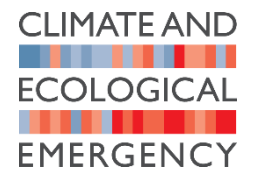


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## APPENDIX A



# H&F 2030: Climate and Ecology Strategy

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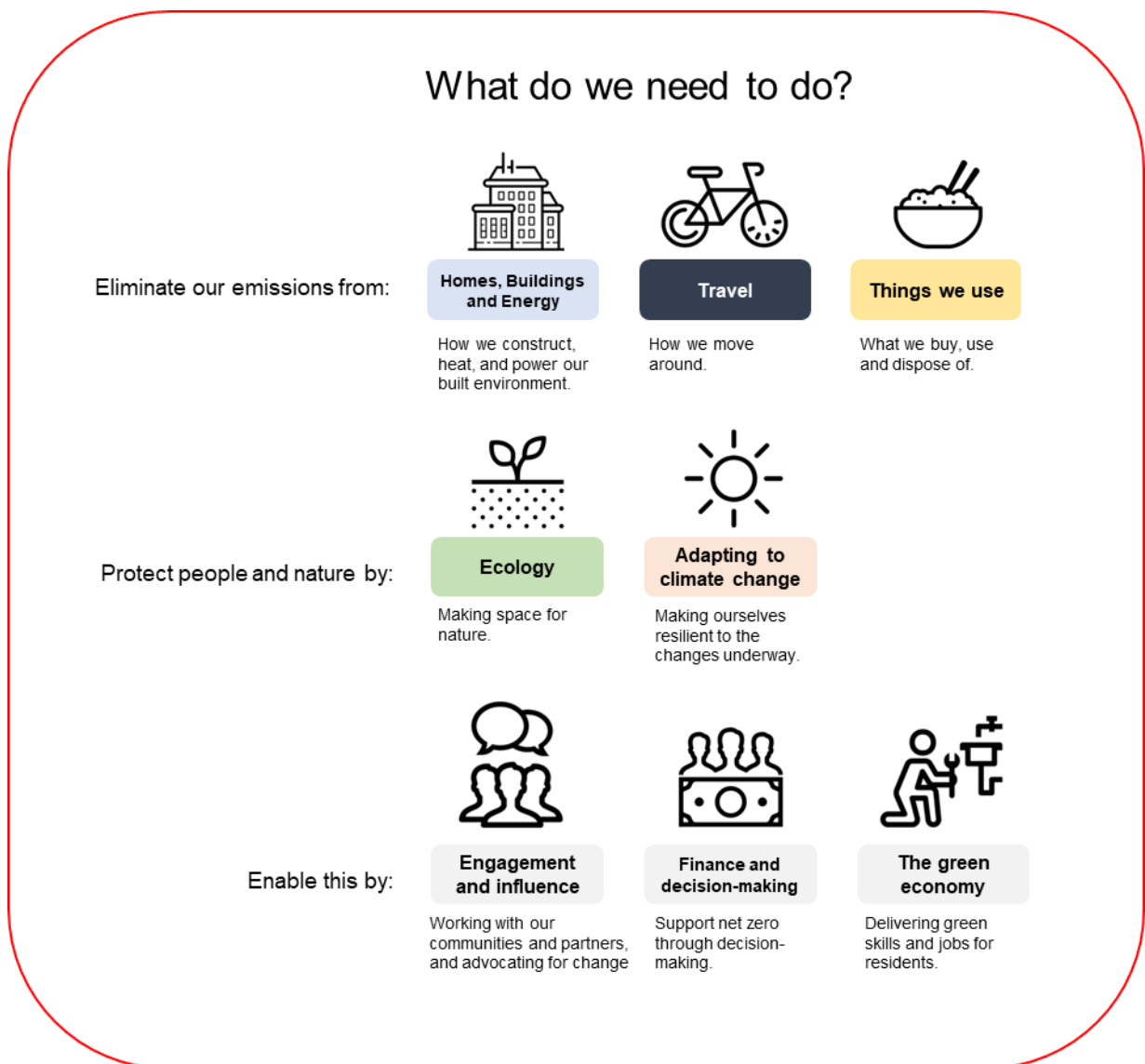
## Strategy on a page

**Vision:** H&F’s climate and ecology strategy sets out the route to net zero greenhouse gas emissions by 2030 for the borough.

Its goal is a clean and sustainable future in which human activity works to the benefit of all people and the environment.

It seeks a safe climate for future generations, along with rich ecosystems that support people and nature, a thriving green economy, and the best possible health, wellbeing and quality of life for all our residents.

The transition from fossil fuels will be an empowering and collective effort in which all have a voice, and the challenges and opportunities from change will be shared justly.



## Introduction

### An urgent need for change

The destabilisation of our climate by human activity will be the great challenge of this century. Over the past hundred years our activities, in particular the burning of fossil fuels, have caused the concentration of greenhouse gases in the atmosphere to rise sharply. By the twenty-first century this had resulted in a 1°C rise in global average temperatures, bringing sea level rises that threaten low-lying areas, and increasingly frequent extreme weather events. Climate change is already causing one disaster around the globe per week, according to the United Nations (UN) secretary-general's special representative on disaster risk reduction<sup>1</sup>.

The UN Intergovernmental Panel on Climate Change (IPCC) released its sixth comprehensive assessment of climate science in August 2021. This reveals that due to the ongoing inadequacy of global action temperatures are now likely to rise by more than 1.5°C within the next two decades. Only drastic reductions in emissions by 2030 can prevent the most devastating global consequences of rising temperatures.

