NORTHAMPTONSHIRE
PARTNERSHIP HOMES

# Energy and Carbon Report

2024-25

# Introduction

If everyone on the planet lived as we do in the UK, we would need three planets to produce and absorb the natural resources consumed. At NPH, we believe that each of our residents, employees, suppliers, and stakeholders has a crucial role in the sustainable development of West Northamptonshire.

To help us become a more sustainable organisation we have adopted the One Planet Living framework, ten simple principles for a holistic approach to sustainability aiming to reduce our ecological footprint to within the finite resources of our planet - it is the only one we have!


Figure 1; The ten principles of One Planet Living

The NPH Sustainability Strategy and Environmental Policy commit NPH to manage our environmental impact and reduce carbon emissions. Our carbon reduction target is to achieve continual reduction of 7% per year.

This report describes NPHs operational energy consumption and carbon emissions, the energy and carbon reporting methodology used, and how NPH has made progress with our carbon reduction target. A summary of the energy and carbon data is provided along with details of where savings have been made, and progress towards net zero carbon.

This formal overview of NPH energy consumption and carbon footprint is intended to provide a basis for design and implementation of greenhouse gas emission reduction and removal initiatives. A summary is included in the annual Financial Return.

# Streamlined Energy and Carbon Reporting

The energy and carbon data in this report has been collated following the *UK Government Environmental Reporting Guidance 2019;* for Streamlined Energy and Carbon Reporting (SECR). The most recent UK Government *Conversion Factors for Company Reporting* have been used.

Energy and carbon data is quantified and reported annually by the NPH Sustainability Manager with support from relevant departments within NPH. A table of data is provided in *figure 2* illustrating energy and carbon performance for the reporting period 2024-25 against previous reporting periods and a base year of 2018-19.

# Methodology

The international standard *ISO 14064-1:2019 Greenhouse gases part 1,* provides the formal methodology for quantification and reporting of NPH greenhouse gas emissions.

A systematic approach has been applied with consideration for environmental aspects and impacts in terms of cause and effect. Environmental aspects summarised in *table 1; greenhouse gas inventory,* are converted into tonnes of carbon dioxide equivalent ($tCO_2e$) as a common and consistent indicator of environmental impact. Carbon dioxide equivalent is a recognised metric to include other greenhouse gases, e.g., methane, relevant to an environmental aspect being reported.

*Table 1; NPH Greenhouse gas inventory*

| Environmental Aspect | Description | Scope |
|---|---|---|
| Gas | Gas consumption in kWh in relation to all energy supply contracts | Scope 1 |
| Diesel | Fleet fuel consumption, measured in litres of diesel, converted into kWh | Scope 1 |
| Electricity | Electricity consumption in kWh in relation to all energy supply contracts | Scope 2 |
| Grey Miles | Business mileage from employee vehicles (grey miles) | Scope 3 |
| Water | Water supply and treatment in $m^3$ in relation to all water supply contracts | Scope 3 |
| Waste | Disposal of various waste streams in tonnes including from fly tipping and estate services, building waste and minor voids, and office waste. | Scope 3 |

Verification and validation of the data and statements included in this report will be conducted by the WNC Sustainability Team. An outcome statement will summarise the findings.

# Boundaries

The organisational boundary for NPH energy and carbon reporting follows a financial control approach, consolidating facility level greenhouse gas emissions from multiple sources, reporting all significant energy consumption and carbon emissions from activities and operations NPH have financial control over.

The Reporting boundaries applied follow the Greenhouse Gas Protocol definitions of:

- Direct greenhouse gas emissions from sources under NPH control
- Indirect greenhouse gas emissions because of NPH actions that occur at a source out of NPH control.

Following the Greenhouse Gas Protocol, three broad scopes are applied:

- Scope 1: All direct greenhouse gas emissions, including gas and diesel
- Scope 2: Indirect greenhouse gas emissions from purchased electricity
- Scope 3: Other indirect emissions, including grey miles, electricity transmission and distribution, and outsourced activities such as water supply and treatment, and waste disposal.

