

Peak District National Park Authority Carbon Management Plan 2020-2050

A plan for managing the greenhouse gas emissions from our buildings and operations

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1 Our Vision

1.1 The Vision

The Peak District National Park Authority (“the Authority”) is committed to reducing our own carbon emissions through improvements to our assets (including property and fleet), ways of working and enabling and encouraging behavioural change in our organisation. We will promote our approach and achievements within our local communities and to visitors. This is influenced by a broad landscape of policy and legislative drivers, which are set out in Appendix 1.

In our previous carbon management plan we set a target for carbon reduction. In this, our second carbon management plan (CMP2), we are looking forward.

Our vision is to be a net zero carbon Authority no later than 2050

1.2 Use and evolution of this Carbon Management Plan

This plan marks the second step in achieving our vision and builds on our significant achievements to date. We intend to use this plan, and subsequent versions, to help direct our emissions reduction efforts over the coming decades.

In developing this plan we have looked, first and foremost, to how we manage our buildings. In doing so we have developed a methodology for identifying material impacts and prioritising emissions reductions across our building portfolio.

Projects to reduce carbon emissions will follow the Authority’s business planning periods, helping to align with budgetary decisions. The current Corporate Strategy runs until 2024 and it is anticipated that our delivery plan (Appendix 4) will be updated in line with the next Corporate Strategy. This will help to identify further changes we can make in achieving our vision of being a net zero carbon Authority by 2050, **with an aspiration to achieve net zero before that point if possible.**

In reducing our carbon emissions there will always be some emissions that cannot be avoided. Our goal to counterbalance these unavoidable emissions is to manage the land that we own in a way that sequesters carbon, helping to create a net carbon sink. We hope that through gathering data concerning our land and land management practices, we can work towards our land becoming a net carbon sink. Therefore, when considered as part of our overall footprint, will counterbalance the residual emissions.

Further information on this approach can be found in the following sections, and the land management approach will be developed further in future versions of this document.

2 The Scope

2.1 Current Scope

This CMP2 covers emissions from activities over which the Authority has operational control: including energy and fuel used by the Authority and within its property portfolio, as well as the operational emissions from transport, waste and water.

All greenhouse gas emissions are measured and recorded. While different greenhouse gases have a different impact on our climate, they are expressed as carbon dioxide equivalent (CO₂e). CO₂e signifies the amount of CO₂ which would have the equivalent global warming impact as the gasses released and allows different gas emissions to be easily compared.

The scope of a carbon footprint is often defined according to the level of control that the organisation has over its emissions and are categorised as Scope 1, 2 or 3. Scope 1 and 2 cover direct emissions from operations and include the use of fuels and electricity. Scope 3 includes emissions arising from sources such as waste, water and commuting and are generally emissions over which we have no direct control (for instance, we can control the amount of water we use but cannot control the amount of emissions which are caused when supplying the water to us). It is usual to include scope 1 and 2 emissions as standard and the scope 3 emissions which are appropriate to the organisation's needs and priorities.

The primary aim of this Plan is to reduce the greenhouse gas emissions arising as a result of activities over which the Authority has direct influence. For this reason, we have chosen to include scope 1 and 2 emissions and some scope 3 emissions relating to waste, water and tenanted properties and grey fleet travel (i.e. staff and member business travel in private vehicles). Inclusion of these scope 3 emissions will enable the Plan to have a wider influence and benefit. We also aspire to include more scope 3 emissions which are described below.

Table 2-1: Sources of carbon emissions in the Peak District National Park Authority's operations, aligned with the GHG Protocol¹

| Scope 1: Direct | Scope 2: Energy indirect | Scope 3: Other indirect |
|--|----------------------------------|--|
| Fuels combustion (direct emissions): e.g. gas, oil & biomass burnt in boilers & furnaces | Purchased electricity generation | Purchased electricity (Transmission & Distribution losses) |
| Owned Transport: e.g. cars & vans | Purchased heat | Fuel combustion Well-to-tank (WTT) emissions |
| Emissions from fuel combustion in tenanted properties (e.g. oil, coal, gas, biomass) | | Business travel: via transport not owned by the organisation |
| | | Waste disposal |
| | | Mains water supply |
| | | Mains sewage treatment |

Information on data sources and emissions standards is set out in Appendix 2.

¹ The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard Revised Edition, World Resources Institute; World Business Council for Sustainable Development, 2004.

2.2 Future Scope

We do not currently have information or data relating to the emissions associated with the land that the Authority owns and manages directly or through tenancies. This is an area that we are working hard to quantify, and once we are able to gather the data in a robust way we will start to include it in our carbon footprint calculations. Until that point we have taken the decision to exclude it from the scope of this CMP2.

We anticipate our published Scope 3 emissions to increase over the coming years as we continue to gather data on other scope 3 emissions, e.g. external IT servers and lifecycle emissions of the goods we buy. This expansion of our Scope 3 emissions reporting will allow us to make greater inroads into understanding where carbon savings can be achieved on our journey towards net zero.

2.3 Currently excluded

Emissions currently excluded from our carbon footprint are as follows:

- Procurement of goods and services
 - While procurement of goods and services is considered to be vital to understanding our holistic carbon footprint, we do not currently have a methodology for calculating this. We intend to investigate options for measuring the carbon impact of procurement as part of this CMP2.
- Fugitive emissions: e.g. from air conditioning & refrigeration
 - Air conditioning is only present in a small number of our properties, and refrigeration is also limited across our operations. As such, fugitive emissions from air conditioning and refrigeration is not currently considered to be a material contributor to our carbon footprint.
- Transportation of purchased materials / goods and waste.
- Emissions from our employees' commute to work.
- Emissions from computing and IT.
- Emissions and storage from managing the land that the Authority owns.

3 Carbon Management Approach

3.1 The Structure

In order to continue achieving emissions reductions as well as reducing operating costs and avoiding financial exposure from climate risks, the Authority is committed to identifying and implementing carbon saving projects.

The Authority recognises that carbon reduction requires a number of key elements to be put in place:

- **Governance:**
 - A robust organisational framework to support the financing, delivery and monitoring of carbon reduction projects.
 - Clearly identified responsibility and accountability for delivery against the requirements of the CMP2.
- **Strategy:**
 - Identification of a realistic suite of carbon reduction projects across a range of areas relevant to the carbon footprint; this list must be regularly reviewed and flexible to adapt to emerging needs and opportunities for funding.
- **Risk Management:**
 - An integrated data collection and collation system to inform operational actions, management decisions, annual progress update(s) and other reporting requirements, as well as to monitor and manage risks to delivery of the strategy.
- **Metrics and Targets:**
 - Clear targets to drive decision-making and reporting against the strategy.

