Broads Authority

22 November 2019
Agenda item number 8

Responding to Climate Change emergency update

Report by Carbon Reduction Project Manager

Summary

This report provides an update on action to progress the Broads Authority's commitment to respond to the climate change emergency, made at the Authority's meeting in September.

Recommendation

To note the report.

Contents

1. Introduction

1.1. At its last meeting on 27 September, the Broads Authority adopted a Climate Change Emergency Statement for the Broads. This report provides an update on taking forward actions identified at that meeting.

1.2. The report outlines the proposed governance of the Carbon Reduction project, the creation of a baseline for the Broads as a whole, the National Parks England Climate Position Statement, and the timeline for developing an Action Plan.

2. Developing an action plan

2.1. The priority for the rest of this financial year is to produce a detailed internal action plan covering the next 10 years, and establish key performance indicators to track progress towards our 'zero carbon' ambition. Officers are taking steps to reduce the Authority's carbon emissions, including options to reduce electricity consumption at the Dockyard, and engaging with the landlord of Yare House on lighting in the building and the provision of more electric charging points for our pool vehicles.

2.2. We will calculate a baseline for our own emissions where data is available, and make sure other relevant data will be available in future years.

2.2.1. All our teams are being asked to review their carbon use, and we will identify where carbon savings of 5% can be made compared to the 2019/20 baseline. Our overall objective is to reduce our Scope 1 and 2 emissions by at least 15 tonnes of CO2 in 2020/21. (Scope 1 refers to emissions directly emitted by our actions, such as burning diesel in the engine of an Authority vehicle. Scope 2 refers to emissions generated in producing electricity for the Authority.)

2.3. For emissions in the wider Broads area, we will begin by planning a series of events to find out how the public want us to approach this issue. We want to place particular emphasis on engaging young people, who tend to be less likely to take part in other processes such as Broads Engage workshops. The timeline is to be determined, but we would like to present the public with the outcome of the Carbon Audit before consulting on specific measures. It may be helpful to align with the Broadland Futures Initiative's plans for engagement events in summer 2020.

2.4. An additional priority for this year is to get a better understanding of the potential for carbon crediting within the Broads, in collaboration with the other National Parks. A possible 'off the shelf' option is the UK Peatland Code. The main challenge would be to identify potential sites to include in such a scheme.

2.5. The action plan will be presented to the Broads Authority meeting in March 2020.

3. Carbon audit and baseline

3.1. National Parks England has proposed the use of a methodology developed by the Lake District National Park and Lancashire University, through a company called Small World Consulting. This method would produce a consumption-based baseline for each National Park.

3.1.1. This consumption-based audit would include emissions from activity within the Broads, such as from boat engines. It would also include emissions associated with consumption within the area, such as food grown outside the Broads but eaten in a Broads pub.

3.1.2. A consumption (rather than emission) measure provides a better picture of the impact of activity in a certain area. It avoids the risk of exporting emissions to other areas or countries rather than reducing them. From our perspective, it means we would consider the emissions of tourists driving to the Broads, as well as the emissions from driving within the Broads.

3.2. A copy of the Small World Consulting Proposal is at Appendix 1.

3.3. Our next step is to define the parameters of the report. For example, where the Broads passes between Hoveton and Wroxham, it may be worth including these parishes in the scope of the report, rather than cutting closely to the executive boundaries of the flood plain. As a first step in understanding emissions throughout the Broads, we have used the National Atmospheric Emissions Inventory Datasets to create emission maps on a square kilometre basis within the Broads (Appendix 3).

4. National Parks England Climate Position Statement

4.1. The Climate Change Position Statement at Appendix 2 was agreed at National Parks England's Annual General Meeting on 30 October. This follows the ambition agreed by the Authority at its last meeting.

5. Project governance and reporting

5.1. We will update the Authority annually on progress against Key Performance Indicators, the following year's work programme and targeted emissions savings.

6. Financial implications

6.1. The proposed Carbon Audit will cost between £5,000 and £10,000 depending on how many National Park Authorities agree to use the method.

