

Broads Curriculum

Geography Key Stage 2

Managing the Broads for people and wildlife

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This resource provides some ideas for:

- human geography (types of settlement and land use, and economic activity)

Introduction

The Norfolk and Suffolk Broads is Britain's largest protected wetland and third largest inland waterway, with the status of a national park. It's also home to some of the rarest plants and animals in the UK. The Broads Authority was set up in 1989, with responsibility for conservation, planning, recreation and waterways. In this resource you'll find some examples of important areas of management relating to each of these responsibilities. As you'll see, all the responsibilities are linked, so the key is to take an integrated approach to managing the Broads.

[About the Broads](#) will introduce you to the area and provide lots of [facts and figures](#).

Here's an [introduction](#) to the Broads National Park and the Broads Authority.

Recreation management

Sailing, motor-boating, canoeing, cycling, fishing, walking, and watching birds and other wildlife are just some of the ways visitors and those living here enjoy the Broads. One of the three key purposes of the Broads Authority is to promote understanding and enjoyment of the Broads, but we need to strike the right balance between this and conservation and navigation interests. Tourism makes a huge contribution to the local economy every year but it needs sensitive management to make sure the fragility of this special landscape isn't affected.

Broads Authority recreation infrastructure and services

- How Hill National Nature Reserve
- Whitlingham Country Park
- Visitor centres at Hoveton/Wroxham, How Hill and Whitlingham
- Boat trips at Hoveton/Wroxham, How Hill and Whitlingham
- Boardwalks over fens and to viewpoints
- Fishing platforms at some moorings and boardwalks
- Close links with the Broads Canoe Hire Association
- Yacht stations at Norwich and Great Yarmouth

- Over 50 24-hour mooring points, some with water and electric charging points
- Staffed 24-hour moorings at Reedham
- Ranger team with launches and vehicles to patrol rivers, enforce bylaws and assist visitors on land and water
- Close association with Broads Beat, operated by Norfolk Police
- Eight free parking locations
- Events programme
- Visitor website and publications

Other forms of recreation management

- Working with partner organisations to seasonally zone waters to allow wildlife to be free of disturbance
- Working with tourism partners (through [Visit the Broads](#)) to promote and brand the Broads National Park

Tourism in the Broads

- In 2017 there were over 7.692 million visitors to the Broads (12.74 million visitor days)
- Tourism contributes £606.03 million to the local economy
- Tourism supports 7,222 full-time equivalent jobs
- Tourism and recreation account for more than 50% of the Broads economy

Damage to the environment, pressures and conflicts

- Litter
- Water pollution
- Erosion of riverbanks and reedbeds caused by boat wash
- Different recreational requirements of different users at 24-hour moorings e.g. water skiers, dinghy sailors, anglers and people on holiday boats

- Visiting craft and other sources may introduce non-native invasive species e.g. Himalayan balsam, floating pennywort, button weed, parrot's feather, Asian clam, zebra mussel, American crayfish and killer shrimp

Conservation management

Wildlife

- The Broads is a haven for a quarter of Britain's rarest species
- 28 Sites of Special Scientific Interest (SSSIs) cover nearly a quarter of the Broads Authority executive area
- Rare birds you may spot: crane, bittern, marsh harrier
- Rare insects: Norfolk hawker dragonfly, swallowtail butterfly, fen raft spider
- Rare plants: milk parsley, holly-leaved naiad, water milfoil, fennel-leaved pondweed, stoneworts

All these species depend on good water quality. One key technique for restoring good water quality is biomanipulation, which can be divided into several stages of work:

- Remove nutrient-rich sediment by mud pumping or dredging
- Construct a fish barrier to exclude fish
- Remove fish from the waterbody, particularly roach and rudd, by electrofishing (temporarily stunning fish) or netting
- Allow water flea populations to grow, as predator pressure has been reduced by removing the fish
- Water fleas will eat algae suspended in the water and restore water clarity, allowing restoration of submerged macrophyte (large aquatic plant) communities
- Once macrophyte communities have been restored, fish barriers can be removed to allow fish to return
- After biomanipulation, ecological and hydrological monitoring are important, to make sure that good water quality is maintained

Habitats

One of the most important Broads habitats is the fens, made up of reed, sedge and other marsh plants. Without management, fens dry out and other, scrubby plants and then small trees start to develop. Agricultural incentives are sometimes available to encourage landowners and farmers to manage their land in particular ways. Under the Countryside Stewardship scheme farmers are paid a subsidy by the [Department for Environment, Food and Rural Affairs](#) to manage land within the Broads in an environmentally sensitive manner.