As well as a commitment to a safe planet for all, Hammersmith & Fulham (H&F) has a direct stake in halting the climate emergency. Most of the borough lies within flood risk zones, with periods of both extreme rainfall and drought made more likely by rising temperatures. The borough is particularly vulnerable to high heat due to its density of buildings, and summer daytime temperatures in London are expected to be 2.1-4.8°C hotter by mid-century<sup>2</sup>. With no action, heat-related deaths in the UK are projected to increase 500% to 12,000 per year this century<sup>3</sup>, with our most vulnerable residents most at risk. Action on the climate emergency presents further opportunities for better quality of life: at present in the UK cold homes cost the NHS £1.4bn a year, and 40,000 die annually from air pollution-related diseases<sup>4</sup>.

The environmental and health consequences of climate change disproportionately affect low-income countries and poorer people in high-income countries<sup>5</sup>. In H&F 32% of the reduced life expectancy for the most deprived people is attributable to circulatory and respiratory reasons<sup>6</sup>, exacerbated by polluted air, cold homes and extreme heat. The world's richest 10% produce half of all carbon emissions whilst

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<sup>1</sup> United Nations, [‘Staggering’ rise in climate emergencies in last 20 years, new disaster research shows | UN News](#)

<sup>2</sup> UKCP18 -

<https://www.metoffice.gov.uk/binaries/content/assets/metofficegovuk/pdf/research/spf/london-city-factsheets-3-of-3-the-results-v0.2.pdf>

<sup>3</sup> UK Committee on Climate Change, *Heat and Preventable Deaths in the Health and Social care System*, <https://www.theccc.org.uk/wp-content/uploads/2019/07/Outcomes-Heat-preventable-deaths-case-study.pdf>

<sup>4</sup> Ashden, *Co-benefits of climate action*

<sup>5</sup> B Levy and J Patz (2015), ‘Climate Change, Human Rights, and Social Justice’, *Annals of Global Health*

<sup>6</sup> <https://analytics.phe.gov.uk/apps/segment-tool/>

poorest 3.5bn account for a tenth<sup>7</sup>. In H&F, we recognise our global responsibility and will take account of the global effect of our decisions and actions, playing our part to contribute to a safe, fair and just world for all.

The climate emergency is closely linked with long-term ecological decline. The UK's biodiversity has been depleted by land use change and urbanisation, with 35% of species declining since 1970<sup>8</sup>. Thirteen percent of UK species are threatened with extinction, and thirty-six plant species have already disappeared. With these losses we also lose vital ecosystem services that species provide, including insect populations to pollinate our crops and plants to clean our air. Overall, public sector spending on biodiversity has declined by 42% since 2008.

### **The national picture**

The Climate Change Act 2008, amended in 2019, sets a mandatory greenhouse gas reduction target for the UK of 100% by 2050. In April 2021 the UK government also announced an interim target to reduce the UK's emissions by at least 78% by 2035, as part of its contribution to the international Paris Climate Agreement<sup>9</sup>. The UK's statutory Committee on Climate Change (CCC) monitors and advises on progress, measured against legally binding five-year 'carbon budgets': a maximum amount of greenhouse gases the UK should emit on its way to net zero. They have assessed that the government's current planned policies are not enough to meet these commitments<sup>10</sup>.

The UK is not alone in setting aggressive emissions reduction targets – almost every other large emitter has done so, including China and the United States.

### **H&F acts**

H&F has taken action to protect our environment over many years, under its ambition of becoming the greenest borough. Since 2016 it has established and enacted recommendations from resident-led biodiversity and air quality commissions, published and followed a 2018-22 business plan covering environmental improvements in habitats and pollution.

In late 2018 the UN's Intergovernmental Panel on Climate Change (IPCC) assessed that the world has until 2030 to take radical action to keep global temperatures within 1.5°C of pre-industrial levels, beyond which catastrophic and irreversible change is expected<sup>11</sup>. Nevertheless, as of 2019 the world's greenhouse gas emissions continued to rise by 0.6% on the previous year.

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<sup>7</sup> Oxfam (2020), *Confronting Carbon Inequality*, <https://oxfamlibrary.openrepository.com/bitstream/handle/10546/621052/mb-confronting-carbon-inequality-210920-en.pdf>

<sup>8</sup> [State of Nature 2019 - National Biodiversity Network \(nbn.org.uk\)](https://www.nbn.org.uk/state-of-nature-2019)

<sup>9</sup> [The Paris Agreement | UNFCCC](https://unfccc.int/paris-agreement)

<sup>10</sup> [Reducing UK emissions: 2020 Progress Report to Parliament - Climate Change Committee \(theccc.org.uk\)](https://www.theccc.org.uk/reports/2020-progress-report-to-parliament)

<sup>11</sup> [Global Warming of 1.5 °C — \(ipcc.ch\)](https://www.ipcc.ch/global-warming-1.5)

In recognition of this, H&F council declared a climate and ecological emergency in July 2019, setting an ambitious target of 2030 for the borough to achieve net zero carbon. Continuing our commitment to doing things with residents, we launched a resident-led Climate and Ecological Emergency Commission, which met throughout 2020 to help us shape a ten-year climate programme to enrich and inspire the borough.

The council has moved quickly during the last two years. We're buying 100% renewable electricity for our buildings, helping residents do the same, and supporting schemes to install local renewable energy. We've initiated a programme of energy efficiency retrofitting for our council homes, schools and premises, and are supporting fuel-poor residents to improve their homes. We've expanded our electric vehicle charging network to be one of the largest in the UK, aiming to have 1,000 installed by the end of 2021, and we're replacing our fleet with electric vehicles. We've rolled out a zero-emissions delivery service, delivering food packages during the Covid-19 pandemic, and have launched our pilot food waste recycling scheme. We've trailblazed a global UN-backed climate education programme with our teachers.