In this section, the term “activities” is applied to the full range of interventions that contribute to emissions reductions. These may include traditional ‘projects’ such as the installation of low energy lighting, which are generally easier to calculate carbon savings for. However, activities may also include interventions such as staff energy awareness training where carbon savings are much harder to predict and quantify.

3.2 Approach to carbon management

In addition to our operations, the Authority has 70 occupied properties within its portfolio. Those properties range from offices and operational bases to public buildings such as visitor centres and public toilets, to privately occupied residences and farms. As such, our carbon management approach needs to take into account the building usage, as well as the level of influence and control that the Authority has over each building. In addition, many of the buildings in the Authority’s estate are of cultural and historic importance and are subject to associated planning restrictions as a result. Figure 3-1 illustrates the locations and property types within the Authority’s portfolio.

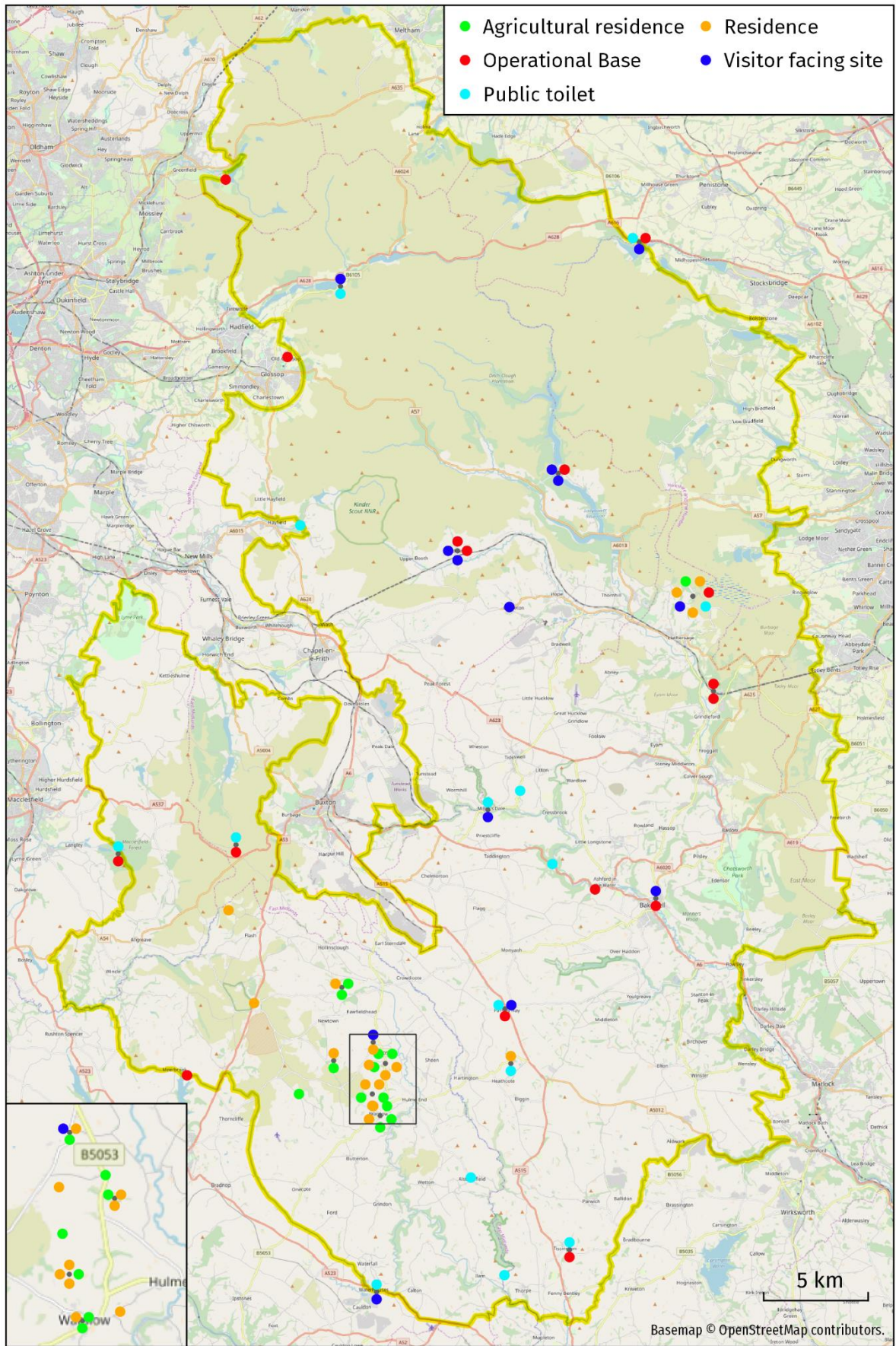


Figure 3-1: Map of the different property types within the Authority's portfolio

Our previous Carbon Management Plan outlined the strategy across 5 key strategic themes. These themes, which are shown in Table 3-1, remain relevant today and have driven the development of this plan and associated documentation.

Table 3-1: Key strategic themes for carbon management in the Peak District National Park Authority

| | |
|---|--|
| Monitoring and data management | We have developed standard approaches to data management and collection over the past 10 years and continue to work on this as a key theme to ensure that we are optimising our data collection processes and managing our resources effectively. |
| A vision for our property portfolio | Previously, our goal was to ensure that our properties demonstrated best practice with respect to energy efficiency, waste and water use. We have made significant progress against this theme since 2009 and are now taking this further to assess the resilience of our properties to the effects of climate change. |
| Travel and transport | We continue to work on travel and transport as an Authority. Going forward, we are working to assess the accessibility of our buildings to lower-carbon forms of travel such as walking, cycling, public transport, and electric vehicles. |
| Awareness raising, communication and workplace culture | We have worked hard in our operational bases to raise awareness with colleagues and suppliers on the projects undertaken as part of the previous carbon management plan. Going forward, our approach will be to communicate these efforts further afield, to local communities, users of the park and more widely. |
| Resources for implementation | Resources continue to be financed through a combination of the Authority's capital strategy as well as on-going operational budgets. |

The Authority converts key environmental criteria to carbon to understand the operational carbon footprint of its portfolio and its operations. That footprint is then used to drive decision-making to reduce carbon emissions over time.

Additionally, we recognise that not all environmental criteria can be easily, or directly, linked to a carbon footprint. As such, as part of this Carbon Management Plan the Authority has also sought to integrate considerations around other environmental criteria into its governance and decision-making.

