Dartmoor National Park Authority

2024/25 Greenhouse Gas Emissions Footprint

October 2025

Executive Summary

Dartmoor National Park Authority (DNPA) has produced an organisational greenhouse gas (GHG) inventory (or 'carbon footprint') since 2018/19. For the 2024/25 reporting period, DNPA has produced its carbon footprint in-house, building on the methodology and approach developed by the Centre for Energy and the Environment (CEE) at the University of Exeter in the previous year (2023/24). The Greenhouse Gas Protocol and EN 14064-1 were again used to define the scope of the assessment. The scope of reporting remains broader than in earlier years, following the expansion undertaken in 2023/24, with emissions reported under the categories of buildings, transport, purchased goods and services, investments, and land use.

DNPA's total net emissions in 2024/25 were 3,105 tCO2e. The footprint continues to be shaped by the strong carbon sink observed within Scope 1 from woodland sequestration, alongside the significant impact of the pension within Scope 3. The following observations are made within each category:

- Buildings: Emissions from buildings remain a relatively small component of the footprint, with the majority arising from offices (notably Parke) and visitor centres (principally the Princetown Duchy Hotel). Smaller contributions are from staff working at home and other operational buildings.
- Transport: Emissions from transport are higher than from buildings, with staff commuting again representing the majority share, followed by DNPA's own vehicle fleet. Grey fleet and business travel remain a relatively small proportion of transport emissions.
- Purchased Goods and Services: Emissions from this category were 348 tCO2e. This remains a significant source of emissions and includes a mix of recurring activities and project-based expenditure. As in 2023/24, visitor management, projects, and facilities were among the largest contributors. The data was estimated using high-level financial information and therefore contains a degree of uncertainty.
- Investments: Emissions associated with the Devon Pension Fund remain the single largest contributor to DNPA's gross emissions, at 4259 tCO_2e. For the purpose of this reporting, the same figure as in the 2023/24 year has been used, and this will be updated when a new figure becomes available from Peninsula Pensions. Excluding land use sequestration, these emissions again account for the vast majority of the footprint. DNPA has very limited ability to directly influence this source.
- Land Use: DNPA's managed woodlands continue to provide a substantial carbon sink, offsetting 1771 tCO_2e of carbon through annual sequestration.

Data limitations mean that the role of other habitats (such as peatland and open habitats) as sources or sinks of GHGs remains uncertain.

Contents

1. Introduction

DNPA was created by the Environment Act 1995 to conserve and enhance Dartmoor National Park's natural beauty, wildlife and cultural heritage, and to promote opportunities for the public to understand and enjoy the special qualities of Dartmoor National Park. It is headquartered at Parke and has approximately 90 staff.

DNPA has produced an organisational greenhouse gas inventory (or 'carbon footprint') since 2018/19. Building on the methodology and expanded scope developed by the Centre for Energy and the Environment (CEE) at the University of Exeter in 2023/24, DNPA has produced the 2024/25 footprint in-house.

DNPA undertake this reporting not just as an exercise in measurement, but as part of our commitment to climate action. In July 2019, DNPA became the first UK national park to declare a climate and ecological emergency, recognising the urgent need to reduce greenhouse gas emissions and strengthen the resilience of the landscape. Our updated Climate Action Plan (2025) commits DNPA to a pathway towards net zero emissions by 2050, with a near-term target of 438 tCO_2e (headline) by 2030/31, and a more focused 66 tCO_2e target for Scopes 1 & 2 by that date.

This report is a key component of that journey. By transparently tracking emissions, identifying high-impact sources, and aligning with science-based targets, DNPA aims to lead by example and inspire further action across the Dartmoor community.

2. Referenced Standards

There are several recognised standards that provide methods for quantifying organisational greenhouse gas (GHG) emissions. These are:

- BS EN ISO 14064-1 [1] (referred to here as *ISO 14064*), supported by ISO/TR 14069[2], which gives additional guidance on its application.
- The Greenhouse Gas Protocol (*GHG Protocol*) [3], which is widely used internationally and includes supplementary guidance for supply chain emissions [4 and 5]
- The UK Government's Environmental Reporting Guidelines (ERG) [6], most recently updated by DEFRA for 2024/25, which are based on both ISO 14064 and the GHG Protocol but provide a simplified framework for UK organisations.

In practice, there is substantial overlap between ISO 14064 and the GHG Protocol. For this report, DNPA has followed the methodology set out in DEFRA's 2024/25 Environmental Reporting Guidelines, which draw directly on these international standards.

3. Methodological Approach

3.1 Definition of "Carbon Footprint"

A carbon footprint represents an organisation's net annual GHG emissions, including all sources (emissions to the atmosphere), sinks (removals from the atmosphere), and reservoirs (components that store GHGs).

GHGs contributing to anthropogenic climate change include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulphur hexafluoride (SF_6). Each gas is converted into carbon dioxide equivalents (tCO_2e) using its Global Warming Potential (GWP). Emission factors are generally provided in tCO_2e, so no further calculations are required.

3.2 Guiding Principles

Following ISO 14064, the footprint is developed according to:

- **Relevance:** Including appropriate sources, sinks, and methodologies.
- **Completeness:** Accounting for all relevant emissions and removals.
- **Consistency:** Enabling meaningful comparisons.
- **Accuracy:** Minimising bias and uncertainty.
- **Transparency:** Sufficient disclosure of methods and data.