These are some of the first steps towards ten years of climate action, set out in the strategy below, that will bring the community together to deliver a socially just, environmentally safe society.

Achieving a net zero borough presents a vast challenge, not least the projected £2bn investment required locally. This will require concerted action not just by the council but also by central government to bring forward much greater funding, bolder policy, and powers for local authorities; and by our residents, businesses, and organisations to take up the challenge.

### **Opportunity from a green economy**

H&F was the first local authority to publish a ground-breaking Industrial Strategy, and has been working with its partners including institutions like Imperial College, anchor businesses, and regional partners to foster the field-leading green innovations and skills needed for a net zero future. H&F has a thriving economy, and a growing environmental goods and services sector employing around 3,300 people. The local economy is key to the low-carbon transition, providing goods and services to the borough and beyond. Businesses also control a significant direct footprint locally, with 43% of the borough's emissions being from non-domestic buildings, and freight representing 28% of road use.

The council believes firmly in the benefits that a green economy can bring. These include a green recovery from Covid-19, local skills and jobs for a low-carbon future, an early adopter advantage for local businesses in growing low-carbon markets, opportunities for residents to make use of sustainable and local goods, and future-proofing for businesses.

The council is using its role in the borough and region to lead a green economic recovery, and to develop its industrial strategy towards clean sectors. We will

support businesses and help create the conditions for these sectors to thrive, as well as directly investing in low-carbon solutions to grow these industries.

### **The borough's greenhouse gas emissions**

The borough's activities directly and indirectly cause the emissions of various greenhouse gases, measured in 'CO<sub>2</sub> equivalent' (CO<sub>2</sub>e). A summary is given below; more detail on the borough's emissions can be found in **Appendix F**.

The main footprint for the borough, known as its '**production-based**' footprint, comes primarily from the direct use of fossil fuels and electricity within the borough boundary. This is the footprint against which the net zero target will be measured.

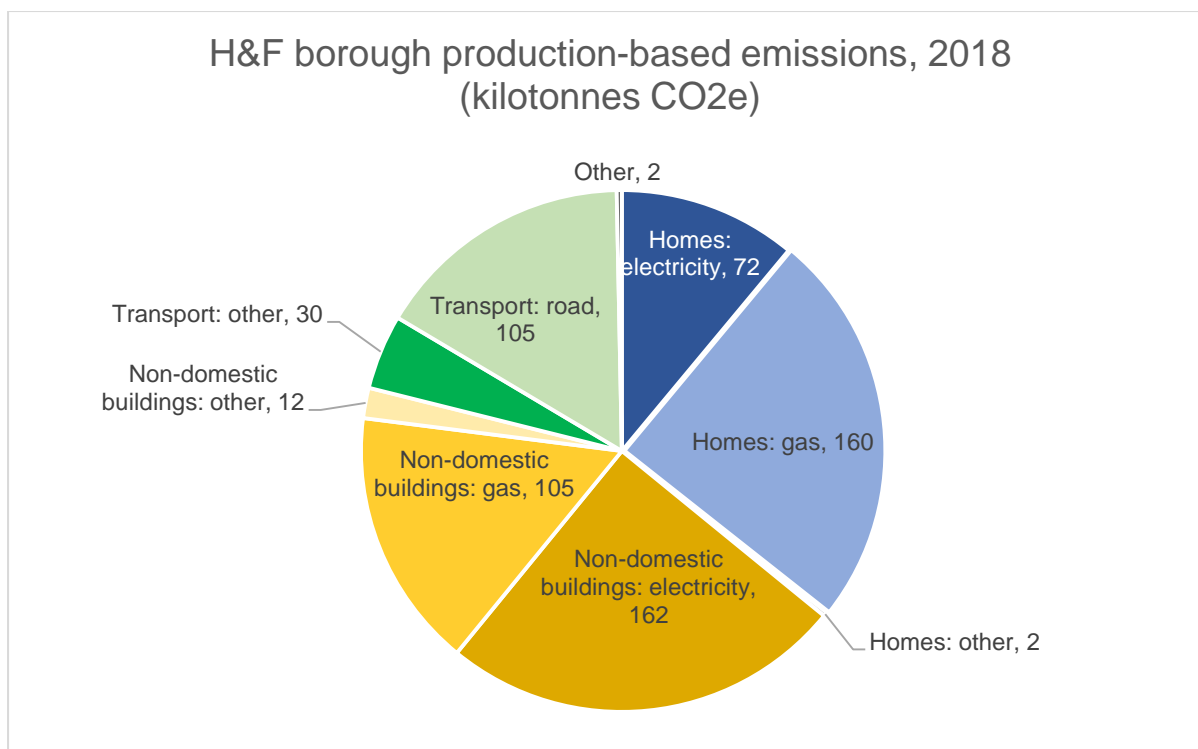
The total production-based emissions for H&F are **648,752 tonnes of CO<sub>2</sub>e**<sup>12</sup>, of which:

- 36% is from homes, mostly from gas heating.
- 43% is from other buildings, mostly from electricity use.
- 21% is from transport, mostly road use.

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<sup>12</sup> Data source: London Energy and Greenhouse Gas Inventory (LEGGI). This includes scopes 1, 2, and 3 emissions from the sources included. Aviation within the borough boundary (such as helicopters) is included under 'Transport: other', but flights taken from London airports by H&F residents are not included in this, instead covered in 'consumption-based' emissions below. Waste disposal takes place out of borough and is not assigned to H&F in this footprint, but is estimated below under consumption-based emissions.