Author: Harry Mach

Date of report: 22 November 2019

Background papers: Report to BA 27 September 2019

Broads Plan objectives:

Appendix 1 – Carbon footprint analysis proposal

Appendix 2 – National Parks England: Climate Change Position Statement

Appendix 3 – GHG emission maps for the Broads Area

Appendix 1 - Carbon footprint analysis proposal

Costed options from Small World Consulting: October 2019

Background

In 2010 Small World Consulting carried out a baseline consumption-based greenhouse gas audit for the Lake District National Park. By adopting consumption-based metrics alongside more traditional production-based, the Lake District opened up policy areas such as food, shopping, business supply chains and travel by both residents and visitors to and from the Park. The study led to a carbon budget being set each year, with a target to reduce annual emissions by 1% per year compared to business as usual (therefore 6% by 2016). Each year, actions taken to cut emissions have been collated from members of the Park's strategic partnership and assessed in terms of their contribution to the target. Overall, such emission reduction actions are thought to have led to annual savings of around 3% per year, compared to business as usual (50% of the targeted reduction).

The consumption-based emissions reporting adopted by the Park was later used elsewhere, (including Manchester, West Sussex, Cornwall, South Downs National Park and Cumbria), leading to carbon reduction initiatives covering aspects of human consumption that would not have been covered by more traditional production-based carbon accounts. The policy applications adopted by some of these local areas formed a substantial section of the Select Committee for Energy and Climate Change's report on Consumption-Based Emissions Reporting in 2012. More recently, progress in many local areas has been hampered, and in some cases curtailed, by budget cuts. However, the Lake District has continued its leading role.

Seven years after the baseline study, quite a lot had changed, including reporting methods, underlying model data, the numbers and behaviours of residents and visitors, and the evolution of the climate change agenda. We therefore refreshed the baseline in 2017.

In the last 12 months climate change has moved up almost everyone's agenda, with increasingly worrying science, the arrival of protests and strikes, the UK strengthening its production-based targets to net zero by 2050, and a flood of local area declarations of climate emergency.

Here we provide costed options for a consumption-based analysis of carbon in all the UK's national parks, on the same basis as that carried out for the Lake District in 2017, although taking account of some expected variation between parks in the data available.

Options

1. A baseline for residents and visitors

We propose updating the baseline consumption-based carbon emissions assessment for the Park, covering the same boundaries as the 2010 original baseline and refreshed in the following ways:

- The underlying environmentally extended input-output carbon model will be updated reflecting latest data from the Office of National Statistics, UK Environmental Accounts, and local area energy and emissions data (including new sector categorisations).
- Local data will be based on currently available sources:
    - Office of National Statistics – for population, energy use, and resident incomes.
    - Most recent visitor surveys Visitor Survey – for visitor numbers, expenditure breakdowns, UK visitor home locations, and travel modes and distances (within and to and from each Park).
    - Cumbria Visitor Survey – for overall numbers and the most recent available International Visitor Surveys, to understand countries of origin and modes of travel to the UK (sense checked against local Visitor Survey data on port of entry into the UK).
    - Economic data as available in each park (such as the Lake District's local plan review).
    - Traffic Count data if available – which can be used to track changes in emissions from driving in the Park (although the baseline figure will be derived from other means).
    - Annual municipal waste statistics
    - STEAM reports

We also recommend the purchase of Civil Aviation Authority Air Passenger Survey data to assess emissions from resident (rather than visitor) flights. This would bring the methodology into line with our work for Manchester, West Sussex, Cornwall, and the South Downs National Park. Judging by the 2010 survey data, we can expect to receive 60 to 80 responses for each park, weighted to reflect all resident flights. This should be reasonably representative and give an improved estimate of this part of the baseline.

For local data there are choices over the depth of sources to trawl. It would be possible to further explore the use of other local data sources, but the return is likely to be small, given the likely questions over data quality.