3.3 Organisational Boundaries

Organisational boundaries determine which emissions are included in the footprint. Both ISO 14064 and the GHG Protocol allow either a control or equity share approach. DNPA applies operational control, meaning it accounts for 100% of emissions from operations it manages directly, while excluding operations it does not control.

Facilities are defined as individual installations or production processes within a single geographic or organisational unit. Under operational control:

- Financial control: Exists if an organisation directs financial and operating policies to gain economic benefits.
- Operational control: Exists if an organisation has authority to implement operating policies.

For DNPA, operational control is applied. Emissions from leased assets (e.g., buildings) are included in Scope 1 and 2, consistent with previous footprints. Using either control approach would likely yield the same total emissions, with only minor differences in categorisation.

3.4 Reporting Boundaries

Organisations should define reporting boundaries and identify all relevant sources and sinks of GHG emissions, grouped into direct and indirect emissions:

- Scope 1 (direct): Emissions from activities owned or controlled by the organisation, e.g., combustion in boilers or company vehicles.
- Scope 2 (energy indirect): Emissions from purchased electricity, heat, steam, or cooling.
- Scope 3 (other indirect): Emissions resulting from the organisation's activities but occurring from sources not owned or controlled, e.g., business travel, waste disposal, or purchased materials.

Scope 3 emissions may occur upstream, downstream, or be "out of scope" to avoid double-counting. The inclusion of indirect emissions should be based on significance, considering factors such as magnitude, influence, business risk, sector guidance, and cost of data collection. Where emissions are excluded, this should be clearly disclosed.

3.5 Inventory Categories

Categories within each of the three scopes are provided by ISO 14064 and the GHG Protocol (and their respective secondary guidance documents). These two standards have been cross-referenced and generally align, with only minor differences. Table 1 shows the list of categories and whether they are included (scoped in) or excluded (scoped out) from DNPA's footprints.

A detailed explanation of what is included in each category, along with the associated data collection and calculation approaches, is provided in Section 4.

Table 1: Inventory categories and their recommended inclusion or not within the footprints for DNPA

Scope	Upstream/ Downstream	No.	Category ISO 14064-1	Include/Exclude
Scope 1: Direct GHG emissions and removals				
1	Direct	1	Direct emissions from stationary combustion	Include
		2	Direct emissions from mobile combustion	Include
		3	Direct process related emissions	Exclude - Not Relevant
		4	Direct fugitive emissions	Include
		5	Direct emissions and removals from Land Use, Land Use Change and Forestry (LULUCF)	Include
Scope 2: Energy GHG indirect emissions				
2	Upstream	6	Indirect emissions from imported electricity consumed	Include

		7	Indirect emissions from consumed energy imported through a physical network	Include
Scope 3: Other indirect GHG emissions				
3	Upstream	8	Energy-related activities not included in direct emissions and energy indirect emissions	Include
		9	Purchased goods and services	Include
		10	Capital equipment	Include
		11	Waste generated from organisational activities	Exclude
		12	Upstream transport and distribution	Include
		13	Business travel	Include
		14	Upstream leased assets	Exclude - Not Relevant
		15	Investments	Include
	Downstream	16	Client and visitor transport	Exclude
		17	Downstream transport and distribution	Exclude - Not Relevant
		18	Use stage of the product	Exclude - Not Relevant
		19	End of life of the product	Exclude - Not Relevant
		20	Downstream franchises	Exclude - Not Relevant
		21	Downstream leased assets	Exclude - Not Relevant
		22	Employee commuting	Include
	Varies	23	Other indirect emissions not included in the other 22 categories	Exclude - Not Relevant

Most of the categories excluded in Table 1 were deemed not relevant to DNPA. The following exceptions were excluded for specific reasons:

- **Capital equipment**: Aggregated within purchased goods and services, as it was not possible to separate capital from revenue spend.
- **Waste generated from organisational activities**: No specific waste data (e.g., mass of waste per stream and processing method) were available, so emissions were captured via spend on purchased goods and services.
- **Client and visitor transport**: Emissions from DNPA's clients and visitors are expected to be low, and gathering meaningful data would be difficult. Although visitor emissions across Dartmoor National Park are significant, they were excluded from DNPA's organisational footprint. This aligns with Race to Zero[1], which considers overall carbon reduction plans for national parks rather than individual organisational footprints.

Update for this year:

- **Upstream transport and distribution (T&D)** and **well-to-tank (WTT)** emissions are now included in this year's footprint due to improved access to data. Including these additional categories allows DNPA to report a more complete picture of its emissions and increases alignment with ISO 14064 and the GHG Protocol. Capturing more categories may result in higher reported emissions this year, even if actual operational changes have been minimal. This reflects better coverage rather than increased emissions from DNPA's activities.

Secondary Reporting Categories

In addition to the above, it is useful to report emissions in categories that better reflect DNPA's internal organisation. For example, building-related emissions may arise from: stationary combustion (Scope 1), imported electricity (Scope 2). energy-related activities (Scope 3), and capital equipment (e.g., construction of new buildings).