Scope 1 emissions are those emitted through the direct use of fossil fuels (such as oil and gas) within the borough boundary. Scope 2 emissions are those emitted in the production of electricity consumed within the borough boundary. Scope 3 emissions are all other emissions that occur due to activity within the borough, but that occur elsewhere (in this case including the upstream production and transportation of gas used within the borough, for instance).



*H&F's 'production-based' footprint. Source: London Energy and Greenhouse Gas Inventory. 1 kilotonne = 1,000 tonnes.*

In addition to the borough's direct emissions, we also indirectly cause emissions through the things we buy and use, known as '**consumption-based emissions**'. These emissions often occur elsewhere in the production and transportation of goods, so aren't captured within the borough's production-based footprint. These emissions are estimated to total **1,636,000 tonnes of CO<sub>2</sub>e** for H&F's households; 2.5 times the level of our direct emissions alone. While we cannot reduce these emissions to zero solely through our own actions, reducing emissions from the things we use is therefore a key element of the strategy.

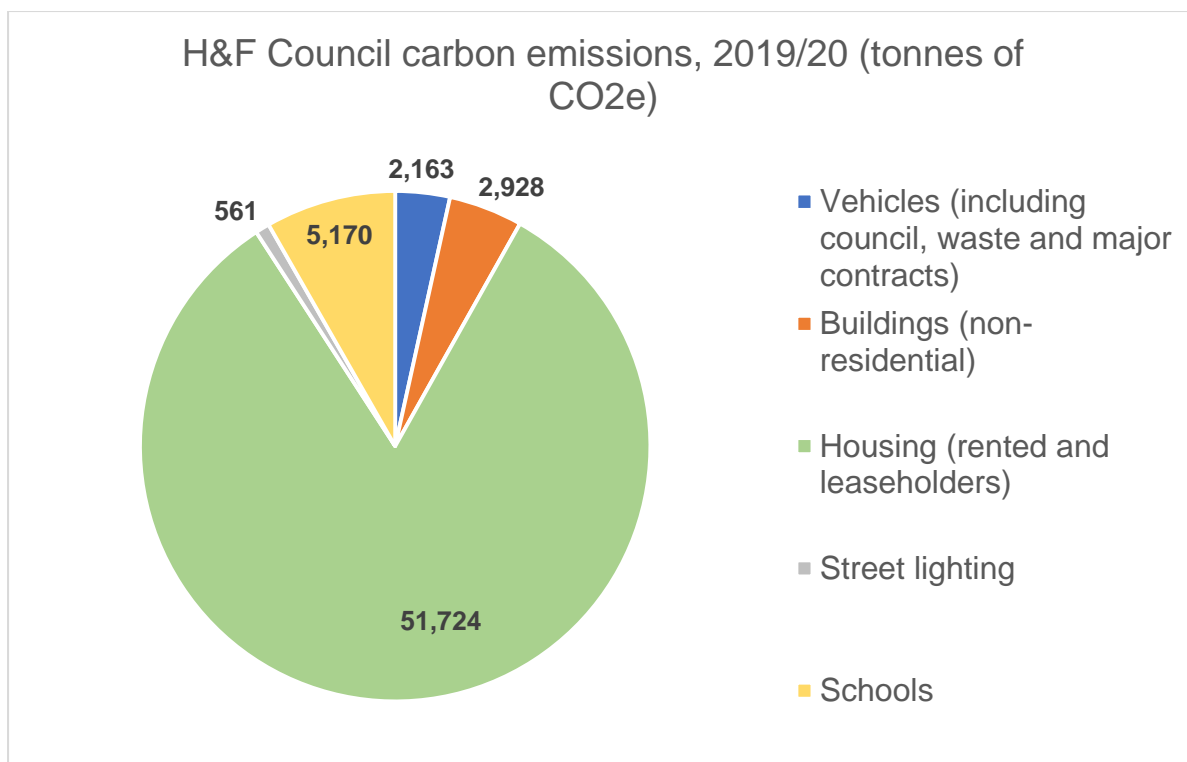
To meet the aim of keeping global temperature rise under 1.5°C in line with the principles of the Paris Climate Agreement, the borough must also limit its level of **cumulative emissions**. H&F's upper limit of cumulative emissions in line with these principles has been calculated at 4.8 million tonnes (Mt) of CO<sub>2</sub>e<sup>13</sup>. At current emissions levels this would be exhausted within seven years; cutting emissions early counts for more than cutting late.

The **council's carbon footprint** from its own operations and assets, including its housing, accounts for 9.6% of the borough's emissions at **62,546 tonnes of CO<sub>2</sub>e**<sup>14</sup>. The emissions from heating and powering its homes account for 83% of this.

<sup>13</sup> Tyndall Centre

<sup>14</sup> This footprint includes the council's scope 1 and 2 emissions from directly owned and operated assets, plus scope 3 emissions from its housing. It excludes emissions associated with water and waste (included within the borough-wide footprint), and scope 3 emissions from its supply chain.





The council also procures goods and services; another estimated **65,360 tonnes of CO<sub>2</sub>e** is associated with these.

### The scope of H&F’s net zero targets

The council has set targets for the organisation and borough to be ‘net zero carbon’ by 2030.

The target for the borough will be measured against the scope 1, 2, and 3 emissions of its production-based footprint<sup>15</sup>, relating to fossil fuels and electricity consumed within the borough, as well as disposal of the waste it produces. This footprint corresponds to the areas within the direct control of the borough’s residents, businesses and organisations, and is the most reliably measured footprint. Tackling consumption-based emissions is recognised as critical and within our indirect influence, so remains as one of the five climate challenges around which the strategy is organised.