Costs per park (without purchase and analysis CAA passenger data):

Number of Parks	**Cost**
1 Park	£9,000
2 Parks	£17,000 (£8,500 each)
3 Parks	£24,000 (£8,000 each)
4 Parks	£30,000 (£7,500 each)

Number of Parks	Cost
Per subsequent park	£6,000

Additional fee for purchase and analysis of CAA passenger data: £1250 + VAT for 1 Park, plus £600 per additional Park, provided the data is purchased in one batch.

2. An outline consumption-based carbon baseline for industries registered in the Park

This will be based on turnover data, broken down by sector, and categorised by GHG Protocol scopes 1,2, supply chain scope 3, according to data available in each park (for example in the Lake District we used an 18 sector breakdown District Local Plan Review). This outline estimate will be based simply on generic modelling of the carbon intensity of different UK industries, scaled to the turnover within each Park, and not the specific characteristics of the actual businesses. It will give an approximate sense of perspective of the carbon from different industries and a comparison of the significance of industry compared to residents and visitors.

Note that this study will look at businesses that are registered in the parks, therefore omitting, for example high street chain stores, chain accommodation providers based outside the Park, and national transport companies.

It should also be noted that the industry 'footprint' will overlap with the footprint of residents and visitors to the significant extent that they buy the goods and services provided within the Park.

Costs per park:

Number of Parks	Cost
1 Park	£2,000
2 Parks	£3,750 (£1,875 each)
3 Parks	£5,250 (£1,750 each)
4 Parks	£6,750 (£1,625 each)
Per subsequent park	£1,500

All costs are exclusive of VAT.

October 2019

Appendix 2 - National Parks England: Climate Change Position Statement

2019

Introduction

It is now well understood that we are facing a global crisis of climate change and ecological collapse. Urgent action is needed to reduce greenhouse gas (GHG) emissions and mitigate further warming, adapt to the changes we are already seeing, and raise awareness amongst decision makers and the wider public of what they can do to address this challenge. England's nine National Park Authorities and the Broads Authority (NPAs) have a central role to play in each of these areas. NPAs are uniquely situated to lead on addressing the climate crisis. We are place-based and landscape focused, with the passion, knowledge, and public support to deliver.

Climate Change and our National Parks

The climate crisis is a serious threat to England's National Parks, their special qualities, communities, biodiversity, and natural environment. We are already beginning to see the impacts of the climate crisis in our National Parks and the wider countryside, and these effects are expected to increase. They include:

- warmer wetter winters, hotter drier summers, and increased extreme weather events
- increased risk of wildfire and drought, and increased pressure on water resources
- increased risk of flooding, subsidence, and erosion, especially along coasts and river corridors
- declining soil health and loss of critical habitats and species, including through a rise in pests and diseases
- damage to infrastructure, traditional buildings, and archaeological features from extreme weather events
- threats to traditional farming caused by changing growing conditions and weather patterns

The effects of climate change will have a cumulative impact on the National Parks that will go beyond the isolated changes noted above.

However, our National Parks are not just passive recipients of climate change, they can and should be powerful drivers of the solution. Protecting the special qualities of our National Parks from the impacts of climate change and helping them adapt is central to fulfilling our statutory purposes, as is helping others understand how they can help. We see National Parks as a critical element of driving a national step-change in behaviour and inspiring collective action that meets the scale of the challenge we face.

National Parks also play a key role in mitigating the worst impacts of climate change and driving adaptation to the changes we're already facing, and this was acknowledged and supported in the recent Landscapes Review[1]. Through targeted efforts to restore habitats and increase ecosystem functionality, National Parks will be central in providing increased carbon sequestration, ecological resilience, biodiversity, and other public benefits such as flood mitigation.

Our Commitment to Climate Action

National Park Authorities committed to leading the way on addressing the climate crisis, as outlined in the National Parks Vision and Circular[2].[2] We are already tackling the climate crisis in several ways, but we are ambitious to do more.

1. We are committed to achieving carbon neutrality, in line with government net-zero[3] targets. **We have agreed an ambition achieve net-zero as NPAs by no later than 2030.**
2. We are committed to working across boundaries, with National and Local Government, partners, stakeholders, Areas of Outstanding Natural Beauty and the Welsh and Scottish National Parks to meet the scale of the challenge before us.