Reporting under a **'Buildings'** category with sub-categories, as required, provides more informative insights. A **secondary reporting category list** was produced by mapping all ISO/GHG categories (and splitting where needed) to DNPA's internal structure:

1. **Buildings**
   1.1 Visitor Centres
   1.2 Offices
   1.3 Other
   1.4 Home Working
2. **Transport**
   2.1 DNPA Operated Vehicles
   2.2 Business Travel
   2.3 Grey Fleet
   2.4 Staff Commuting
3. **Purchased Goods and Services**
   3.1 Purchased Goods and Services
4. **Investments**
   4.1 Pensions
5. **Land Use**
   5.1 Woodland
   5.2 Open Habitat Sites

Reporting Periods

The carbon footprint was calculated for the financial year April 2024 to March 2025. This is the first year since the 2023/24 baseline footprint, produced by the Centre for Energy and the Environment at the University of Exeter. The same methodology as the baseline year has been applied, with additional categories included to provide a more complete picture of DNPA's emissions.

The underlying data and emission factors used in the calculations were aligned with the chosen reporting period.

Quantifying Emissions and Removals

Calculation methodologies were selected to minimise uncertainty and yield accurate, consistent, and reproducible results, while remaining mindful of technical feasibility and the cost of data gathering. Within each category, sources and sinks were identified.

As it is not practicable to directly measure the actual mass of greenhouse gases (GHGs) emitted from an activity, emissions were calculated by multiplying relevant activity data by an emission factor. The choice of activity data depended on availability, following a data hierarchy approach that prioritises:

1. Primary data – data collected directly by the organisation.
2. Site-specific data – tailored to the activity or location.
3. Secondary data or estimates – used only when primary or site-specific data are unavailable.

For example, for vehicle emissions, the preferred data would be the actual fuel consumed, followed by fuel expenditure, and lastly distance travelled. Where a mix of data types exists within a category, the hierarchy is applied: e.g., if fuel consumption data exist for some vehicles and mileage data exist for all vehicles, fuel data are used where available, and mileage data for the remainder. Steps should be put in place to capture fuel consumption data for all vehicles in the following year.

Emission factors were sourced from a range of references, with the most extensively used being the UK GHG Conversion Factors for Company Reporting (referred to as "Government EFs") [7], which are updated annually and provide consistent factors across activities. For this 2024/25 footprint, the 2024 Government EFs were applied, as most of the financial year falls within the 2024 calendar year.

At a minimum, an aggregate value is quantified for each category. However, maintaining as fine a level of granularity as the source data allows provides greater insight. For example, for buildings, emissions can be calculated on a per-building basis if metered data are available, rather than only as a sum-total for all buildings.

For reporting purposes, it may be preferable to separate only the most significant sources within a category to avoid unwieldy lists (e.g., reporting large buildings individually while aggregating smaller sites). The full detail should be retained within calculation tools or spreadsheets to enable ongoing analysis and future refinement.

Intensity Ratios

The headline inventory was reported in absolute terms as tCO2e. The nature of DNPA does not lend itself well to normalising by other intensity ratios, for example by number of employees, operating budget, size of estate etc.

Data Collection and Analytical Approach by Category

Scope 1: Direct Emissions

Direct emissions from stationary combustion

Description:
Direct emissions arise from on-site combustion of fuels (e.g., natural gas, heating oil) in plant such as boilers, within DNPA's organisational boundaries. In practice, this primarily includes gas boilers in DNPA-owned buildings.

Approach Taken for Footprint

Building	Fuel Type	Consumption 2024/25	Notes
Parke	Gas	97,760 kWh	Annual aggregated data
Parke	Heating Oil	1020 Litres	Annual aggregated data
Princetown	Wood Chip (Bioenergy)	209.5 tonnes	Annual aggregated data

These were multiplied by government emission factors to calculate scope 1 GHG emissions. More granular energy data (e.g., half-hourly) could further improve accuracy.

Direct emissions from mobile combustion

Description:
Direct emissions arise from fuel burned in DNPA-owned transport equipment. Emissions from non-owned transport are included in Scope 3.

Approach Taken for Footprint:

Fuel Type	Consumption 2024/25	Notes
Small Diesel Vehicles	4435 miles	Total fleet consumption per vehicle type
Medium Diesel Vehicles	17434 miles	Total fleet consumption per vehicle type
Large Diesel Vehicles	130340 miles	Total fleet consumption per vehicle type
Petrol Vehicles	0 miles	Total fleet consumption per vehicle type
Petrol (tools)	135 litres	Handheld tools and equipment
Electricity (EVs)	N/a	Included in building electricity to avoid double counting

For 2024/25, emissions were calculated by vehicle type, using total mileage for each category (e.g. small diesel, large diesel) and applying government conversion factors. This improves accuracy compared to 2023/24, when fuel use was apportioned across the fleet.

Accuracy could be further improved in future by using actual litres of fuel used per vehicle type rather than mileage-based calculations. This would also support efficiency metrics ($kgCO_2e$/mile).

Direct process-related emissions

This category is out of scope as it is not applicable to DNPA activities.

Direct fugitive emissions

Description:
These are uncontrolled GHG emissions from processes using GHGs, primarily refrigerants in building space conditioning systems or in vehicles.

