

**Broads Local Plan – June Bite Size Piece**  
Report by Planning Policy Officer

**Summary:** This report introduces the following topics for the Publication version of the Local Plan: Soils

**Recommendation:** Members' views are requested.

**1.0 Introduction**

1.1 This report introduces the following topics for the Publication version of the Local Plan: Soils

1.2 Members' views are requested to inform the draft policy approach in the Publication version of the Local plan.

1.3 It is important to note that this is not necessarily the final text or approach, but is part of the development of the final text. There could be other considerations that come to light between now and the final version being presented to Planning Committee.

**2.0 Topics covered in this report:**

2.1 Soils – a new strategic policy on soils with some amendments to the peat policy. Note that it is intended to undertake a single issue focussed consultation on this section.

**5.0 Financial Implications**

5.1 Generally officer time in producing these policies and any associated guidance as well as in using the policies to determining planning applications.

Background papers:None

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Appendices: APPENDIX A Soils

## 1. Soils

### Policy PUBSPxxx Soils

Proposals shall address the following in relation to soils in the Broads:

- i) protect the best and most versatile agricultural land;
- ii) address decontamination where needed in order to improve quality;
- iii) re-use top soil locally;
- iv) take particular care in the transportation and disposal of soil during development to prevent possible movement of invasive species; and
- v) address soil erosion and possible contamination of the water environment

The Authority will refer to the principles in the DEFRA safeguarding soils strategy.

### Reasoned Justification

The NPPF (at paragraph 109 and 143) seeks the protection and enhancement of soils as well as preventing development from contributing to unacceptable levels of soil erosion. The NPPF also seeks the safeguarding of the best and most versatile agricultural land.

The NPPG identifies soils as *'an essential finite resource that provides important 'ecosystem services', for example as a growing medium for food, timber and other crops, as a store for carbon and water, as a reservoir of biodiversity and as a buffer against pollution.'*

The map at Appendix S shows the best and most versatile agricultural land. The best and most versatile land is defined as Grades 1, 2 and 3a of the Agricultural Land Classification.

Soil pollution can arise from different sources including agricultural activities and fuel storage. Where development is proposed on land that could be contaminated, a site investigation will usually be required.

The Broads have a number of Non-Native Invasive plant and invertebrate species which are easily transferable between sites via machinery, soil and damp equipment. These species can alter entire ecosystems by displacing or outcompeting local species, spreading disease, changing the ecology and physically clogging the waterways. Any proposal for development on or near water, or on land with record of invasive species present should include appropriate biosecurity measures:

- Clean, Check, Dry - machinery, equipment and clothing before moving between sites. More information can be found on [www.nonnativespecies.org/checkcleandry](http://www.nonnativespecies.org/checkcleandry)
- Avoid transfer of vegetation or viable seeds or propagules in topsoil or other material. If possible reuse soil on the same site.
- Avoid importing topsoil which is unscreened.

Soils are susceptible to erosion which can pollute ditches and waterbodies via sedimentation or addition of nutrient contained in the soil and the Authority actively works with landowners to address this. The sediment and nutrient released into water can smother vegetation and invertebrate life, and result in algal blooms which cause further damage to the ecology. Mitigation strategies should include:

- Leaving an appropriately sized buffer strip (3-5m wide) of vegetation between worksite and surrounding ditch network. If necessary use appropriate ground protection system to keep machinery disturbance of vegetation to a minimum in the buffer area.
- Rapidly re-establishing native vegetation cover over exposed and disturbed ground. Where it is necessary to store soil, keep it covered to avoid erosion.
- Use of sediment traps, such as earth bunds or via creation of new ponds to slow the flow of water and prevent sediment reaching ditches

Soil runoff can carry sediment and nutrients into the local watercourses where they can reduce water quality, smother fish spawning grounds and increase the risk of local flooding. Soil runoff can come from many sectors including construction sites, eroded rural roads and agriculture, for example heavy rainfall on compacted soils or cropped fields which are not properly managed. There is much advice available for the agricultural sector on minimising runoff and managing soils. Construction sites shall be required through the planning process to take adequate steps to minimise soil runoff.

The peat and alluvial gley soils on the grass marshes are rich in carbon.