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Scope 1 emissions are those emitted through the direct use of fossil fuels (such as oil and gas) within the borough boundary. Scope 2 emissions are those emitted in the production of electricity consumed within the borough boundary. Scope 3 emissions are all other emissions that occur due to activity within the borough, but that occur elsewhere (such as in the production and transportation of food and goods consumed within the borough).

<sup>15</sup> Scope 1 emissions are those emitted through the direct use of fossil fuels (such as oil and gas) within the borough boundary. Scope 2 emissions are those emitted in the production of electricity consumed within the borough boundary. Scope 3 emissions are all other emissions that occur due to activity within the borough, but that occur elsewhere (such as in the production and transportation of gas consumed within the borough in this instance).

The target for the council will be measured against its scope 1 and 2 emissions, as well as emissions from the buildings it owns and for which it has responsibility for the fabric and fuel sources, including council housing. Scope 3 emissions from procurement fall outside of the net zero target as they are only partly within the council's influence, but we recognise our role in tackling these, so this again forms an integral part of the strategy and action plan.

## Framework

### 2030 Vision

*H&F's climate and ecology strategy sets out the route to net zero greenhouse gas emissions by 2030 for the borough.*

*Its goal is a clean and sustainable future in which human activity works to the benefit of all people and the environment.*

*It seeks a safe climate for future generations, along with rich ecosystems that support people and nature, a thriving green economy, and the best possible health, wellbeing and quality of life for all our residents.*

*The transition from fossil fuels will be an empowering and collective effort in which all have a voice, and the challenges and opportunities from change will be shared justly.*

### Principles

H&F's six values guide the strategy:

**Building shared prosperity.** The strategy strives to put H&F at the forefront of the growing green economy and ensure all residents benefit, through investment, training, and support to businesses.

**Doing things with residents, not to them.** The strategy has been guided by our resident-led Climate and Ecological Emergency Commission. Ongoing coproduction will be integral to developing the action plan, and the council will amplify community action as well as providing leadership.

**Creating a compassionate council.** Improving human wellbeing is at the heart of the strategy. As well as providing a safe planet for future generations, it targets poverty and equality, and seeks to improve health and public space for residents of all backgrounds, experiences and abilities.

**Taking pride in Hammersmith & Fulham.** Our climate goals are delivered through improvements to the public realm that will bring space, nature and wellbeing to residents.

**Ruthlessly financially efficient.** The funding challenge to delivering net zero is great, and will be met with strong cases for investment, innovative financing approaches that engage the public, maximising the value of spend on carbon reduction, and leveraging outside funding.

**Rising to the challenge of the climate and ecological emergency.** This strategy is the council's plan for delivering on this value, and ensuring all decisions support it.

In addition to the six H&F values, the following cross-cutting sustainable principles guide the strategy:

**Ambition.** H&F has adopted a stretching 2030 target, well in advance of the UK's 2050 target. The actions to reach this must be ground-breaking and ambitious.

**Just transition.** Climate justice is social justice, as many of the damaging effects of climate change fall disproportionately on the vulnerable. This strategy aims to improve the life chances of all, promote equality, and ensure the costs and benefits of action fall justly.

**Wider environmental benefit.** The actions are intended to reduce greenhouse gases, but also aim to improve biodiversity, air quality, and broader sustainability.

**Wellbeing.** Climate actions seek to enhance the health, wellbeing and cultural life of residents, and bring communities together.

**Partnership.** Council action and technological solutions alone will not achieve net zero. All the borough's communities and partners must educate, support and galvanise each other to bring about the changes needed.

The driving purpose behind this strategy is to bring about a better planet for people and nature. Carbon reduction is a critical means to this end, but not the end in itself. Our resident-led commission and engagement to date tell us that residents want to see environmental and social outcomes delivered together. Our actions to reduce carbon must support wider issues of sustainability and social justice.

While cutting our emissions we will also ensure our activities reduce their impact on other local and global **environmental boundaries**, such as biodiversity loss, pollution, water scarcity, ocean health and resource scarcity.

These actions must also strengthen our **social foundations**. They should deliver progress for people's security and wellbeing, including access to good food, health, housing, education, opportunities and connection with others.

The council will continue to work with its local partners to explore how as a borough we can deliver environmental and social outcomes in tandem. With this end in mind the climate and ecology strategy works towards the United Nations' Sustainable Development Goals (SDGs), seventeen global aims to achieve a better future by 2030.

## **Summary of the five climate challenges**

The action needed falls into five strategic challenges. These are summarised in full detail in the section **Five climate challenges**.

The five challenges are:

### Homes, Buildings and Energy

How we construct, heat and power our built environment.

### Travel

How we move around.

### Things we use

What we buy, use and dispose of.

### Ecology

How we make space for nature.

### Adapting to climate change

How we make ourselves resilient to the changes happening.

## Enabling action

To deliver the strategy, a sea change will be needed in:

- the drive and capacity of the market to enable net zero;
- the financing models and funding available for climate action in the private and public sectors;
- the way our organisation and others prioritise and evaluate decisions, and
- the way our residents think and behave towards sustainability.

Three enabling workstreams cut across the five climate challenges, and create the conditions needed for this change:

1. Engagement and influence
2. Finance and decision-making
3. The Green Economy

## Wider benefits of action

Achieving net zero requires changes in behaviour from everyone in the borough, so a successful programme will be one that builds belief that change is desirable. As H&F's resident-led Climate and Ecological Emergency Commission has put it, this involves articulating '*the amazing quality of life... that would result from a zero carbon, ecologically rich society*'.