Approach Taken for Footprint:
Estates confirmed no refrigerant leaks occurred in 2024/25.

Direct emissions and removals from Land Use, Land Use Change, and Forestry (LULUCF)

Description:

GHG emissions and removals from LULUCF may come from anthropogenic land use activities (controlled biomass burning, restoration of wetlands, forest management, rice and other agriculture cultivation, animal husbandry generating enteric fermentation,) direct land use change (afforestation, reforestation, and

deforestation), and managed forests, within the organisational boundary. For DNPA this means the flux of GHG emissions from its woodlands and open habitats.

Approach Taken for Footprint:

A report produced by Farm Carbon Toolkit in 2023 identified the baseline annual sequestration in DNPA's woodland estate, using the Forestry Commission's Woodland Carbon Code methodology. These numbers were taken directly from Table 1 of the Farm Carbon Toolkit report. They were unable to determine carbon sequestration from the open habitat sites due to a lack of soil sample replication for soil and habitat combinations. The values used here can be used in future years, though there would be an implicit assumption that woodland areas remain constant. To improve data accuracy going forward would require commissioning further work to understand the level of carbon sequestration from woodland both in terms of quantity of woodland, and its age and condition. Efforts should also be taken to quantify carbon sequestration from open habitats, even if initially these may be high-level estimates with high margins of error.

Scope 2: Energy Indirect Emissions

Indirect emissions from imported electricity consumed

Description:

These are indirect emissions associated with the import of electricity by the organisation. It excludes upstream emissions associated with the production of fuels feeding power stations, embodied emission associated with the production of generation plant, and the transmission and distribution network (these are captured within Scope 3). In practice, this will be electricity consumption from buildings, and increasingly vehicles.

Approach Taken for Footprint:

Electricity consumption data (kWh) was available for the reporting period for all buildings occupied by DNPA. In 2024/25 this comprised 11 sites which totalled 196,081 kWh. These were multiplied by the government EFs for grid electricity (generation). The quality of the source data is already sufficient to be able to calculate GHG emissions.

Indirect emissions from consumed energy imported through a physical network

This category has been taken to be out of scope as it is not relevant to the activities of DNPA.

Scope 3: Other Indirect Emissions

Energy-related activities not included in direct emissions and energy indirect emissions

Description:

These are indirect emissions from upstream activities associated with fuel and electricity consumption by the reporting organisation. Examples include the extraction, production, transport, and distribution of fuel and energy. In practice, this will be an additional well to tank (WTT) uplift on all fuel use from stationary and mobile construction, imported electricity, business travel and employee commuting.

Approach Taken for Footprint:

These were calculated by establishing these emissions in parallel to the main emission source, as described above. These were applied to direct emissions from stationary and mobile consumption, imported electricity, business travel, and commuting. For each of these, the source 'activity data' was in addition multiplied by the corresponding WTT factor as the main EF used. For electricity, the factor used was the sum of three upstream factors – the generation WTT, transmission and distribution (T&D), and T&D WTT.

Purchased goods and services

Description:

These are emissions associated with the consumption of goods and services by the reporting organisation that are not otherwise included elsewhere in the inventory. For example, business travel, or electricity consumption are all examples of goods and services that are consumed, but they are already accounted for within specific sub-categories in the inventory that have been created within the standards to improve transparency and consistency. These scope of these emissions are 'cradle to gate' i.e., all emissions that occur up to the point of sale by a producer e.g., raw material extraction, transport to a manufacturing facility, processing etc., but not including onward transport to the customer. In practice, this category will rely heavily on engagement with both procurement departments, and supply chain partners.

Approach Taken for Footprint:

DNPA purchase goods and services via a central procurement service. This data was analysed using a 'spend based method'.

The central procurement data was analysed first. Each transaction was allocated to an expense area and expense type based on the stated 'activity code' and 'expense code'. The expense type was found to be most useful in terms of relating to a sector in the UK economy whereby emission factors are available for each sector (there are

110 high level codes using the Standard Industry Classification [SIC] classification system). Each of the expense types was allocated to one of the SIC codes, or alternatively as either ‘included elsewhere’ 10 (e.g., in the case of vehicle fuel), or ‘not relevant’ (where these spend items were not expected to result in emissions). The most recent and applicable emission factors to be used are from the 2021 UK’s carbon footprint dataset [9] in the ‘SIC multipliers’ sheet.

Whilst this method is effective at being able to calculate emissions arising from anywhere in the economy, it is important to recognise it is not likely to be accurate and cannot distinguish emissions between spend within a category or between suppliers, and is only really useful as an initial rough ‘snapshot’ rather than as a tool that can identify specific opportunities or track changes over time (as the only two factors in the calculation are amount spent and the emission factor). To improve data quality in future years, steps should be taken to engage with suppliers to obtain more relevant and specific EFs. Suppliers should be ranked by spend and those with the highest spend targeted first. If specific data is obtained for a supplier, then this can be used to replace the spend-based EF used in the current approach, with that approach persisting where specific supplier data is not available.