As part of the Government's 'Safeguarding our Soils' strategy<sup>1</sup>, Defra has published a code of practice on the sustainable use of soils on construction sites, which may be helpful in development design and setting planning conditions.

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<sup>1</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/69308/pb13298-code-of-practice-090910.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69308/pb13298-code-of-practice-090910.pdf)

### **Policy PODM10: Peat soils**

#### **See map: Appendix K: Location of Peat soils**

Sites of peat soils will be protected, enhanced and preserved. Where it is considered necessary in cases where development coincides with the location of peat an evaluation will be required to assess the impact of the proposal in relation to palaeoenvironments, archaeology, biodiversity provision and carbon content.

There will be a presumption in favour of preservation in-situ for peat and development proposals that will result in unavoidable harm to, or loss of, peat will only be permitted if it is demonstrated that:

- i) there is not a less harmful viable option;
- ii) the amount of harm has been reduced to the minimum possible;
- iii) satisfactory provision is made for the evaluation, recording and interpretation of the peat before commencement of development; and
- iv) the peat is disposed of in a way that will limit carbon loss to the atmosphere.

Proposals to enhance peat and protect its qualities will be supported.

#### Reasoned Justification

Peat is an abundant soil typology in the Broads and an important asset, providing many ecosystem services (put simply, what nature does for us):

- **Climate change:** The soils formed by the Broads wetland vegetation stores 38.8 million tonnes of carbon (NCA Profile 80, Natural England and the Broads Authority's Carbon Reduction Strategy<sup>2</sup>). Peat soils release previously stored carbon when they are dry. UK peats represent both a threat and an opportunity with respect to greenhouse gas emissions. Correct management and restoration could lead to enhanced storage of carbon and other greenhouse gases in these soils, while mismanagement or neglect could lead to these carbon sinks (which have absorbed carbon dioxide from the atmosphere) becoming net sources of greenhouse gases.
- **Biodiversity:** Peat soils support internationally important fen, fen meadow, wet woodland and lake habitats. 75% of the remaining species-rich peat fen in lowland Britain is found in the Broads. Milk parsley only grows on peat soils and this is the food plant of the Swallowtail caterpillar. Fen orchids have their UK stronghold in the Broads so the peat soils are critical for the survival of this species. Rare plant and invertebrate communities (collection of species) are supported by the peaty soils.
- **Archaeology:** From around the 11<sup>th</sup> Century the demand for timber and fuel was so high that most woodland was felled, and the growing population then began digging the peat in the river valleys to provide a suitable fuel alternative. Rising sea levels then flooded these early commercial diggings and, despite numerous drainage attempts, the flooding continued and subsequently today's broads were formed. Historic England has identified the Broads as an area of *exceptional waterlogged heritage*. Fundamentally, because of the soil conditions in the Broads, there is great potential for archaeology to be well preserved, giving an insight into the past. Archaeology is discussed in more detail in the Heritage section of this document.

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<sup>2</sup> [http://www.broads-authority.gov.uk/data/assets/pdf\\_file/0011/400052/Carbon-reduction-strategy.pdf](http://www.broads-authority.gov.uk/data/assets/pdf_file/0011/400052/Carbon-reduction-strategy.pdf)  
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- **Palaeoenvironments:** The peat has accumulated over time and thus incorporates a record of past climatic and environmental changes that can be reconstructed through, for example, the study of its stratigraphy and pollen content, leading to increased knowledge of the evolution of the landscape.
- **Water:** Peaty soils help prevent flooding by absorbing and holding water like a sponge as well as filtering and purifying water. Peat can absorb large quantities of nutrient and other pollutants, although peat soils can under certain conditions release these chemicals back into the surrounding water.

While there is a certain irony in protecting the peat soils in an area where the lakes originated from peat extraction, peat is a finite resource taking thousands of years to form. Land management that could impact on the quality of the peat soil includes land drainage, introduction of polluted water, burying the peat under hard surfaces or gardens, compacting peat and peat removal to change the land use.

Lowland fen is a priority habitat under the UK Biodiversity Action Plan and the EU Habitats Directive because of the quality and diversity of species it supports. Peat is not a habitat that can be recreated elsewhere as the deep soils take thousands/millions of years to form.

