Motor Cruisers	4,967	5,059	5,091	5,086	5,110	5,079	5,083	5,004	5,237	5,142
Auxiliary Yachts	1,166	1,168	1,152	1,127	1,132	1,093	1,107	965	1,048	1,024
Day Launches	521	514	504	495	556	574	558	562	582	600
Outboard Dinghies	1,043	1,062	1,016	962	1,064	1,060	1,058	1,051	1,140	1,185
Workboats	188	180	172	156	158	156	153	144	142	166
Passenger Vessels SPB	<i>SPB (Charitable Trusts & Ferries)</i>				22	21	23	13	19	20
TOTAL MOTOR BOATS:	7,885	7,983	7,935	7,826	8,042	7,983	7,982	7,739	8,168	8,137
Sailing Craft	1,214	1,230	1,191	1,107	1,076	1,081	1,023	844	920	861
Rowing Craft	1,636	1,578	1,532	1,513	1,483	1,513	1,545	1,800	2,039	2,054
Houseboats	33	27	33	45	45	49	52	49	52	67
Total	10,768	10,818	10,691	10,491	10,646	10,626	10,602	10,432	11,179	11,119
HIRE BOATS	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Motor Cruisers	869	842	821	789	802	806	801	734	729	673
Auxiliary Yachts	46	47	43	44	45	46	44	39	45	45
ALL CABIN HIRE BOATS:	915	889	864	833	847	852	845	773	774	718
Day Launches	289	299	290	295	290	301	297	261	326	363
Outboard Dinghies	7	8	10	11	9	9	8	4	4	4
Passenger Vessels MCA	11	10	10	6	6	6	6	5	6	6
Passenger Vessels SPB	<i>SPB (Commercial)</i>				6	7	7	4	8	8
TOTAL MOTOR BOATS:	1,222	1,206	1,174	1,145	1,158	1,175	1,163	1,047	1,118	1,099
Sailing Craft	109	110	108	102	101	95	87	74	88	73
Rowing Craft	188	175	184	192	191	194	193	182	227	230
Houseboats	16	16	16	16	28	26	26	27	27	28
Total	1,535	1,507	1,482	1,455	1,478	1,490	1,469	1,330	1,460	1,430
Grand Total	12,303	12,325	12,173	11,946	12,124	12,116	12,071	11,762	12,639	12,549