Capital equipment

Description:

These are emissions associated with the purchase of capital goods. There is the potential for overlap in the categorisation of either purchased goods/products, and capital goods and so it is important that they are only accounted for in one place. The GHG Protocol states that “Capital goods are final products that have an extended life and are used by the company to manufacture a product; provide a service; or sell, store, and deliver merchandise. In financial accounting, capital goods are treated as fixed assets or as plant, property, and equipment (PP&E). Examples of capital goods include equipment, machinery, buildings, facilities, and vehicles”. Whilst purchased products are sometimes referred to as “consumables” and are used over a short period of time (e.g., days or usually less than a year), capital goods are used for much longer periods (e.g., 5 to 50 years). Whether a good is classified as a “purchased product” or “capital good”, the reporting should make clear which category it is being accounted for in.

Approach Taken for Footprint:

The source data from the previous section on purchased goods and services did not enable separation of spend on capital and revenue items, and to capital equipment was included within that section, and not separately reported here. If spend data was separated into revenue and capital spend, then these categories could be separately reported here.

Waste generated from organisational activities

Description:

Waste can impact on organisational GHG emissions in several ways, including:

• The use of recycled materials in the products the organisation purchases. These are already accounted for in the section on purchased products and services.

• The transport and subsequent processing of waste generated by the organisation. This is what is covered within this section. Technically, the transport of waste from the organisation to the waste treatment facility would constitute “upstream transport and distribution”, however as the Government EFs combine the transport and waste processing impact, they are assumed to be included within this section.

• The onward disposal of waste from products sold by the organisation. This is not applicable to DNPA.

No specific waste data was available (e.g. mass of waste, by waste stream and processing method) so this was instead captured via spend on bought goods and services.

Upstream transport and distribution

Description:

This category includes transportation and distribution (both transport and logistics including warehousing) of products purchased by the reporting company in the reporting year between a company’s tier 1 suppliers (i.e., those with which the organisation has a direct purchase order) and its own operations, and transportation and distribution services purchased by the reporting company in the reporting year, including inbound logistics, outbound logistics. The transport within the supply chains between tier 1 and 2 suppliers should be included within the “purchased goods and services” section i.e., that section reports “cradle-to-gate” emissions (where gate is the factory gate of a supplier), and this section should report on the transport of those goods from the factory gate to the organisation.

Whilst the supply of goods and services to DNPA will result in emissions from upstream transport and distribution, the magnitude of the emissions is likely to be low, and obtaining meaningful information would be extremely challenging and expensive and so this was not reported here.

Business travel

Description:

This section includes emissions from business travel in vehicles owned or operated by third parties and hotel stays during trips. Emissions are reported by mode of transport and hotel stays.

Approach Taken for Footprint:

Transport / Source	Distance / Activity 2024/25	Methodology
Grey Fleet	16416 miles	Mileage claims analysed by exact vehicle type (e.g., small diesel, large diesel, electric); multiplied by corresponding emission factor
Air Travel	29,918 miles	Emission factor applied to distance travelled
Rail Travel	17600 miles	National rail emission factor applied
Bus Travel	0 miles	N/a
Hotel Stays	62 room.nights	Hotel nightly room emission factor applied for relevant country

Using the exact vehicle type for grey fleet improves the accuracy of emissions estimates over the 2023/24 baseline. Data is sufficient for annual GHG reporting, and this approach will become increasingly important as electric vehicles are adopted.

Upstream leased assets

This category has been taken to be out of scope as it is not relevant to the activities of DNPA

Investments

Description:

Indirect emissions from investments arise from the operation of equity investments. These include holdings in listed or unlisted companies, with emissions typically estimated based on the investor's share of ownership. For DNPA, this relates to staff pension contributions.

Approach taken for footprint:

Source	Methodology	Notes
Devon Pension Fund (Brunel Pension Partnership)	Weighted Average Carbon Intensity (WACI) of 150 tCO_2e/£million (Brunel, 2023) applied to DNPA's investment value of £28.39 million	Same figure used as 2023/24 baseline due to lack of updated WACI data

This approach provides a reasonable high-level estimate suitable for organisational footprinting. Future reporting could be improved by using updated WACI data when available from Brunel Pension Partnership or the Devon Pension Fund.

Client and visitor transport

Emissions from clients and visitors to DNPA specifically are likely to be low, and gathering meaningful information would be challenging. Emissions from visitors to Dartmoor National Park will be significant.

However, as all UK national parks are part of Race to Zero which looks looking at overall carbon reduction plans for the national parks, emissions from visitors to Dartmoor were excluded from this organisational footprint.

Downstream transport and distribution

This category has been taken to be out of scope as it is not relevant to the activities of DNPA.

Use stage of the product

This category has been taken to be out of scope as it is not relevant to the activities of DNPA.

End of life of the product

This category has been taken to be out of scope as it is not relevant to the activities of DNPA.

Employee Commuting

Description:
This category includes emissions from employee travel between home and the workplace. For DNPA, this covers daily commuting journeys by staff to offices or depots, and emissions from homeworking (energy used to heat and power homes while working remotely). Journeys made during working hours are accounted for under other categories (e.g. business travel).

Approach Taken for Footprint:

For 2024/25, commuting emissions were calculated using data from an updated staff travel survey, which asked staff about commuting distances, modes of transport, and the number of days worked from home or in the office. Although individual vehicle types were not distinguished, total annual mileage for each employee was multiplied by the DEFRA 2024 average car emission factor to estimate emissions from driving.