The actions in this strategy bring with them a host of benefits fundamental to the wellbeing and prosperity of our communities. Many of these offer significant positive feedback loops. Reducing air pollution, for instance, can improve life expectancy, allow people to be more active, reduce days missed from school and work through sickness, and relieve pressure on the NHS, freeing up budgets to be refocused on other needs.

Action on the climate will also help the council deliver on a number of other outcomes:

- **Air quality**, including through cycling, walking, electric vehicles, and removal of gas boilers
- **Health and wellbeing**, including through warm homes, cycling, access to green space, and sustainable diets
- **Poverty and equality**, through energy efficient, fuel poverty-proof homes, reskilling for green sectors, and access to clean air and green space.
- **Green growth and local jobs**, including supporting White City biotech and local skills for green jobs
- **Biodiversity**, by increasing and improving green space

Additionally, investment in climate resilience will help to avoid costs associated with a more extreme climate down the line.

The actions also offer benefits to the council as an organisation, including:

- **System-wide prevention** e.g. lower costs associated with waste collection and poor health
- **Futureproofing** e.g. warmer council homes fit for future minimum standards
- **Invest-to-save** e.g. energy-efficient offices with low heating demand
- **Invest-to-earn** e.g. selling renewable electricity to the grid or consumers
- **Energy security** e.g. on-site renewables and fossil-free heating offering predictable supply and prices

### Levers of change

The actions to bring about net zero draw on the full range of levers at the council and community's disposal, including:

- |   |                              |                                     |
|---|------------------------------|-------------------------------------|
| - Convening capability and partnerships | - Lobbying for change        | - Market stimulation and innovation |
| - Engagement and education              | - Planning powers            | - Public infrastructure             |
| - Incentivisation                       | - Local policy               | - Procurement                       |
| - Choice architecture                   | - Regulation and enforcement | - Financial investments             |
|   | - Capital investment         |                                     |

### The funding challenge

Delivery of this strategy is dependent on the provision of unprecedented levels of public and private sector funding. Carrying out these actions will require substantial investment in an already financially challenging environment, and the sources for this remain uncertain. Achievement of around fifty percent external funding is expected to be required to decarbonise the council's housing portfolio. Securing the necessary investment will be an on-going challenge given the current financial environment.

The net cost to the council to decarbonise the organisation is estimated to be £248m. This is primarily a capital programme, with £213m of this estimated for the council's housing. Costs will be dependent in many cases on the extent of the activity undertaken, and detailed cost and benefit analysis will be needed at project

planning stages. Decarbonising the borough is likely to require investment in excess of £2 billion, for which investment will be needed from government, businesses and residents.

Some of these costs will be defrayed through resulting efficiencies; the net cost to decarbonise the UK is projected to be less than 1% of GDP<sup>16</sup>. Some investment will result in operational savings: more energy efficient buildings and lower running costs of electric vehicles offer cumulative estimated operational savings of £11.2m to the council by 2030. Nevertheless, it will first be necessary to achieve the upfront funding required for investment, and not all investment offers an immediate financial return.

Climate action also offers system-wide savings through demand management, such as through reduced levels of waste, and reduced demand on the health system from illnesses related to air quality and cold homes. We will quantify and communicate these benefits wherever possible to build strong business cases for investment.

The costs of action must also be compared to the counterfactual, the 'cost of doing nothing'. The risks of climate change increase with higher cumulative emissions, so early investment will save significant costs in the future. Eliminating a source of emissions now reduces total carbon in the atmosphere by as much as eliminating a source thirty times as large in 2050. We also know that earlier action will mean lower costs of adaptation. The Global Commission on Adaptation in 2019 estimated that a USD 1.8 trillion investment in adaptation measures would bring a return of USD 7.1 trillion in avoided costs and other benefits.

Innovative financing and purchasing models will be explored to help deliver these actions and drive down the cost. Opportunities to achieve an income from carbon reduction will be sought to sow back into climate action. The council will continue to explore ways to subsidise these investments, including applying for grants from government and other sources, and lobbying for further support alongside its partners.

Further detail on our approach and actions around this are in the 'Finance and decision-making' section below, and in the action plan.

### **Links with other strategies**

The net zero strategy sets H&F on the path to meet, and ideally exceed, its share of the world's commitment to limiting climate change under the Paris Climate Agreement. It is also aligned with the UN's Sustainable Development Goals for 2030.

This plan aims to deliver net zero by 2030, compliant with and exceeding the UK's legally binding 2050 target and the Mayor of London's 2050 target. It aligns with the London Environment Strategy, contributing to its aims on climate mitigation and adaptation, circular economy and waste, air quality and green infrastructure. It also aligns with seven cross-London workstreams to tackle the climate emergency,

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<sup>16</sup> UK Committee on Climate Change, *Sixth Carbon Budget*

agreed by London Councils' Transport and Environment Committee and London Environment Directors' Network, that H&F has developed alongside other boroughs.

The actions support and strengthen delivery against the council's existing plans and strategies:

- **2018-22 Business Plan** commitments, particularly active and electric travel, greening the borough, waste, and reducing pollution; as well as others such as opportunities for young people, healthy eating and income generation.
- **Local Plan** delivery of zero carbon building.
- **Industrial Strategy** priorities of encouraging enterprise and economic growth for all, by working with our local partners to ensure the growing green economy thrives locally, and our residents are equipped with the skills to benefit.
- **Air Quality Action Plan**
- Recommendations by four of the council's **resident-led commissions**: Climate and Ecological Emergency; Biodiversity; Parks; and Air Quality.