3.3 The Environmental Indicator Methodology

As part of the development of this CMP2 the Authority has commissioned development of an environmental indicator methodology (EIM). The EIM is designed to prompt low carbon and climate resilient thinking when undertaking condition assessments and other reviews of our properties. This identifies performance of each individual property against 27 environmental criteria within seven categories, and prompts consideration of how repairs and maintenance could be employed to boost environmental performance.

The categories assessed within the EIM are:

- Climate change resilience
 - Criteria include resilience to flood, drought and temperature
- Resource use

- Criteria include reduction and management of energy, water and waste
- Building fabric thermal efficiency
 - Criteria include thermal efficiency of the building envelope
- Biodiversity
 - Criteria include management of external areas for biodiversity
- Accessibility
 - Criteria include accessibility of the building to public transport and electric vehicle charging
- Environmental management and behaviour
 - Criteria include smart metering and building user guidance
- Pollution prevention
 - Criteria include management of external and internal pollution risks

The results of each assessment are plotted on a chart, showing the current and potential performance of each property for the seven categories. This chart, along with supporting information, will be incorporated into the Authority’s standard approach to property condition assessments and repairs decision-making – helping to drive low carbon thinking in our decision-making. An example output from the assessment is set out in Figure 3-2 and Figure 3-3 below.

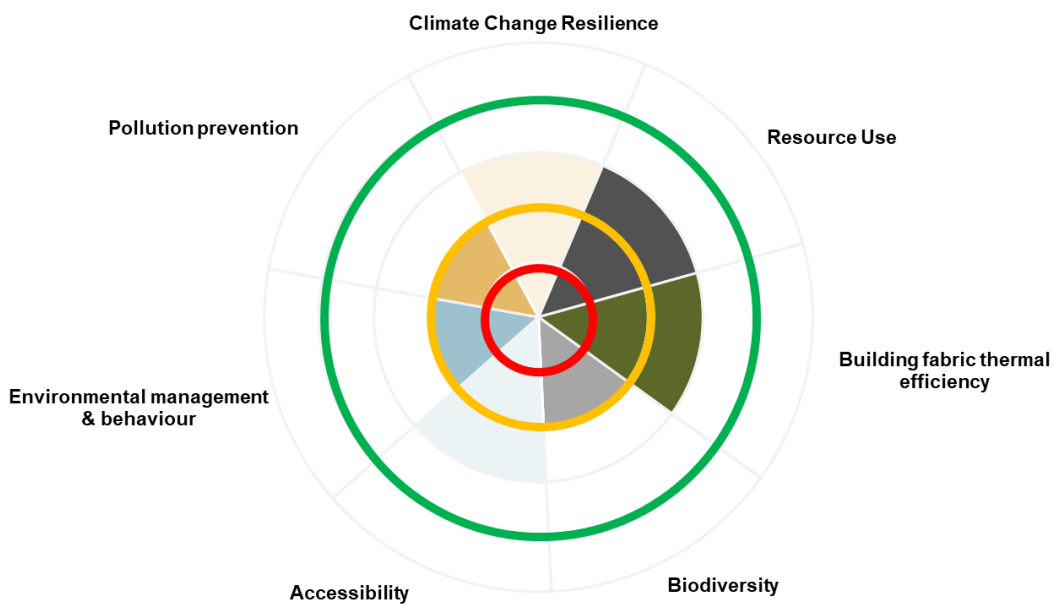


Figure 3-2: Current performance of Aldern House using the environmental indicator methodology. Where categories perform lower than the amber circle this will prompt improvement works, with categories performing lower than the red circle being prioritised. Categories performing outside the green circle are exemplar projects and will be used to inform improvements elsewhere.

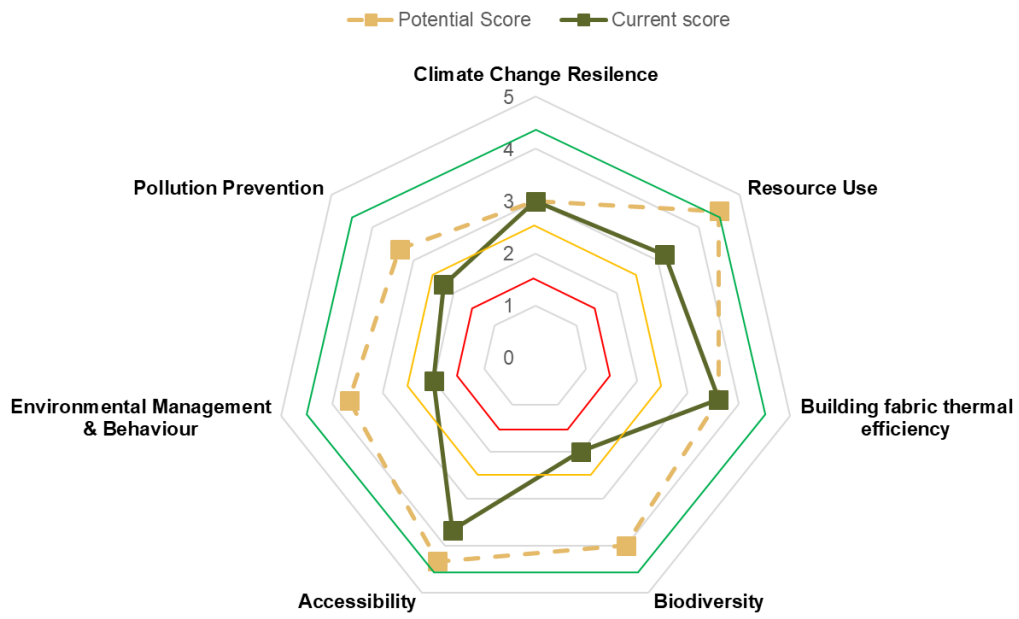


Figure 3-3: Current and potential performance of Aldern House using the environmental indicator methodology. The greatest areas of opportunity for improvement sit within the Biodiversity and Environmental Management & Behaviour

4 Our Carbon footprint

4.1 Introduction

As part of our first Carbon Management Plan (2010-2015) we identified our 2008/09 carbon footprint as a baseline. Our approach now is forward-looking rather than backward looking. If we intend to be net zero, then the baseline itself is less of a focus. Our annual footprint is, however, important for us to be able to measure progress and identify key milestones for carbon reduction over the course of the next 30 years.

To inform this CMP2 we have rebased our carbon footprint for the 2017/18 year – bringing in further elements of our Scope 3 footprint that we did not have the ability to do 10 years ago when we started this journey. That has resulted in a slight increase in our carbon footprint against our calculations for the 2016/17 (12 tonne increase) year.