It should be noted that on occasion, for nature conservation benefits, peat can be removed to create very shallow turf ponds or scrapes (areas of temporary open water) on areas of fen or scrub habitat to maximise the biodiversity value and hold back succession to woodland habitat. It is noted that the removal of peat can be necessary for conservation management, e.g. the most biodiverse areas of UK fen occur on areas where the turf has been stripped and vegetation subsequently grown back.

The NPPF (paragraphs 143 and 144) and NPPG only mentions peat soils in relation to its excavation as a mineral resource rather than the issue in the Broads relating to impact due to groundworks from development and inappropriate land management.

The policy seeks protection of peat soils through changes in the location of development in the first instance and then designing proposals in such a way so as to minimise disturbance to the qualities of the peat and the amount of peat removed. Development proposed on areas of peat would require justification for the need to site development and subsequently a peat assessment that shows how efforts have been made to reduce adverse impacts on peat. Proposals that would result in removal of peat are required to assess the archaeological and paleo environment potential of peat and make adequate recordings prior to removal.

In order to then prevent the loss of carbon to the atmosphere that is sequestered in peat soils, disposal is of great importance. The Authority expects peat to be disposed of in a way that maintains the carbon capture properties. Peat needs to go somewhere where it can remain wet (and hence retain its function to lock up carbon and prevent it being released into the atmosphere) or potentially provide a seedbank (the potential for ancient peat to provide a viable seedbank may need to be evidenced) or be reused for local benefit (for example by boosting organic matter in

degraded arable soils). When dry, peat loses its properties and oxidizes, so transfer to the receiving site would need to be immediate.

The Authority has undertaken projects to emphasise the importance of peat:

- 'For Peat Sake' is a Broads Authority education project and education resource document to help students understand what peat is and why it's so precious. It outlines some of the science of peat in the Broads and its history, and explains how and why it is worth studying.
- The Authority provides soil carbon protection advice to land owners, land managers and agri-advisors, arising from its peat survey in 2009/2010. The survey looked at the type and quality of peat soils outside of conservation designated fen and wet woodland habitats, and included fen meadow, grazing marsh and arable sites. These peat soils account for over 4,500 hectares which could potentially be improved for carbon storage mainly through water management. This document was distributed to Farm Advisers working in the Broads.
- Surveys and mapping: Extensive cores have been taken in the past by numerous researchers (Parmenter and Lambert). In recent years peat survey in the Waveney and Ant valley and collating records of peat from partners and surveyors. Current work is scoping out the mapping of historic peat cutting and the collation of peat records

#### Evidence used to inform this section

- NCA Profile: 80 The Broads (NE449), Natural England: <http://publications.naturalengland.org.uk/publication/11549064>
- Positive Carbon Management of Peat Soils, Broads Authority:  
[http://www.broads-authority.gov.uk/\\_data/assets/pdf\\_file/0010/416494/BA\\_PeatCarbonManagement.pdf](http://www.broads-authority.gov.uk/_data/assets/pdf_file/0010/416494/BA_PeatCarbonManagement.pdf)
- Peatlands and Climate Change, Worrall et al, Scientific Review, December 2010:  
<http://www.iucn-uk-peatlandprogramme.org/sites/www.iucn-uk-peatlandprogramme.org/files/Review%20Peatlands%20and%20Climate%20Change,%20June%202011%20Final.pdf>
- FEN PLANT COMMUNITIES OF BROADLAND. Results of a Comprehensive Survey 2005-2009 (Broads Authority and Natural England):  
[http://www.broads-authority.gov.uk/\\_data/assets/pdf\\_file/0006/416391/Fen-plant-report-summary.pdf](http://www.broads-authority.gov.uk/_data/assets/pdf_file/0006/416391/Fen-plant-report-summary.pdf)
- Wetland and Waterlogged Heritage Survey NHPP Activity 3A5, Historic England, 2011 to 2015:  
<http://historicengland.org.uk/research/research-results/activities/3a5>

#### Monitoring Indicators

- Development in areas of peat soils.
- Development on best and most versatile agricultural land