Fens can be maintained or restored by a variety of techniques

- Hand cutting and raking of marsh litter
- Mechanical methods such as the fen harvester
- Grazing ponies and Highland Cattle
- Supporting the reed and sedge cutting industries

Waterways management

The Broads Authority is responsible for sediment management in the rivers and broads (shallow lakes). Over the years sediment has increased as a result of environmental changes. There are more accumulations of algae in the broads and more soil has been eroded. We hope improvements in water quality, measures to reduce bank erosion, improve bank protection and manage flood risk will lessen the need for dredging.

Dredging

To protect navigation channels and this internationally important wetland we aim to:

- Identify how much sediment is coming into the Broads
- Work with other organisations to reduce the amount coming in
- Define desired channel dimensions in order to plan what future dredging will be needed
- Reuse dredged sediment wherever possible for work such as restoring riverbanks, as we have done at Salhouse Spit

The two dredging methods routinely used are grab (or excavator) dredging and suction dredging. Suction dredging uses a floating platform with an engine that powers a pump. The sediment is passed along tubes to an adjacent disposal site, often a field of low ecological quality.

Water catchment management

The Broads does not exist in isolation. The catchment area of the rivers in the Broads is more than 10 times bigger than the Broads and includes around two-thirds of Norfolk and some of north Suffolk.

Water that falls in this area runs, drains, percolates, or is pumped into rivers and ultimately flows through the Broads and out to sea at Great Yarmouth. A [Broadland Catchment Partnership](#) has been formed to work together for healthier water and wetlands in the wider area.

Climate change

The easterly, low-lying and coastal nature of the Broads makes it vulnerable to the effects of climate change and sea level rise. Adapting to climate change is one of our strategic priorities in recognition of how serious the potential impact is. Planning now for warmer, wetter winters and drier, hotter summers, as well as more frequent extreme events like flooding, will help minimise future adverse impacts of climate change and make use of its potential opportunities.

Planning

As part of the national park family we have a duty to protect the Broads while balancing its communities' needs. Strong planning policies help ensure that development is controlled, well designed and carefully sited to be sensitive to the existing landscape, while meeting the needs of local people and the local economy. All new developments within the Broads need to be carefully considered to ensure that they are in line with our agreed planning policies. Our planning team plays a vital role in making sure that any new development contributes to the quality of the natural environment and built heritage, as well as providing homes and work places to support the people who live here and sustain the local economy.

Planning policies

The [Broads Local Plan](#) is the document used for making decisions on planning applications and other development matters. The plan covers a wide range of planning topics including:

- Renewable energy
- Affordable housing
- Moorings

- Flooding
- Impact of development schemes on people and the landscape

Planning permission

Planning permission is approval to start building, or altering a building or piece of land. Specific Broads-related work that generally requires planning permission includes:

- New piling or quay headings
- Creation of new moorings or cuts (small waterways)
- New fishing platforms

Planning enforcement

The Broads Authority is responsible for enforcing planning regulations and challenging illegal development. A recent example took place at Thorpe Island on the River Yare on the edge of Norwich, where boats were being moored in a mooring basin that did not have planning permission for mooring boats.

Proactive planning

Sometimes there are opportunities to improve the landscape through the planning process. For example the Broads Authority worked with power supply providers to bury overhead electrical power lines underground, in order to restore the open landscape of the marshes near the historic St Benet's Abbey on the River Bure. This work also protected wildfowl such as swans and geese from the potential danger of electrical power lines.