Homeworking emissions were calculated using DEFRA's homeworking emission factor. Average days working from home per FTE were used to estimate total hours of homeworking, which were multiplied by the emission factor.

Using this method, commuting emissions were calculated as 94.16 tCO_2e, extrapolated to 107.27 tCO_2e for the full 90 FTE. Homeworking emissions were 10.97 tCO_2e, for 2024/25.

This approach improves on the 2023/24 baseline by incorporating an updated staff survey, providing more accurate insight into commuting patterns and homeworking, even though average emission factors were applied. Future surveys should continue to capture homeworking and commuting data annually to monitor trends and support emissions reduction initiatives.

Other indirect emissions not included elsewhere

No other sources of emissions have been identified.

Results (2024/25)

DNPA's total net emissions in 2024/25 were 3105 tCO_2e. As in 2023/24, the footprint is dominated by the sink observed in Scope 1 from carbon sequestered in woodlands, and the impact of the pension within Scope 3. A full breakdown of emissions within GHG Protocol/EN 14064-1 categories is provided in Appendix A.

Emissions broken down by theme are shown in Table 2, Figure 3, and Appendix B. The following observations can be made within each category:

- Buildings: This remains a relatively minor category, although DNPA has greater direct control over these emissions. Approximately 35% of emissions here are from offices (e.g., Parke) and 32% are from visitor centres (mainly Princetown Duchy Hotel). The remaining emissions are from staff working at home and other buildings.
- Transport: Emissions in this category are about 1.5 times larger those from buildings. Around 60% of emissions are from staff commuting, with just under a third from DNPA's own vehicles. Grey fleet emissions remain low, however business travel emissions have considerably increased as a result of more

frequent plane travel. Improved calculation methods (using vehicle type and mileage data) provide more accurate estimates than in 2023/24.

- Purchased Goods and Services: Emissions from this category were 348 tCO_2e, representing a significant source compared to previous footprints. Emissions arise from a mix of recurring revenue activities and fixed-term projects. The highest contributing area was visitor management and facilities, accounting for around 17% of all purchased goods and services. This category is calculated using a high-level spend-based method, so there is inherent uncertainty.
- Investments: Emissions associated with the Devon Pension Fund were 4259 tCO_2e. This is the same figure used as 2023/24 baseline due to lack of updated WACI data.
- Land Use: Woodland sequestration continues to offset a significant portion of GHG emissions (-1771 tCO2e). The contribution of open habitat sites as a source or sink remains uncertain due to a lack of robust data.
- Employee Commuting and Homeworking: Updated calculations using the 2024 staff survey indicate commuting emissions of 107 tCO_2e and homeworking emissions of 11 tCO_2e. This improves on the 2023/24 baseline by incorporating up-to-date staff travel patterns and more accurate activity data.

Table 2: GHG emissions in 2024/25 by theme and sub-category and GHG Protocol Scope

Theme Category	Scope 1	Scope 2	Scope 3	Grand Total
1. Buildings	**32**	**40**	**28**	**100**
1.1 Visitor Centres	9	16	7	32
1.2 Offices	20	10	5	35
1.3 Other	3	14	5	22
1.3 Homeworking			11	11
2. Transport	**49**		**120**	**169**
2.1 DNPA Operated Vehicles	49			49
2.2 Business Travel			9	9
2.3 Grey Fleet			4	4
2.4 Staff Commuting			107	107
3. Purchased Goods & Services			**348**	**348**
3.1 Purchased Goods & Services			348	348
4. Investments			**4259**	**4259**
4.1 Pensions			4259	4259
5. Land Use	**-1771**			**-1771**
5.1 Woodland	-1771			-1771
Grand Total	**-1690**	**40**	**4755**	**3105**