4.2 2017/18 carbon footprint

The Authority's total carbon footprint for the 2017/18 year (rebased) was 723 tCO_{2e}. The carbon footprint for the 2017/18 year was calculated against the UK Government's 2018 Greenhouse Gas Conversion Factors. The various components of our footprint for 2017/18 are split out in Table 4-1 and Figure 4-1 below.

Carbon footprint - share of emissions by category

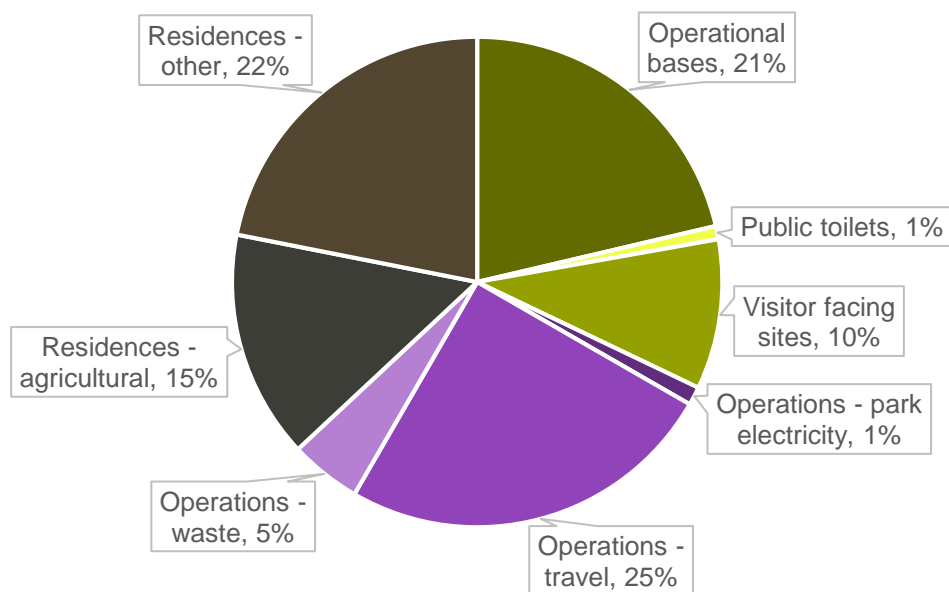


Figure 4-1: Authority GHG emissions by category

Table 4-1: Carbon footprint for the Authority in 2017/18 (rounded to the nearest whole number). NB we expect our Scope 3 emissions to increase over the next few years as we build a more detailed picture of Scope 3 emissions e.g. from IT and procurement of goods and services.

| Category | Scope 1 (tonnes CO ₂ e) | Scope 2 (tonnes CO ₂ e) | Scope 3 (tonnes CO ₂ e) | Total (tonnes CO ₂ e) |
|-------------------------------|--|--|--|--|
| Operational bases | 32.4 | 80.4 | 41.4 | 154 |
| Public toilets | 0.0 | 3.5 | 2.8 | 6 |
| Visitor facing sites | 23.8 | 31.0 | 16.8 | 72 |
| Operations - park electricity | 0.0 | 8.0 | 0.8 | 9 |
| Operations - travel | 110.5 | 0.0 | 70.6 | 181 |
| Operations - waste | 0.0 | 0.0 | 34.0 | 34 |
| Residences - agricultural | 73.9 | 17.2 | 17.7 | 109 |
| Residences - other | 116.8 | 17.6 | 23.9 | 158 |
| Total | 357.4 | 157.7 | 208.0 | 723 |

A more detailed breakdown of our 2017/18 carbon footprint can be found in Appendix 6.

4.3 Projections and Business As Usual

Given the Authority's portfolio operations are relatively stable, we have assumed 0% energy demand increase in our business as usual (BAU) projections.

4.4 Progress to date

To date, the Authority has made good progress on reducing our carbon emissions from the 2009/10 Carbon Management Plan (CMP1) baseline. Our footprint increased as a result of the rebasing exercise for 2017/18 as we brought more aspects into scope (e.g. water supply and treatment and more detailed data on tenant fuel use). We recognise that we have significant further work to undertake in order to reach our vision of net zero operations by 2050. This CMP2 is our next step in achieving that vision.

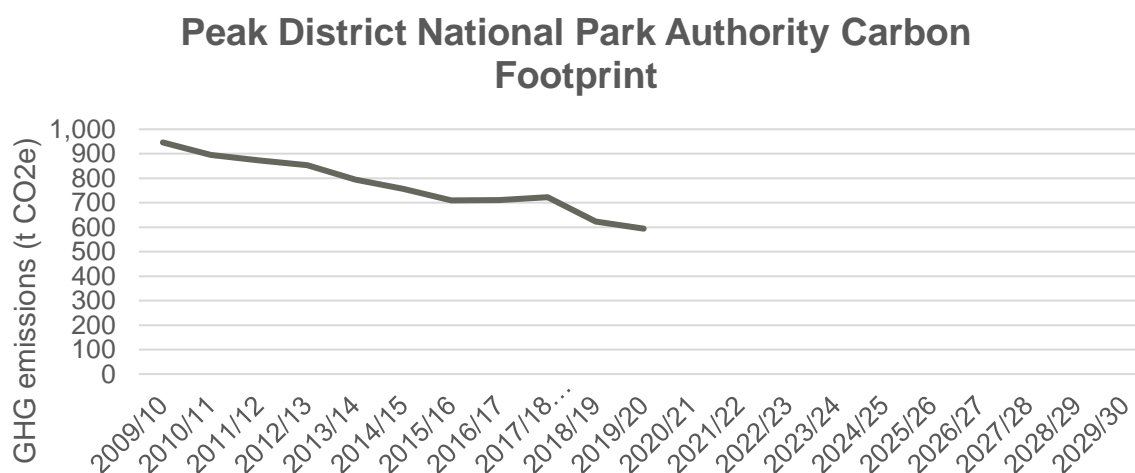


Figure 4-2: Peak District National Park Authority Carbon Reduction Progress

In CMP1 we reduced our carbon footprint by 29% from our 2009/10 baseline of 946 tCO₂e. That happened through a focussed programme of improvements including:

- Energy hierarchy
 - Installation of heritage double glazing
 - Improvements to airtightness and insulation

- Installation of renewable technologies
 - LED lighting and improvements to IT infrastructure
- Transport
 - Policy changes to reduce vehicle journeys
 - Improvement of fleet vehicle efficiency
 - Provision of pool bikes and payment of mileage for cycling
- Waste
 - Behavioural change campaigns to reduce generation of waste
 - Increase rates of recycling

Further detail on our implemented projects can be found in Appendix 3.