### **Resident-led commission and engagement to date**

The resident-led Climate and Ecological Emergency Commission, comprised of twelve local resident volunteers, was launched in January 2020, to make recommendations to the council on the action needed to achieve its ambition of net zero by 2030. The commission built detailed recommendations within eight key workstreams, which have informed the council's strategy:

- Built infrastructure
- Transport
- Ecology
- Energy
- Waste and the circular economy
- Finance
- Food
- Health

In developing its recommendations the commission held a public engagement event at the Lyric Theatre in February 2020, at which residents proposed a wide range of actions for the borough in themed breakout groups.

During Summer 2020 the commission worked with the council on a virtual consultation on residents' priorities for climate action. This received 387 responses and was viewed by another 600 people. Questions were asked against a range of themes, with key findings from respondents including that:

- The issues of most concern to residents were:
  - Waste and recycling facilities
  - Air pollution
  - Loss of nature and wildlife
  - Traffic on our streets
- Priorities for transport and travel were improved cycle routes and less air pollution.



- Affordability of and support for energy efficiency was of importance to 91% of respondents.
- Within food, respondents were most concern about where their food comes from.
- Most respondents identified flexible volunteering opportunities as key to enabling more involvement in community life.
- Half of business respondents felt being seen as 'green' was crucial, and a low-emissions delivery network was seen as being the most important factor in helping them to decarbonise.

In May 2021 the commission presented its findings to Cabinet, summarising four core proposals, for the council to:

- Establish a vision for a zero-carbon society;
- Communicate and engage with residents on the climate and ecological emergency;
- Build and share local sources of knowledge;
- Create an effective plan to achieve net zero.

In presenting a public-facing evidence base, vision and route to net zero, this strategy and action plan represent a vital step to meeting these proposals.

## **Development of the strategy**

Close working between the resident-led commission and council officers throughout 2020, along with the commission's final recommendations, and the results of the virtual consultation, have shaped this strategy. With the commission's direction, the evidence base and outline strategy were developed by the Climate Emergency Unit during spring 2020.

Environmental consultants were appointed in April 2020 to undertake an independent baseline of H&F Council's greenhouse gas emissions, and give high-level recommendations and cost estimates for the council to achieve net zero within its own assets and operations.

Over the summer, working groups involving services from across the council met to build actions around ten overarching workstreams. The working groups drew on residents' input and their own sectoral knowledge, further developed and examined the evidence base, and consulted with partners and external experts across the workstreams.

## **Delivering the strategy**

This first action plan is focused on the actions the council can take to move the borough towards net zero. The council has direct control over less than a tenth of the borough's emissions however; changes in behaviour and investment are needed from all our residents, businesses and partners. The council will develop its work with local communities and partnerships to deliver net zero, and to reflect the actions and pledges taken by others in future updates to the strategy.

New internal arrangements will be put in place to aid the strategy's implementation, including for programme delivery, political oversight, and resident involvement and review. A carbon management plan will be developed internally for the council to plan and monitor its route to net zero carbon across its own organisational assets and operations<sup>17</sup>.

The challenge ahead involves a step change, demanding bold new thinking and experimentation. Not every action will be successful from the outset, and these will continue to be shaped and refined in the open, in collaboration with our local residents and organisations. The strategy will be an evolving document, with annual updates to report on progress against the actions, and reflect changes as more detailed feasibility is understood, and new policy contexts and technologies emerge. A full review will be undertaken in 2026.

### **Monitoring progress**

The council will continue to measure and report the borough and organisation's carbon footprints annually.

The scope for the borough's carbon footprint and net zero target will be assessed on its production-based account, as measured by BEIS and LEGGI, depending on the availability of data. However, the council will pursue new and valid methods of measuring and communicating the borough's direct and indirect emissions, including consumption-based emissions.

The scope for the council's net zero target includes its scopes 1 and 2 emissions, plus scope 3 emissions from the buildings it owns and over which it has control of energy efficiency and fuel use, including its housing.

The council will also seek robust methodologies to translate the emissions targets into equivalent real-world targets for substituting fossil fuel-based processes with zero-carbon ones, such as number of journeys transitioned from car to public transport, and percentage of heating demand reduced through better insulation.

### **Carbon balancing**

The only way to ensure a safe climate is to radically reduce carbon emissions from the borough's assets and activities to as close to zero as possible. This is the focus of the strategy. As a matter of principle H&F Council sees the elimination of emissions, not offsetting, as the goal and the most valid route to a safe climate.

The technical challenges to decarbonisation are nevertheless substantial, and in many realms such as retrofitting and construction the methods continue to evolve. The scenario modelling commissioned externally for the council's own assets models a precautionary assumption of 12-14% of council homes unable to receive energy efficiency upgrades by 2030 even in the highest ambition scenario, for example.

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<sup>17</sup> Action O1.1 in the action plan (Appendix B)

It is therefore likely that from 2030 H&F Council will need to undertake some level of carbon balancing for any unavoidable residual emissions still occurring from its own assets. This involves paying a price per tonne of greenhouse gases emitted to fund offsetting activities that remove a demonstrably equivalent quantity of carbon from the atmosphere, such as tree planting.

This will never be undertaken as an alternative to reducing our direct emissions, but only as a last resort on the road to absolute zero emissions, in demonstration of the organisation's commitment to its 2030 target. H&F will examine valid and accountable opportunities to offset its emissions within the borough boundaries, for instance through tree planting or subsidising local carbon reduction.

## Five climate challenges

The climate strategy tackles five strategic challenges:

1. **Homes, Buildings and Energy** – how we construct, heat, and power our built environment.
2. **Travel** – how we move around.
3. **Things we use** – what we buy, use, and dispose of.
4. **Ecology** – how we make space for nature.
5. **Adapting to climate change** – how we make ourselves resilient to the changes happening.

These five challenges help us put a conceptual framework around the task at hand. In practice they are not perfectly distinct from one another, and much of the action we can take, from using our planning powers to educating our residents, will deliver progress against these together.