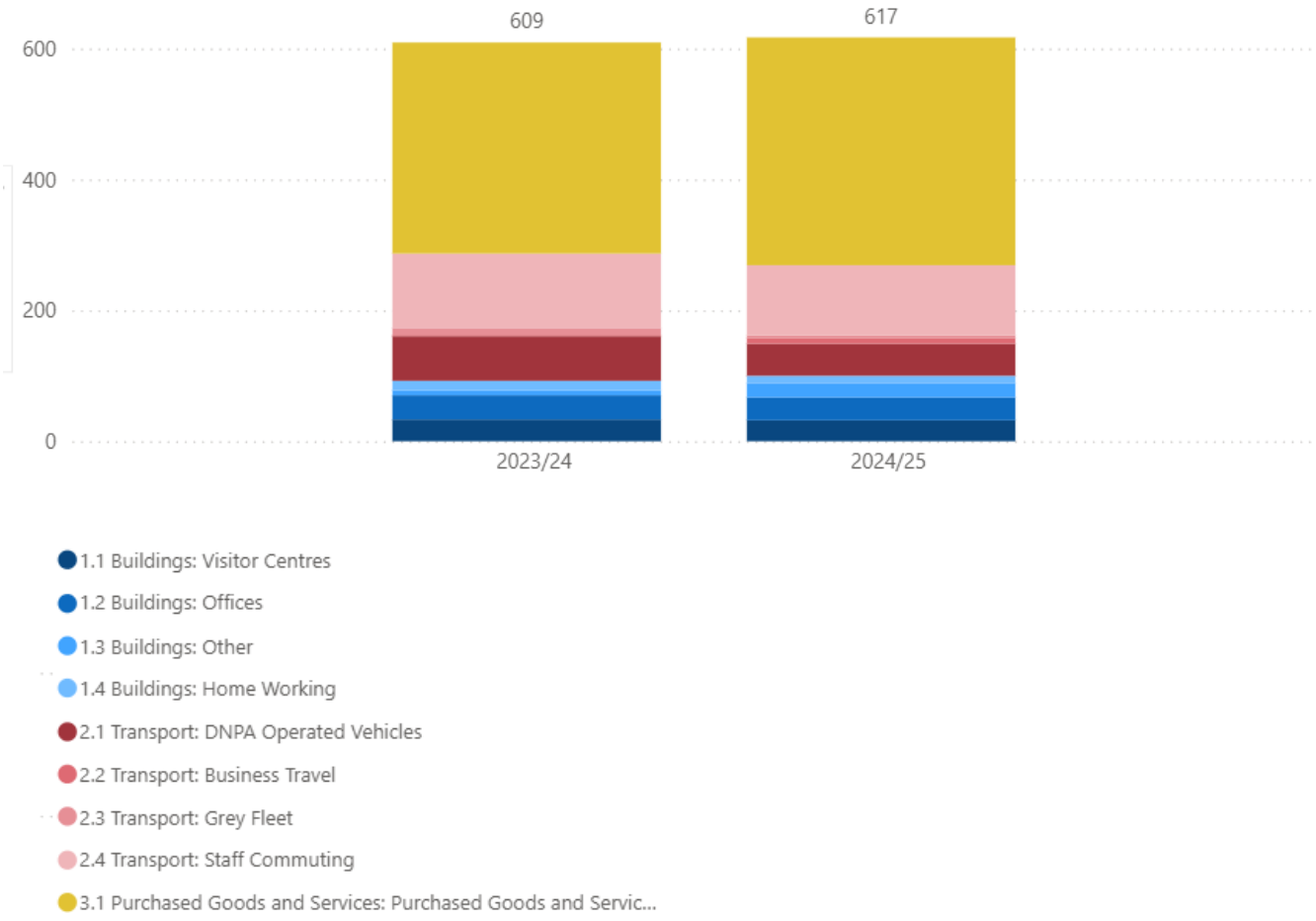


Figure 3: GHG emissions in 2023/24 and 2024/25 by theme sub-category

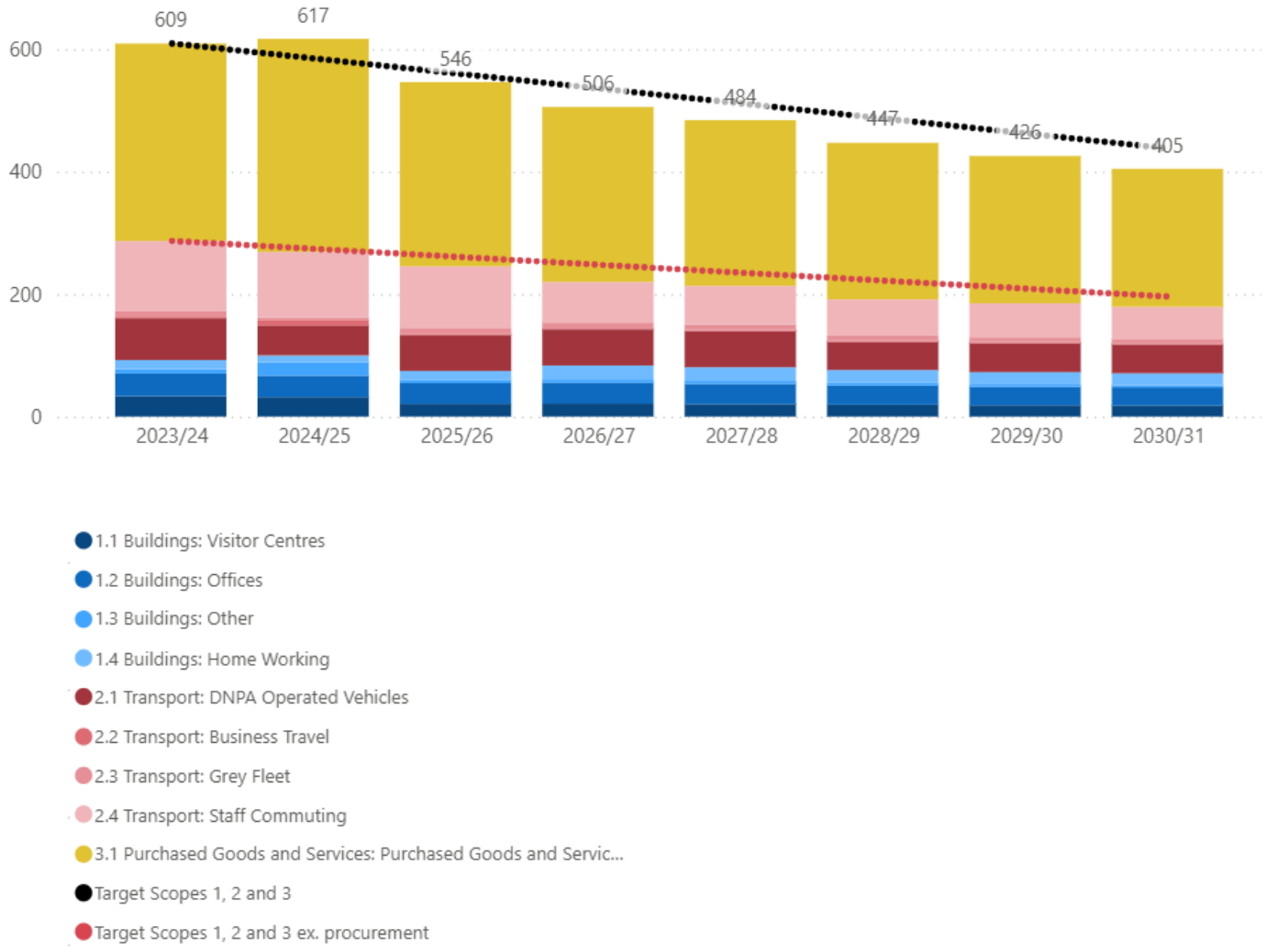
Target Tracking

The 2024/25 emissions footprint for DNPA shows an emission footprint of 617 tCO_2e, compared to 609 tCO_2e in 2023/24 (after excluding pensions and woodland sequestration). While total emissions have increased slightly, this is primarily due to updated and more accurate activity data, particularly for transport and purchased goods and services.

- Buildings: Emissions from buildings have increased modestly due to higher electricity consumption at certain sites.
- Transport: Transport emissions remain dominated by staff commuting, though better survey data and more precise grey fleet calculations have improved the accuracy of this category.

- Purchased Goods and Services: This category shows an increase, reflecting both higher spend in some areas and more precise mapping to emission factors.
- Investments: Pension-related emissions remain unchanged, as these are based on the published WACI of the Devon Pension Fund.
- Land Use: Woodland continues to provide a substantial carbon sink, offsetting 1,771 tCO_2e.

Overall, the minor increase in net emissions reflects methodological improvements rather than a true rise in organisational impact. These variations are expected, as the Authority has not yet implemented specific emission reduction actions. With the adoption of the Climate Action Plan, targeted measures will be introduced, enabling future reductions and a clear downward trajectory.



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Appendices

Appendix A: Inventory Broken Down by Scope and Category

Scope	No	Name	tCO2e 2024/25	tCO2e 2024/25
1	1	Direct emissions from stationary combustion	-1690	32
	2	Direct emissions from mobile combustion		49
	3	Direct process related emissions		X
	4	Direct fugitive emissions		0