The NPAs are committed to leading on addressing the climate crisis through:

3. **Mitigation** – reducing GHG emissions and increasing carbon sequestration.
4. **Adaptation** – increasing ecosystem resilience, habitat creation, and restoring natural landscape functions.
5. **Education** – increasing awareness among residents and visitors and demonstrating solutions.
6. **Research** – providing a focus for academic and scientific research into pioneering sustainable land management techniques like moorland restoration.

Meeting the Challenge

Reducing our carbon footprint

We are committed to increasing our efforts to mitigate GHG emissions by reducing the carbon footprint of NPAs and operations within our National Parks. NPAs have already taken steps to reduce their carbon footprints through increased efficiency, reduced consumption, and carbon accounting. Through the Sustainable Development Fund, NPAs have also provided vital financial support to schemes that explore ways to reduce GHG emissions.

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[1] See: Landscapes Review Final Report 2019

[2] See: English National Parks and the Broads – UK Government Vision and Circular 2010

[3] We have adopted the Committee on Climate Change definition of net-zero: 'the total active removals from the atmosphere offsets any remaining emissions'

We will:

- agree a common set of metrics, targets, and methodologies across NPAs to monitor emissions reductions
- further reduce our energy consumption through additional efficiency efforts and the increased use of renewable energy sources
- improve the environmental performance of our vehicle fleet by switching to low and zero emission vehicles
- reduce car mileage through greater use of car sharing, carpools, public transport, and alternative working arrangements

Enhancing and restoring nature

National Park Authorities actively influence the management of almost 10% of England's land area and play an important role in raising awareness of the challenges and opportunities the climate crisis poses to our protected landscapes, and the role they can play in addressing the challenge.

We will continue to work alongside farmers, landowners and land managers to increase climate mitigation and adaptation efforts. This can be done by increasing sustainable farming and land management practices and through nature recovery, including habitat restoration and the creation of large carbon sinks through peatland restoration and woodland creation. In England's National Parks, peatlands alone hold 153 mt of carbon[4], more than 40% of the UK's annual CO2 emissions. These ecosystems must be protected and restored so they can continue to sequester carbon.

We will:

- support appropriate woodland planting and peatland restoration projects
- support landscape scale habitat restoration and nature recovery efforts, following the Lawton Report [5]principles of more, bigger, better, and connected habitats
- support farming practices in upland and lowland landscapes that protect and deliver climate benefits
- promote local food produced to high environmental standards to reduce the need to import food with high carbon footprints

Planning for a low carbon future

National Park Authorities are planning authorities, and through this role have been encouraging renewable energy schemes, sustainable housing and transport, and low carbon land management. The National Planning Policy Framework (NPPF) includes meeting the

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[4] See Landscapes Review: Final Report 2019

[5] Making Space for Nature: A review of England's Wildlife Sites and Ecological Network

challenge of climate change as a major priority[6], and NPAs will continue to use their planning role to address the climate crisis. Through planning, NPAs will also continue to support the energy hierarchy, seeking to reduce consumption, improve efficiency, and increase use of renewable energy.

We will:

- actively support the development of renewable energy generation in National Parks where appropriate
- support projects that promote energy conservation and efficiency
- support and encourage the use of sustainable and efficient design, materials, and locations in new development
- seek to reduce the need to travel and increase access to sustainable forms of transport
- support community inspired schemes that reduce emissions, including through renewable energy and increased efficiency
- support initiatives that deliver economic benefits to rural economies from low carbon practices and technologies

Raising awareness and demonstrating solutions

Over 90 million people visit England's National Parks and their surrounding areas every year. Through our visitor centres, guided walks, education programmes, and outreach efforts, NPAs are informing visitors and residents of the impacts of climate change on our National Parks, and what they can do to help.

We will:

- support sustainable tourism practices that limit GHG emissions
- explain to visitors and residents how National Parks are impacted by climate change and what they can do to help
- provide opportunities to get involved in mitigation and adaptation projects
- continue to encourage the use of public transport by visitors and local communities
- collaborate on research and demonstration projects to pioneer new approaches

The Tools to Deliver

Meeting our ambitions and tackling a challenge of this scale will require the resources, tools, and powers to deliver.