5 Implementing the plan

5.1 Implementation Framework

A detailed delivery plan will be developed for each corporate strategy period setting out how the target reductions will be achieved. The current delivery plan for the corporate strategy period 2020-2024 is available at Appendix 4. The following principles have been employed in developing the 2020-2024 delivery plan and will be used as a framework in developing future plans:

- a) Operational Properties:
 - Improve, and maximise, energy efficiency measures wherever possible, including improving the thermal efficiency of buildings.
 - Purchase electricity from renewable sources.
 - Where possible, generate energy on site via renewable sources.
- b) Business Travel:
 - Make use of IT, for example, teleconferences and video calls, so the need to travel is reduced.
 - Utilise electric vehicles wherever possible charged from renewable supplies.
 - Minimise the use of private cars for business travel.
 - When utilising public transport, ensure that the most sustainable option is prioritised.
- c) Tenanted properties
 - Increase, and maximise, energy efficiency measures wherever possible.
 - Install low carbon heating mechanisms (e.g. biomass or electric heating) wherever possible.
 - Ensure that tenants purchase electricity from renewable sources.
 - Generate energy on site via renewable sources.
- d) Water use
 - Ensure that water efficient devices are used throughout Authority properties.
- e) Waste production
 - Minimise the amount of waste produced as a result of Authority activities.
 - Ensure that whatever is produced is reduced to a minimum.

Once the emissions associated with land are calculated and included within the scope, the Authority will also:

- Ensure that carbon impacts of land management practices are included within decision making process around land management changes.
- Look for opportunities to reduce emissions from land and/or increase the amount of carbon sequestration to land through land use changes and management practices. This measure will be implemented in addition to the work to reduce our emissions from our other sources rather than instead of them.

The Environmental Indicator Methodology will be used as a tool to assess current and potential performance of all of the Authority's properties and devise property specific action plans to achieve them.

5.2 Financing the plan

The carbon reduction measures prompted by this CMP2 will be financed using a range of mechanisms:

5.2.1 Capital strategy

The next Capital Strategy programme will take account of carbon reduction measures and the Authority's asset management plan to consider capital investment as follows.

- Invest to save measures which generate operational cost savings, for example energy and water reduction projects
- Measures which can be approved by RMM up to £150,000, or if of greater value, by the Programmes and Resources committee (see Appendix 5 for more information on roles and responsibilities), financed from the Capital Fund, external grants or revenue resources if available.
- Options for borrowing in order to finance larger carbon reduction projects, within prudential limits, the Authority's asset management plan, and where debt repayments do not depend substantially on National Park Grant.

5.2.2 Revenue budgets

Some measures will be funded from revenue budgets and will therefore be at the discretion of the individual budget holders. The Authority has strong support for carbon reduction measures which incentivises budget holders to allocate appropriate resource to achieving reductions.

5.3 Corporate Training

Corporate training budgets are utilised to facilitate the delivery of training and awareness raising measures within the Authority. We aim to empower our colleagues to drive carbon reduction throughout our operations. Training will also be provide for members where appropriate (such as the planned essential member training).

5.4 Additional Resources

The identified projects are predominantly of a built environment/engineering nature. The delivery of these will be the responsibility of the Corporate Property Team and Property Managers. However, responsibility will extend to other services, where appropriate, e.g. Visitor Experience Development and Finance for EV and fleet rationalisation, Marketing and Communications for awareness etc.

It is anticipated that the majority of projects will be resourced in-house, however, where appropriate the Corporate Property Team will commission expert external support to provide technical support to carbon savings projects.

5.5 Internal reporting

Reporting of environmental and carbon performance is provided to the Resource Management Meeting on an annual basis. This reporting identifies current performance, past trends and future projects.

In order to hold ourselves accountable, we track progress quarterly within the Corporate Property Team. This helps us to ensure that we are implementing the strategy effectively, and also helps us when preparing the annual reporting. This will be reported quarterly as part of our standard performance monitoring that is reported to meetings of the Authority.

5.6 External reporting

The Authority reports on its progress against the Carbon Management Plan on an annual basis. Historic reports can be found on our website.

Appendix 1 Context and drivers for carbon management

Context and drivers for carbon management

The Authority recognises the benefit of increasing the operational efficiency of our portfolio in order to drive down energy and resource costs, both for us and for our tenants. Our carbon management approach is influenced by a range of legislative and policy requirements as listed below.

Climate change context

In the last 30 years emissions of carbon dioxide (CO₂) have risen by over 60% (source: World Bank) and the decade between 2000 and 2010 saw greater increase than ever before.

The release of CO₂ and other greenhouse gases is the single most important driver of climate change (sometimes referred to as global warming). The effects are seen such as extreme weather events, natural disasters, coastal erosion, droughts, floods, wildfires.

These disaster events have secondary effects including mass-loss of biodiversity.

Climate change will change the nature of the Peak District National Park's special qualities through its impact on the important park features and the other factors affecting them.

The Authority is planning for the consequences of a 2°C rise in global temperatures by 2040 and a 4°C rise by 2100, and that approach is integral to this CMP2.

We are committed to managing for resilience and that includes our portfolio of properties. This CMP2 aims to help us plan for future challenges to our properties and identify solutions in the short, medium and longer term.

We need to manage the process of evolution of the park in responding to climate change. We must develop objectives and means of monitoring so that our management of the park focusses on responding to and influencing change.

(Peak District National Park Climate Change Adaptation Report 2016)

Winters in the UK, for the most recent decade (2009-2018), have been on average 5% wetter than 1981-2010 and 12% wetter than 1961-1990. Summers in the UK have also been wetter, by 11% and 13% respectively. In future, summers are expected to be characterised by intense heavy summer rainfall events interspersed with drier periods. In all seasons, the frequency of heavy rainfall events is expected to increase, raising the risk of severe flood events (source: UK Climate Projects: Headline Findings, September 2019).

We recognise the risks posed by climate change to the special qualities of the Peak District National Park. Our special qualities as outlined in the National Park Management Plan are:

1. Beautiful views created by contrasting landscapes and dramatic geology
2. Internationally important and locally distinctive wildlife and habitats
3. Undeveloped places of tranquillity and dark night skies within reach of millions
4. Landscapes that tell a story of thousands of years of people, farming and industry
5. Characteristic settlements with strong communities and traditions
6. An inspiring space for escape, adventure, discovery and quiet reflection
7. Vital benefits for millions of people that flow beyond the landscape boundary

Legislative context

Environment Act 1995

As a National Park, the law requires us to carry out two 'statutory purposes':

- conserve and enhance the natural beauty, wildlife and cultural heritage
- promote opportunities for the understanding and enjoyment of the special qualities of national parks by the public

While carrying out these purposes it also has a duty to seek to foster the economic and social well-being of the communities within the National Park..