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

2.20 Health

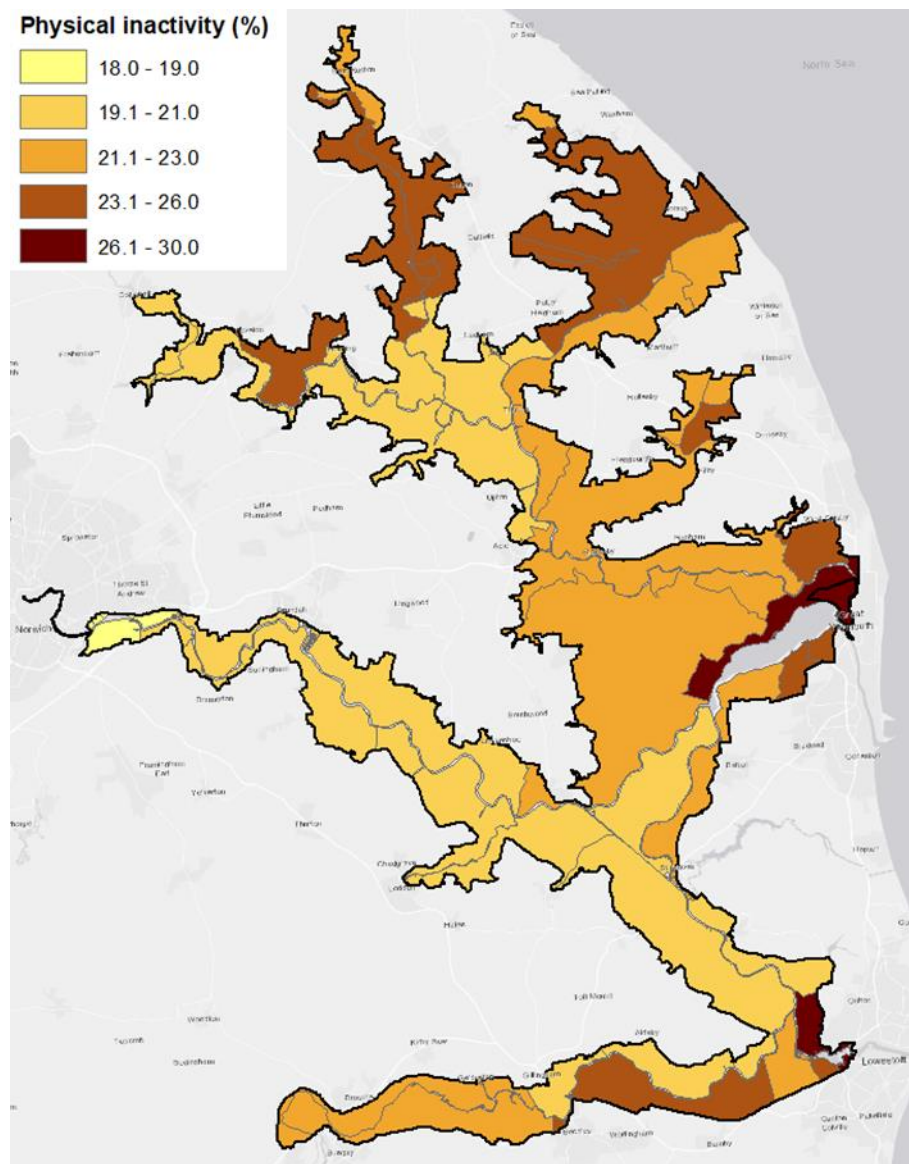
Table 13

Disability key statistic – Census 2021

	Disabled under the Equality Act		Not disabled under the Equality Act	
	number	%	number	%
The Broads	1,379	22.0	4,899	78.0

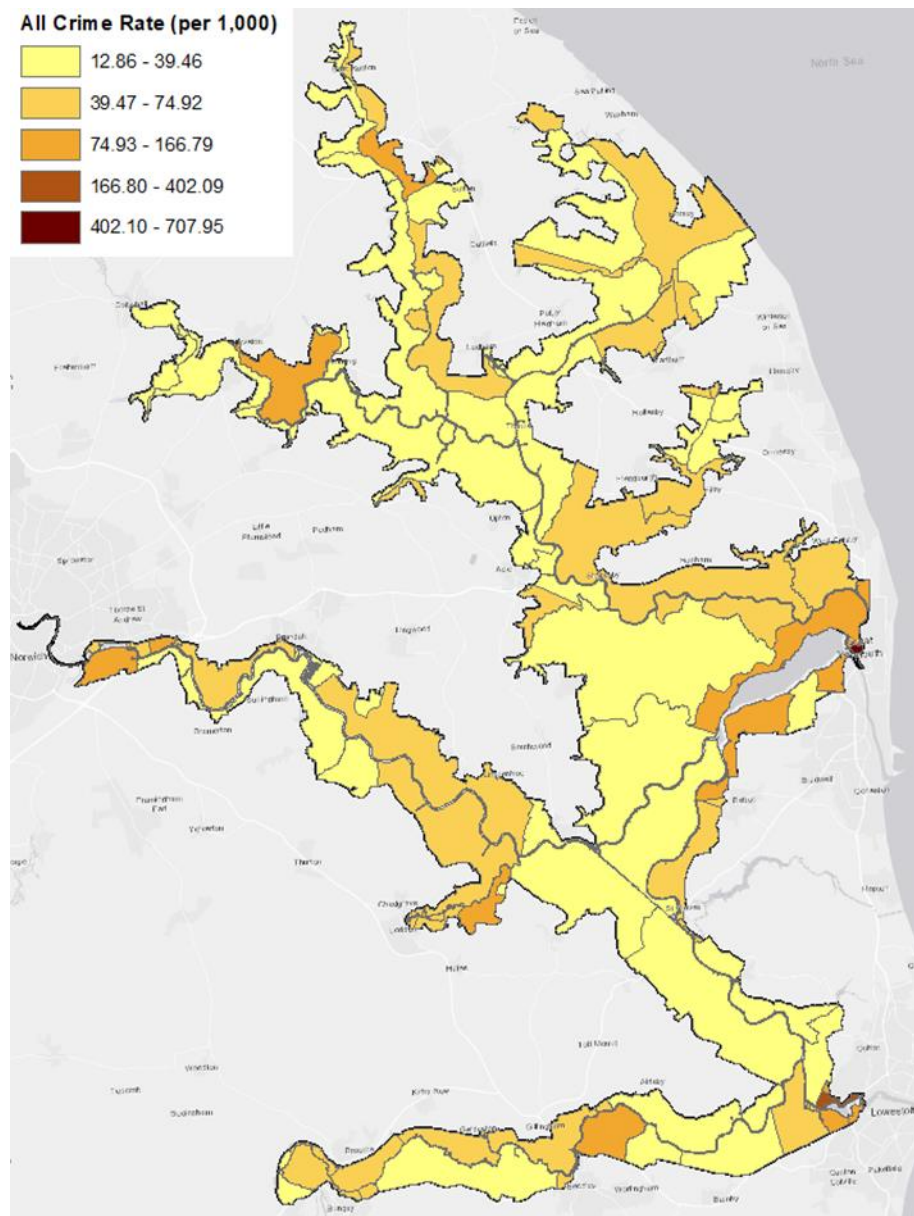
The Census data shows that the percentage of people with disabilities is greater in the Broads than other National Parks.