[6] See: NPPF 2019

National Park Management Plans

National Park Management Plans are a key mechanism for driving action and collaboration on climate change, both within and beyond National Park boundaries. These should be strengthened and given statutory weight.

We will:

- include clear, ambitious targets on climate change mitigation, adaptation, and nature recovery in National Park Management Plans
- work with partners to provide robust assessments of the effects of climate change on the special qualities of the National Parks within State of the National Park Reports
- report annually and transparently on progress made to deliver targets

Environmental Land Management Schemes

Agri-environment schemes, particularly the forthcoming Environmental Land Management Scheme (ELMS) are a critical tool to protect and enhance National Park landscapes, increase sustainable land management, drive carbon sequestration, and promote low carbon agriculture.

We will:

- work alongside our farming community to deliver emissions reductions and habitat improvements through the delivery of ELMS agreements

Nature Recovery Network

The forthcoming Nature Recovery Network will be key to increasing habitat connectivity and resilience, ecosystem functionality, and biodiversity across our protected landscapes. NPE believes National Parks and Areas of Outstanding Natural Beauty should be at the centre of the future Nature Recovery Network and we are ready to work with Government to deliver nature recovery across our landscapes.

NPAs play an important role in supporting the implementation of local nature recovery strategies, supporting decision making that prioritise climate adaptation and mitigation using the best available data and evidence. NPAs also work closely with Local Nature Partnerships to develop and deliver local nature recovery strategies through our Local Plans.

Planning Structures and Standards

It is important that existing planning tools and standards support action on the climate emergency. This can be done in several ways, through Local Plans, National Green Infrastructure Standards, and green infrastructure planning frameworks, which have already proven to be an important mechanism for delivering climate change action in National Parks.

We will:

- develop clear assessments of the changes required to protect the special qualities of National Park landscapes

- implement landscape scale approaches to managing habitat and wildlife that supports adaptation, connectivity, increases biodiversity, and minimises losses
- play a proactive role on the Nature Recovery Network Steering Group

Working Together

While we know that NPAs and National Parks have a critical role to play in addressing the climate crisis, this is a challenge that requires large-scale collective action. We stand ready to work with our partners, stakeholders, and all levels of Government to meet this challenge together.

We look to Government to:

- recognise the valuable contribution of National Parks in climate mitigation and adaptation, through sequestering carbon and increasing the resilience and function of ecosystems
- provide the resources and funding required to help NPAs deliver on this agenda
- provide support from across key departments to ensure a comprehensive and joined up approach
- support NPAs in monitoring carbon emissions and measuring progress
- support NPAs in efforts to improve understanding and awareness of how to address the climate crisis

We look to:

- Local Authorities and other relevant bodies to support NPA planning policies
- Local Enterprise Partnerships (LEPs) to assist NPAs in assessing the needs of rural communities and the potential for low carbon economic development
- LEPs and Utilities to support NPAs in promoting small scale, community-owned renewables
- Natural England to work with NPAs on supporting land management techniques that protect carbon sinks and adapt to a changing climate
- The tourism sector to engage with NPAs in promoting sustainable tourism that reduces emissions and protects our special qualities
- All other bodies and local organisations whose work contributes to the implementation of National Park Management Plans to actively support this agenda

National Parks England (NPE) provides a collective voice for the National Parks. This statement sets out their shared position on Climate Change. Each Authority works to implement the Management Plan for its area, and so each NPA will need to implement this and other policies in ways that are compatible with this plan and appropriate to local circumstance.