The Climate Change Act (2008) (2050 Target Amendment) Order 2019

The Climate Change Act (2008) is the legislation that governs the UK's approach to carbon reduction and climate change response. The Target Amendment Order came into force on 27 June 2019 and amended the legally binding target to reduce greenhouse gas (GHG) emissions set in section 1 of the Climate Change Act 2008 (CCA 2008) from 80% to 100%, or net zero. This target is a key legislative driver for the Authority to consider stringent targets for our own operations.

Forthcoming legislation: Environment Bill (2019/20)

The Environment Bill aims to improve air and water quality, tackle plastic pollution, restore wildlife, and protect the climate. It will set legally binding targets for environmental protection and be overseen by an independent watchdog. This legislation will work alongside the Climate Change Act (2008) to drive climate action, and the Authority has taken this into account in the development of this CMP2.

The policy context

This Carbon Management Plan is informed by a range of policies at the global, national and local level.

Table A1-1: Key policies driving the 2nd Carbon Management Plan

| | |
|----------------------|--|
| International | <ul style="list-style-type: none"> • The Paris Agreement • United Nations Sustainable Development Goals |
| National | <ul style="list-style-type: none"> • National Park Circular (2010) |
| Local | <ul style="list-style-type: none"> • Peak District National Park Local Development Framework - Core Strategy Development Plan Document (2011) • Climate Change and Sustainable Building - Supplementary Planning Document (2013) • Peak District National Park Local Plan - Development Management Policies (2019) • Peak District National Park Management Plan 2018-2023 |
| Internal | <ul style="list-style-type: none"> • Our Corporate Strategy 2019-2024 |

The Authority's commitment to carbon management is primarily underpinned by the following policies, which promote a resilient organisation that is managed strategically for the benefit of the local environment, local communities and visitors.

Peak District National Park Management Plan 2018-2023

The Plan has 6 Areas of Impact:

1. Preparing for a future climate
2. Ensuring a future for farming and land management
3. Managing landscape conservation on a big scale
4. A National Park for everyone
5. Encouraging enjoyment with understanding
6. Supporting thriving and sustainable communities and economy

In the context of these areas of impact, our own buildings need to be resilient to the impacts of a changing climate, accessible to a broad range of users, informative and sustainably operated.

Our Corporate Strategy 2019-2024

The Strategy is organised around three outcomes:

- A sustainable landscape that is conserved and enhanced
- A National Park loved and supported by diverse audiences
- Thriving and sustainable communities that are part of this special place

The contribution of the National Park to carbon capture and storage is a key performance indicator for the Authority. Within that context, it must therefore manage the carbon emissions of its own assets in order to maximise the carbon benefits delivered by the National Park, whilst remaining sensitive to the historical importance of the buildings and landscapes within its portfolio and ensuring that those assets continue to support local communities.

Importantly, the Authority monitors its portfolio as a whole and continually reviews how its buildings are contributing to the ambitions and targets set out in the Peak District National Park Management Plan and Our Corporate Strategy.

Operational efficiency

The Authority recognises the benefit of increasing the operational efficiency of its portfolio in order to drive down energy costs, both for the Authority and for its tenants.

Corporate governance

The Authority is committed to ensuring that our carbon commitments are met, and this CMP2 document provides the framework in which carbon management is approached.

Appendix 2 Emissions sources and scope

Data sources

The Authority routinely collects data, and reports performance, through a number of mechanisms. The carbon footprint is calculated based on the following data sources:

Table A2-1: Data sources for operations performance within the Authority

| Category | Sub-category | Data source |
|----------------------|----------------------------|--|
| Buildings energy use | Electricity | MPAN electricity meter readings Electricity bills |
| | Natural gas | Meter readings Gas bills |
| | Other fuel | Biomass purchase records |
| | Tenanted properties | Assumptions based on national data |
| Transport | Fleet | Fuel card data – litres of fuel purchased |
| | Business travel | Expense claims |
| Waste | Landfill / recycling | Waste management company reporting In-house waste collection data |
| Water | Mains water supply | Water bills |
| | Mains wastewater treatment | Water bills |

Emissions factor sources

Emissions factors for converting data into carbon emissions are sourced from the UK Greenhouse Gas Conversion Factors for Company Reporting² and applied to the appropriate year, as recognised by the Greenhouse Gas (GHG) Protocol³.

Emissions sources

The GHG Protocol categorises carbon emissions as scope 1, 2 or 3 emissions, as defined below.

Scope 1 Emissions: Direct GHG emissions occur from sources that are owned or controlled by the organisation, for example, emissions from combustion in owned or controlled boilers, furnaces, vehicles, etc

Scope 2 Emissions: Indirect GHG emissions arise from the generation of purchased electricity consumed by the organisation.

Scope 3 Emissions: An optional reporting category that allows for the treatment of all other indirect emissions. Scope 3 emissions are a consequence of the activities of the organisation, but occur from sources not owned or controlled by the company. Examples of scope 3 activities are extraction and production of purchased materials; transportation of purchased fuels; and use of sold products and services. Scope 3 also includes the

² <https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting>

³ <http://ghgprotocol.org/>

Transmission and Distribution (T&D) losses for purchased electricity supplied through the Grid.

Boundaries

Organisational boundary

The organisational boundary for this CMP2 is based on the factors over which the Authority has operational control and comprises the occupied properties within the Authority's property portfolio as well as transport and other activities associated with its operations. The Authority has varying levels of control over elements within its tenanted properties, for example heating fuel source (direct control) vs electricity usage (limited control), which is taken into account in this CMP2 and the carbon footprint.

Operational boundary

The operational boundary sets out the emission sources that the Authority includes within its carbon footprint. In keeping with good practice, and, in particular, the WRI Guidance for Public Sector Organisations, this should include all Scope 1 and Scope 2 emissions. In addition, the Authority includes the following Scope 3 emissions in its calculations.

Transport: employee business travel

Employee business travel is calculated based on business travel claims. Distance travelled is calculated based on spend.

Waste: waste treatment

Waste collection and treatment is based on tonnage collected of general and recycling waste.

Water: supply and treatment

Mains water supply and treatment is based on meter readings where possible, and reasonable assumptions where meters are not currently in place.

Energy: transmission and distribution

Energy usage is calculated based on meter readings.