# Energy and carbon data summary

NPH carbon performance from a 2018-19 baseline to the financial year of 2024-25 is summarised in *figure 2*. The latest NPH carbon footprint is 1,689 $tCO_2e$. This equates to an intensity ratio of 0.136 $tCO_2e$ per home (including leasehold).

The overall reduction in carbon emissions from a 2018-19 baseline is 32%.

NPH carbon emissions have continually reduced from the initial baseline of 2,474 $tCO_2e$ in 2018-19. Year on year reductions have exceeded the 7% target for three years in a row, 2023-24 showed a slight increase, but 2024-25 data shows a decrease of total emissions compared to the previous reporting period. Over the five-year period (2020-2025), these still averages at in line with the 7% target.

| | **Baseline 2018/19** | **2019/20** | **2020/21** | **2021/22** | **2022/23** | **2023/24** | **2024/25** |
|---|---|---|---|---|---|---|---|
| **Scope 1 emissions (tCO2e)** | | | | | | | |
| Gas | 1,259 | 1,255 | 1,249 | 1,165 | 1,090 | 1,092 | 1,115 |
| Diesel | 218 | 226 | 214 | 215 | 217 | 204 | 195 |
| *Scope 1 energy consumption - kWh* | *7,847,925* | *7,749,812* | *7,679,142* | *7,267,832* | *6,868,706* | *6,831,938* | *6,916,962* |
| | | | | | | | |
| **Scope 2 emissions (tCO2e)** | | | | | | | |
| Electricity | 527 | 579 | 477 | 432 | 394 | 419 | 524 |
| *Scope 2 energy consumption - kWh* | *1,860,817* | *2,327,986* | *2,046,212* | *2,036,494* | *2,037,376* | *2,022,494* | *2,530,949* |
| **Total Scope 1 & 2 emissions (tCO2e)** | **2,003** | **2,059** | **1,939** | **1,812** | **1,701** | **1,715** | **1,834** |
| Green Tariff electricity for scope 2 (tCO2e) | | | 100 | 300 | 357 | 417 | 524 |
| **Net Carbon outturn (tCO2e)** | **2,003** | **2,059** | **1,839** | **1,512** | **1,344** | **1,298** | **1,310** |
| | | | | | | | |
| **Scope 3 emissions (tCO2e)** | | | | | | | |
| Travel, Waste,Water, Electrical distribution | 471 | 424 | 346 | 407 | 389 | 471 | 379 |
| | | | | | | | |
| **Total annual net emissions tCO2e** | **2,474** | **2,484** | **2,185** | **1,920** | **1,733** | **1,769** | **1,689** |
| | | | | | | | |
| Intensity ratio: tCO2e/number of properties (including leasehold) | 0.200 | 0.201 | 0.177 | 0.155 | 0.140 | 0.142 | 0.136 |
| **Change in emissions from previous period** | | 0.4% | -12.0% | -12.1% | -9.7% | 2.1% | -4.5% |
| **Change in intensity ratio from previous period** | | 0.7% | -12.2% | -12.1% | -10.0% | 1.8% | -4.6% |
| **Change in emissions current period to baseline** | | 0.4% | -11.7% | -22.4% | -29.9% | -28.5% | -31.7% |

*Figure 2; Energy and carbon data*

Scope 1 emissions are in line with prior year.

Under scope 2 emissions, kWh consumption of electricity has been very consistent year on year at roughly 2,000,000 kWh. As the carbon intensity of UK grid electricity has improved, the location-based carbon emissions from NPH electricity consumption have increased by 25% compared to the previous year.

The major scope 2 carbon savings can be attributed to the energy procurement risk management strategy implemented in 2020. In the 2024-25 reporting period 100% of NPH electricity has been procured and supplied through a *Green Tariff* certified under the Renewable Energy Guarantees of

Origin (REGO) scheme. Green tariff electricity is reported as zero carbon emissions using a market-based reporting approach.

Scope 3 emissions have decreased by 20% compared to the previous reporting period. The decrease can be seen in relation to diesel, water, and void waste.

## Progress Towards Net Zero

West Northamptonshire Council (WNC) have made a commitment to the UK100 Net Zero pledge, to cut emissions of the LA to net zero by 2030, and for WNC residents and businesses to be net zero carbon by 2045. NPH has a key role to play in helping WNC meet these targets as a management agent to the local authority and a significant stakeholder in the local economy.