Map 20 shows an estimate of physical inactivity across the Broads; wards associated with Great Yarmouth are highlighted as having the highest levels of physical inactivity.



2.21 Crime

Map 21 Showing crime rates around the Broads.



Crime levels across the whole of the Broads are lower than Norfolk, Suffolk, and England. There were 10,631 reported crimes in LSOAs associated with the Broads between July 2022 and June 2023 (Police UK). The most common crime type was violence and sexual offences. Figure 9 shows the rate of all crimes in LSOAs associated with the Broads; urban areas, such as Norwich, Lowestoft, Great Yarmouth, Heckingham and Horning are highlighted as having the highest rates, although high counts are seen in some rural areas.

2.22 Qualifications

Table 14

Qualifications. Source: 2021 Census.

Area name	None	Level 1 highest	Level 2 highest	Apprenticeship highest	Level 3 highest	Level 4 highest	Other highest
Broads Authority	18.1%	9.6%	13.2%	7.5%	16.1%	32.2%	3.4%
National Park Average	15.1%	8.4%	13.5%	5.9%	15.9%	38.7%	2.5%
England and Wales	18.1%	9.7%	13.3%	5.3%	16.9%	33.9%	2.8%

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

2.23 Broadband

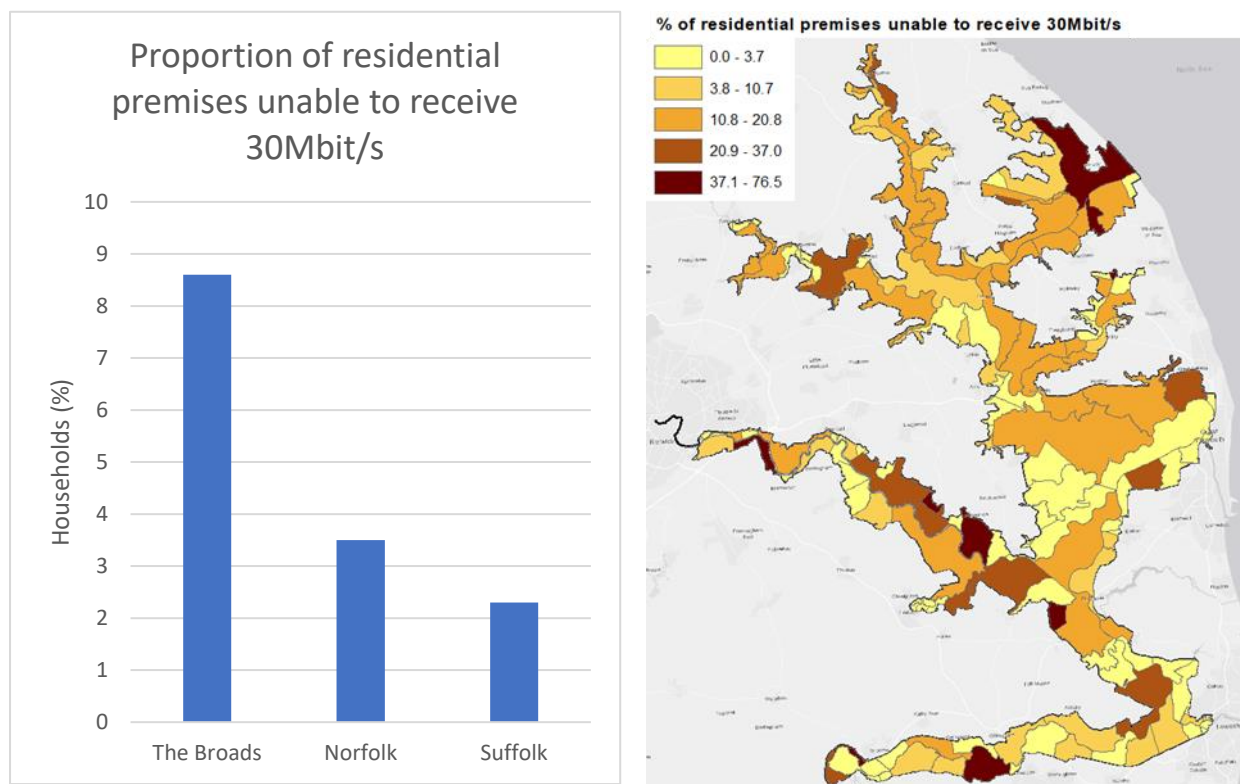


Figure 11: comparison of the broads against Norfolk and Suffolk of households unable to receive superfast broadband – [ofcom connected nations](#).

Map 22: Distribution of output areas in the Broads with the proportion of households unable to receive superfast broadband – [Ofcom Connected Nations](#)