Appendix 3 Projects undertaken since 2009/10

The following initiatives and projects have already been completed or implemented since the Authority's initial baseline carbon footprint was calculated. The carbon emission savings achieved by these schemes contributed to reducing the Authority's carbon footprint by 29% against the 2009/10 baseline in the years to 2017/18.

Energy

- Awareness raising and engagement with staff and building users
- Improvements to insulation within key properties
- Improvements to heating controls and procedures within key properties
- Switch to low energy lighting technologies (LED)
- Switch to more efficient IT infrastructure and equipment
- Energy efficient refurbishment of tenanted properties (using techniques sympathetic to historic construction techniques and materials)
- Installation of renewable and efficient heating systems (biomass, ground source heat pumps, air source heat pumps)
- Installation of renewable electricity generation
- Property rationalisation and more effective use of existing properties

Travel / transport

- Staff initiatives to drive down business travel.
- Provision of cycle facilities at key sites including pool bikes available to all employees.
- Shift to lower emission fleet vehicles
- Procedures put in place to ensure business travel is undertaken using the lowest emission form of transport/vehicle available including paying mileage for employees who cycle to and from meetings.

Waste

- Improved recycling facilities at key visitor facing properties
- New waste collection contract, driving efficiency in the waste collection process, greater recycling levels and consistency of data availability
- Bins are being removed at some public sites to encourage visitors to take waste home where it can be segregated more effectively

Water

- Replacement of sanitary ware, fixtures and fittings with water efficient models as part of improvements and repairs

Appendix 4 2020-2024 Delivery Plan

The Authority's overall aim is to become zero carbon before 2050, to achieve this we need to have a realistic outlook over the coming years so that we can focus our efforts to actions that will achieve the most in the shortest time and be achievable within the current position of the Authority. We also recognise that technology in particular is constantly developing and future plans should reflect what is available at the time. We are therefore currently focusing our effort towards the coming business planning period of 2020-2024.

The following actions reflect the 5 key strategic themes recognised within section 3.2 of this report 'Our Approach to Carbon Management':

| Theme | Actions | Target date |
|-------------------------------------|--|--|
| Monitoring and Data Management | Improve data gathering accuracy and the robustness of process by: <ol style="list-style-type: none"> 1. Recognising areas of lacking or inaccurate data 2. Develop a model for data gathering and assessment of emissions from the land which we own and/or manage | 2021 2024 |
| Our Property Portfolio | <ol style="list-style-type: none"> 1. Assess each property against our corporate indicator methodology (ref) and recognise key areas for improvement in areas which impact on our carbon emissions 2. Ensure all electricity purchased is from renewable sources 3. Investigate how we can ensure that electricity purchased by tenants is also from renewable sources 4. Continue to convert operational and tenanted properties to low carbon (i.e. renewable or electric) heating or power systems. Currently planned projects include: <ul style="list-style-type: none"> • Millers Dale Goods Shed Solar PV • Pump Farm Estate base Air Source heat pump • Pump Farm Farmhouse (unknown) 5. Convert at least one additional operational property to renewable heating. 6. Continue to roll out recycling at visitor facing sites. | 2021 2021 2022 2021 2021 2022 2024 2022 |
| Travel and Transport | <ol style="list-style-type: none"> 1. Renew and revise the Authority's Green Travel Plan 2. Continue to move the Authority fleet to electric vehicles including pool cars and operational fleet. 3. Further promote remote meetings and build on recent reductions in business travel | 2021 2024 2022 |
| Awareness Raising and Communication | <ol style="list-style-type: none"> 1. Increase awareness of our work to reduce carbon emissions internally. 2. Develop 5 case studies showcasing the achievements made to date. | 2024 2021 |

| | | |
|-----------|---|------|
| | 3. Encourage the promotion of our learning to date to those interacting with the Authority, particularly through the planning process. | 2024 |
| Resources | 1. Incorporate the financial demands of achieving zero carbon into our asset management plan and capital strategy within the context of financial impacts following coronavirus pandemic. | 2021 |

Appendix 5 Roles and Responsibilities

Introduction

In order to ensure that there is effective ongoing ownership of the CMP2, it is important to have a fully defined governance structure. PDNPA will continue to adopt the following structure for management accountability.

Programmes and Resources Committee

The Programmes and Resources Committee has responsibility for the strategic direction and monitoring implementation of the CMP2. Progress against the CMP2 will be reported to the committee annually.

Operational roles and responsibilities

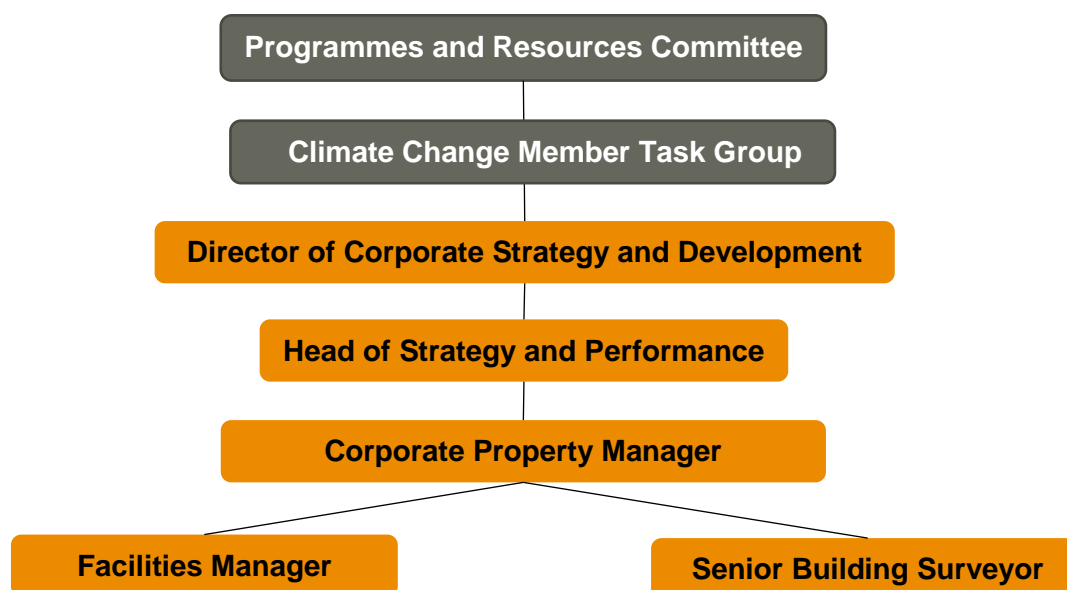


Figure A5-1: Organisational chart - operational roles and responsibilities related to delivery and oversight of the CMP2