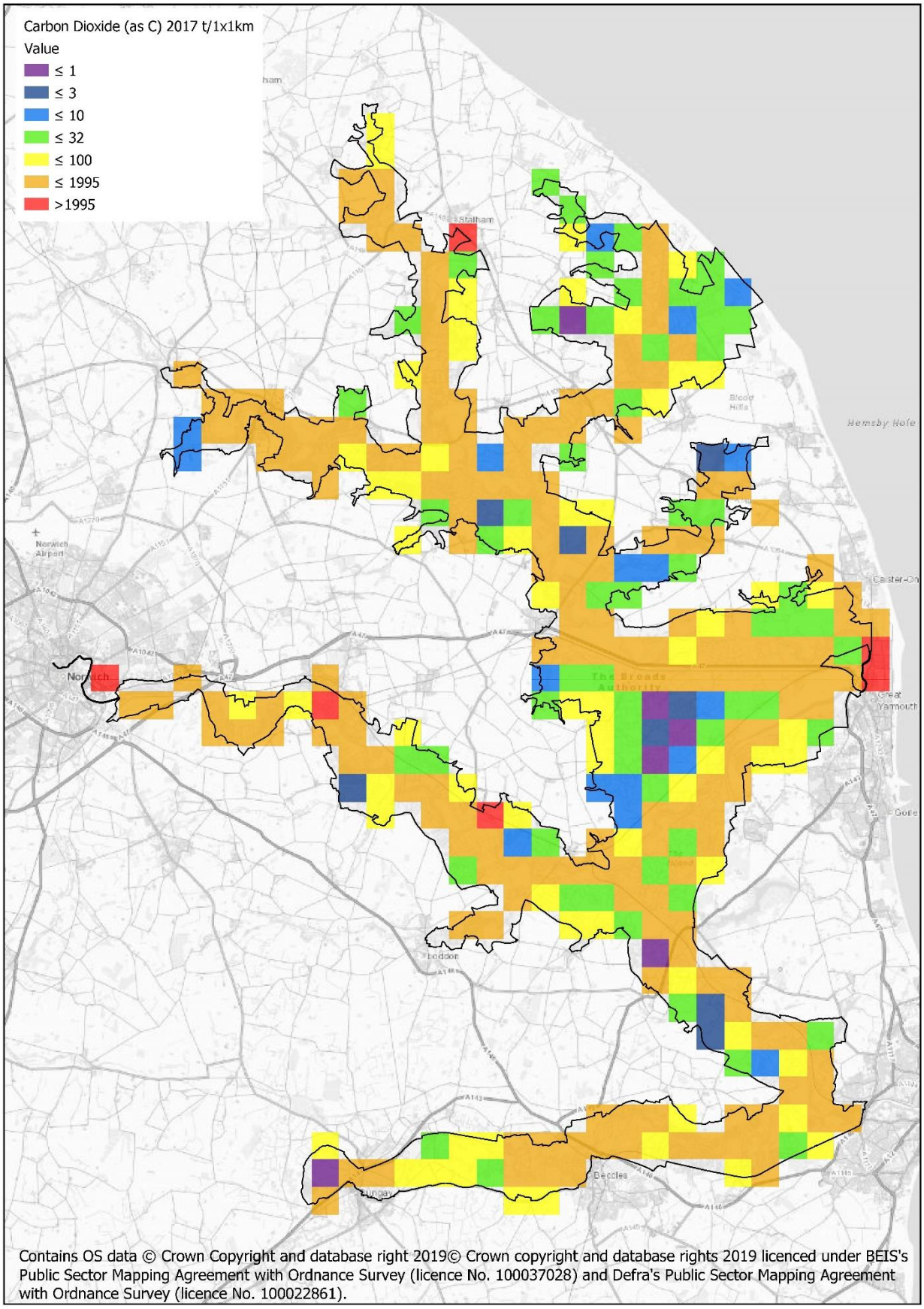
November 2019

Appendix 3 - GHG emission maps for the Broads Area

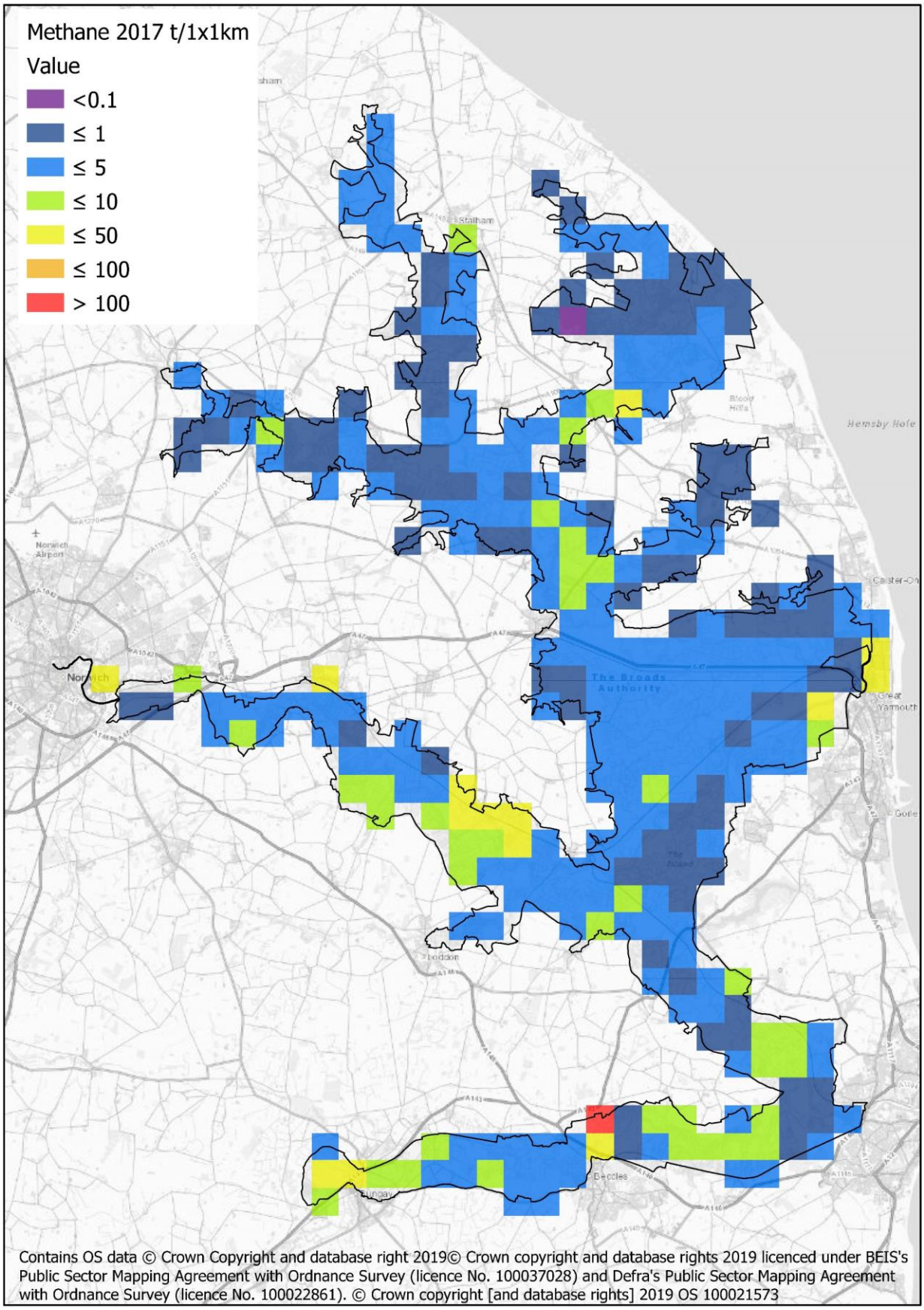
These maps have been produced using data from the National Atmospheric Emissions Inventory. This produces emissions for the entire UK on a kilometre square basis. A full UK version is available at: https://naei.beis.gov.uk/emissionsapp/

We have chosen initially to look at Carbon Dioxide, Methane and Nitrous Oxide as the most prominent Greenhouse Gases.

Carbon Dioxide



Methane


Methane 2017 t/1x1km
Value
<0.1
≤ 1
≤ 5
≤ 10
≤ 50
≤ 100
> 100
Norwich
Norwich Airport
The Broads Authority
Great Yarmouth
Hemsby Hole
Stalham
Beccles
Bungay
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Nitrous Oxide