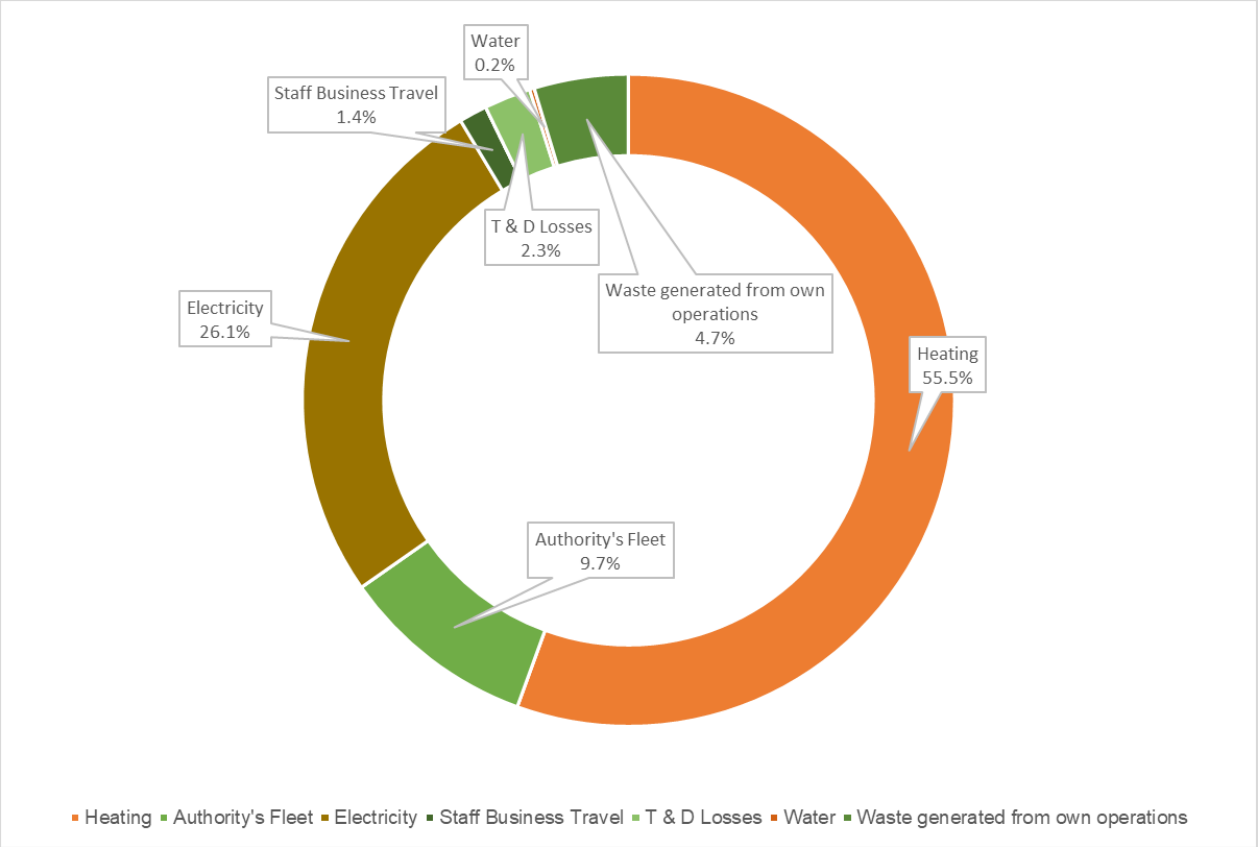


*Figure 3; NPH carbon emissions by environmental aspect*

The above chart in figure 3 illustrates NPH carbon emissions by environmental aspect for the reporting period 2024-25. Consumption of natural gas, primarily for communal heating systems, accounts for over 55.5% (2023/24: 61.7%) of the total footprint. Reducing our reliance on gas whilst continuing to deliver a best value service will be a significant challenge. To help on this journey, air source heat pump domestic heating technologies are being explored, with a particular focus on the tenant experience, and NPH are

supporting WNC on a feasibility study looking into potential development of a Northampton low carbon heat network.