Table A5-1: Operational roles and responsibilities within the Authority

| | |
|---|--|
| Programmes and Resources Committee | Holds responsibility for the strategic direction and monitoring of the CMP2 |
| Climate Change Member Task Group | Advisory body to Programmes and Resources Committee, to develop the Authority's thinking and response to climate change. |
| Director of Strategy and Development | Provides corporate oversight and governance of the CMP2, supported by Head of Strategy and Performance |
| Head of Strategy and Performance | Responsible for specific oversight of the CMP2 – reports to Director of Strategy and Development |
| Corporate Property Manager | Oversees implementation of the CMP2 |
| Facilities Manager | Operational responsibility for implementation of the CMP2 and budget holder for some property-related works |
| Corporate Property Team | Responsible for assessing the property portfolio against the EIM |

| | |
|---------------------------------|--|
| Senior Building Surveyor | Responsible for overseeing implementation of major projects in the portfolio |
|---------------------------------|--|

Resourcing and Ownership

The CMP2 will be approved by the Programmes and Resources Committee, providing endorsement and a clear commitment at the highest level, reinforcing the need for action across the organisation.

Appendix 6 Breakdown of the 2017/18 carbon footprint

CMP2 progress

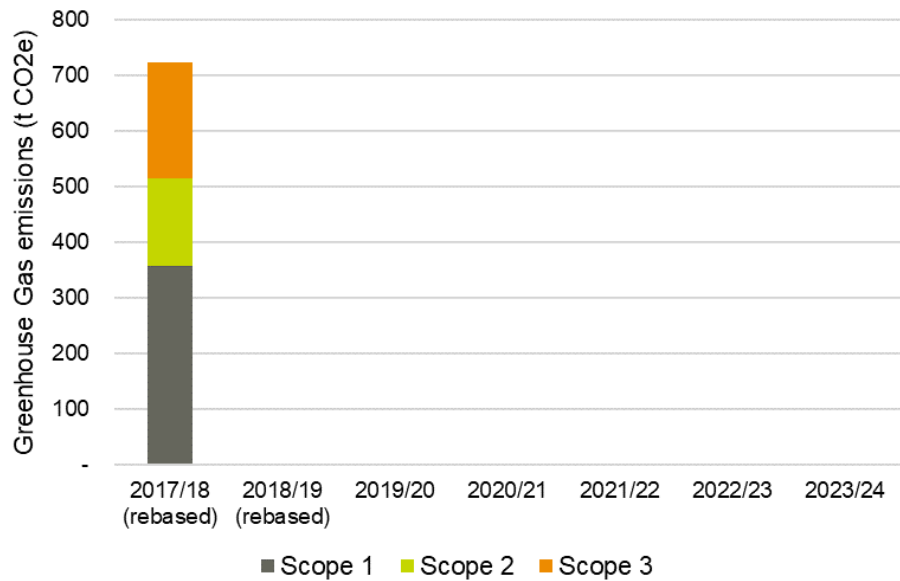


Figure A6-1: Greenhouse gas emissions (tCO₂e) split by scope

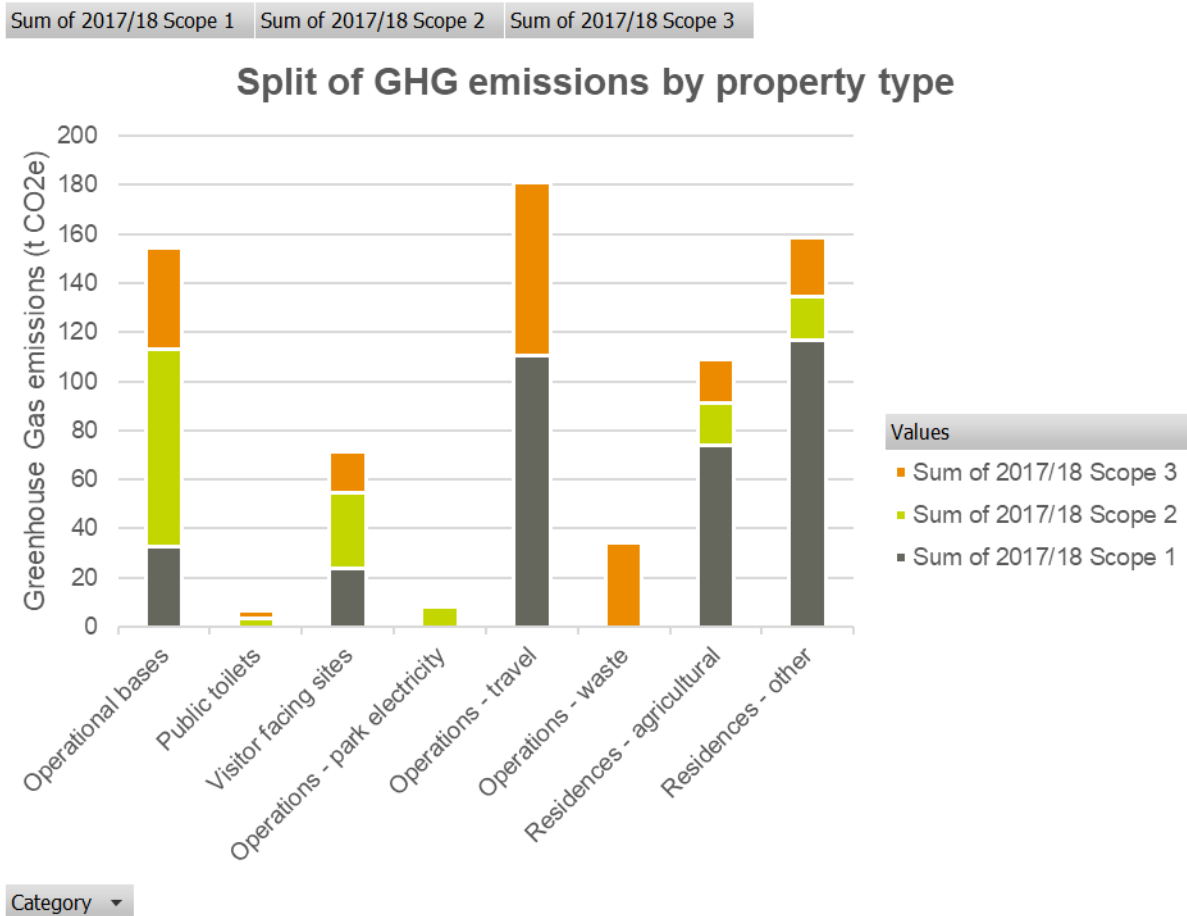


Figure A6-2: Greenhouse gas emissions (tCO₂e) split by scope and property type