	5	Direct emissions and removals from Land Use, Land Use Change and Forestry (LULUCF)		-1771
2	6	Indirect emissions from imported electricity consumed	40	40
	7	Indirect emissions from consumed energy imported through a physical network		X
3	8	Energy-realted activities not included in direct emissions and energy indirect emissions	4755	17
	9	Purchased products		348
	10	Capital equipment		X
	11	Waste generated from organisational activities		X
	12	Upstream transport and distribution		X
	13	Business travel		13
	14	Upstream leased assets		X
	15	Investments		4259
	16	Client and visitor transport		X
	17	Downstream transport and distribution		X
	18	Use stage of the product		X
	19	End of life of the product		X
	20	Downstream franchises		X
	21	Downstream leased assets		X
	22	Employee commuting		118
	23	Other indirect emissions not included in the other 22 categories		X
Offset	24	Offset carbon		0
		GRAND TOTAL (net)		**3105**

Appendix B: Inventory Broken Down by Theme and Detail

Category and Detail	2024/25
1. Buildings	**100**
1.1 Visitor Centres	**32**
Princetown	19
Postbridge	9
Haytor	4
1.2 Offices	**35**
Parke	32
Heating Oil	3
1.3 Other	**22**
Works Depot	4
Newbridge Aerial	0
Meldon	0
Ranger Store	0
Dartmeet	1
Higher Uppacott	17
1.4 Home Working	**11**
Home Working	11
2. Transport	**169**
2.1 DNPA Operated Vehicles	**49**
Diesel	49
Petrol	0
Ranger Tools	0
2.2 Business Travel	**9**
Hotel Stays	1
Plane	8
Train	1
Bus	0
2.3 Grey Fleet	**4**
Grey Fleet	4
2.4 Staff Communting	**107**
3. Purchased Goods and Services	**348**
Purchased Goods and Services	348
4. Investments	**4259**
4.1 Pensions	**4259**
Pension Investments	4259
5. Land Use	**-1771**
5.1 Woodland	**-1771**
Blackingstone Rock	-7
Caseley Wood	-37
Castor Copse	-37
Eastpark Copse	-52
Hawnes and Dendles	-122
Haytor	-186
Holne Moor and White Woods	-925

Plasterdown	-6
Sanduck and Huntingpark	-115
Trendlebere	-6
Whiddon Scrubs	-45
Wray Cleave and Steward Woods	-234
Grand Total	**3015**