NPH carbon emissions from electricity are low due to REGO electricity supply. To improve on our current position and to develop a more robust net zero carbon energy system, we will continually seek to minimise energy consumption and increase the proportion of onsite renewable energy generation.

NPH manage almost every type of waste stream imaginable, including building waste, office waste, hazardous waste, and much more. Coupled with the high volumes collected, this makes waste a complex and challenging environmental aspect.

Diesel used in the fleet of NPH vans accounts for 11.6% of total carbon emissions (2023/24: 11.5%). The transformation to a zero-carbon fleet is anticipated to see the uptake of electric vehicles being gradually blended in over the coming years. Consideration has been made for how this will impact NPH operations, and our expectation is for the NPH fleet to be diesel free and zero carbon before 2030.

## The housing portfolio

The portfolio of circa 12,000 homes managed by NPH has a modelled carbon footprint of 22,564 $tCO_2e$ (2022/23). Our aim is to transform to a net zero carbon housing portfolio by reducing energy consumption and increasing the provision of renewable energy.

More than 1,100 homes in the portfolio currently have solar PV, providing more than 3MW of renewable power. For the period 2024-25 this generated 1.1 million kWh of renewable electricity.

Our Social Housing Decarbonisation Fund (SHDF) demonstrator scheme completed in December 2022. The project completed whole house retrofit to 140 homes. The project applied a ‘fabric first’ approach to reducing space heating demand, installing external wall insulation, high performance windows and doors, and topping up loft insulation. The homes were insulated tight, and so it was also important to ventilate right by installing mechanical ventilation to ensure comfortable and healthy home environments. Smart heating controls and internet of things devices have been installed to both empower residents and enable monitoring of performance of the homes post-retrofit. Renewable energy generation has been installed in a portion of the retrofits, including solar 19 PV systems, and 15 air source heat pumps replacing gas boilers.

During 2023/24 we completed 429 homes through Wave 1, implementing a fabric first approach to improving energy efficiency by installing external wall insulation, loft insulation, new windows and doors, and improved ventilation. Pre-retrofit, the 429 homes started at EPC band D to E.  Post retrofit, the homes have been improved to at least EPC Band C, reducing household energy bills.

During 2024/25 Wave 2 will be completed during April 2025 and will affect another 103 homes, with the same works as Wave 1.

This has significantly reduced the energy consumption of the retrofitted homes, saving tenants hundreds of pounds on energy bills, and offering some protection from the energy price rises seen over the past few years. Reduced energy consumption has also resulted in significant reductions in carbon emissions.

## Exceptions and exclusions

- Greenhouse gas removals are not included in this energy and carbon data.
  Net zero carbon transformation will require a balance of inputs and outputs: carbon emissions against carbon sinks and removals. Sufficiently robust data for NPH greenhouse gas removals are not currently available. Development of NPH energy and carbon reporting working towards a net zero carbon transformation will seek to include elements of greenhouse gas sinks and removals into the greenhouse gas inventory. For example, biogenic removals and storage e.g., afforestation, reforestation, forest restoration, urban tree planting, agroforestry, etc.

- Energy and water consumption from NPHs main office at Westbridge Depot is excluded from this data collection.
  Westbridge Depot is leased to NPH from WNC. Provision of energy and water is provided as part of the landlord services and therefore accounted in WNCs own energy and carbon reporting. To avoid double counting, and in respect of the organisational boundary described above, energy and water supplied to the Westbridge Depot office is excluded from NPHs energy and carbon data.

- Housing stock energy and carbon emissions are excluded from the reporting methodology.
  The housing stock managed by NPH has a carbon footprint far greater than the operational carbon emissions declared in this report. Those emissions are summarised at the end of this report but deemed out of scope. The purpose of this energy and carbon reporting system is to provide a basis for design and implementation of greenhouse gas emission reduction and removal initiatives in relation to NPH operations.

The described exceptions and exclusions are reviewed annually. Agreed changes following review will be documented and highlighted in future energy and carbon reports.