The five challenges are summarised below. Each challenge outlines the need for action, the vision, the set of objectives, and selected key actions.

The full action plan for each workstream is attached to this report as **appendix B**.

## 1. Homes, buildings and energy

### Background

H&F's homes account for 36% of the borough's direct emissions. Within this, the council's homes account for 8% of the borough's emissions, and 83% of its own organisational emissions. The majority of these emissions from homes are from gas used for heating and hot water. Poor insulation results in high gas demand and contributes to fuel poverty; cold homes cost the NHS around £1.4bn per year<sup>18</sup>. To eliminate carbon emissions, our homes must be well-insulated, and heated by renewable sources.

The borough's non-domestic buildings include 12,000 businesses, 60 schools, 2 main hospitals, 3 football stadiums, 1 prison and a large variety of retail, leisure and entertainment venues. Together, these account for 43% of the borough's emissions, with around two thirds of this from electricity and one third gas.

Planning policy around carbon reduction currently focuses on operational carbon emitted during a building's use. However, around half of the carbon a building emits typically occurs before it's in use, in its materials and construction<sup>19</sup>. Construction contributes around 10% to UK annual emissions, with the production of concrete one of the world's major sources of greenhouse gases.

H&F currently uses around 2,500 GWh of energy from the national grid, generated from a mix of renewables and fossil fuels. The borough generates a small amount of renewable electricity from 200 solar installations, but currently has one of the lowest uptakes of solar among the London boroughs.

### What we need to do

With 80-85% of today's buildings expected to still be in place in 2050, retrofitting these with improvements to the building fabric and low-carbon heating is the greatest challenge for decarbonisation locally. Residents' wellbeing is paramount, so ensuring their homes can be warmed affordably is essential. A whole house approach should also be taken to ensure interventions are effective and compatible with further upgrades. Alongside retrofitting our own buildings, for those in the private sector providing information, setting the right policy direction, facilitating access to grant support, and developing opportunities to collaborate with residents and local organisations will be key.

New building in the borough should be to a zero-carbon standard, with embedded emissions from their materials and construction minimised and energy use

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<sup>18</sup> Ashden, *Climate action co-benefits: a toolkit for local authorities*, [CAC-Chapters-all\\_new-brand.pdf](https://www.ashden.org/CAC-Chapters-all_new-brand.pdf) ([ashden.org](https://www.ashden.org))

<sup>19</sup> UK Green Building Council, [UK-GBC EC Developing Client Brief.pdf](https://www.ukgbc.org/developing-client-brief)

minimised. Existing and new buildings should also be made to withstand a changing climate, helping to manage higher heat, flood risk, and water scarcity. Updated planning guidance and/or policy will be needed to deliver futureproof homes.

These actions will reduce the energy used by our buildings and appliances. The remaining energy we use must be supplied efficiently and from renewable sources. This can be achieved through efficient district heat networks, upscaling our local generation of renewable electricity, and buying our remaining energy from renewable sources.

### **Opportunities and benefits**

Ensuring our current homes and new developments become net-zero carbon will not be easy. It will however offer many additional benefits, including:

- Reduced energy bills for residents.
- Higher quality of housing stock, making homes healthier and more comfortable to live in.
- Improved air quality through the reduction of emissions from gas boilers.
- Creating new skilled employment and commercial opportunities within the sustainable construction sector.
- Increased greening of spaces and biodiversity provides physical, mental, social, environmental and economic benefits for city dwellers.

### **Key Challenges**

Whilst there are many benefits to us moving towards net-zero we recognise that it also presents significant challenges. These will need to be addressed working alongside our partners ensuring everyone is part of the journey. Challenges include:

- Funding the level of investment needed for schools retrofit
- The financial viability of retrofit projects and the disruption of refurbishment to tenants and occupiers
- Poor incentives for landlords to upgrade their properties beyond the minimum requirements
- A skills gap associated with low carbon retrofit and whole building solution design
- National planning policy and incentives are not sufficiently favourable to zero carbon buildings, or retention and reuse of existing buildings
- Housing target pressures

## Homes, buildings and energy: 2030 Vision

*All residents in the borough live in comfortable, affordably heated and well-adapted homes that are cost efficient and have zero carbon impact. All business and organisational buildings are powered sustainably, cost efficient and have zero carbon impact. Our heat and power is supplied by renewable energy and, where possible, by local sources that efficiently meet demand.*

<b>Theme</b>	<b>Objectives</b>
Homes	Council housing: Put in place and implement whole house retrofit plans for all council homes to achieve net zero, that include adaptation measures.
	Private housing: Promote and support all owner-occupiers, landlords and renters to retrofit their homes to net zero
Organisations	Council assets: Put in place and implement retrofit plans to achieve net zero, that include adaptation measures for all council buildings
	Existing private buildings: Promote and support commercial landlords, tenants and third sector organisations to increase the energy efficiency of their buildings and install low carbon heating
Planning	Planning: Adopt the highest possible climate standards, and integrate these into planning frameworks, to achieve net-zero developments that secure necessary infrastructure, are well-adapted for a changing climate, and result in a net increase in biodiversity.
Energy	Energy management: Reduce total and peak energy demand in the borough
	Energy supply: Increase the borough's renewable energy use and generation

## 2. Travel

### Background

Road transport is responsible for 16% of the borough's emissions<sup>20</sup>. Freight accounts for 28% of fuel use, with the remaining 72% from personal travel predominantly made up of car usage, as opposed to public transport (buses, 9%). As well as greenhouse gas emissions, transport creates air and noise pollution, with significant implications for biodiversity and public health.

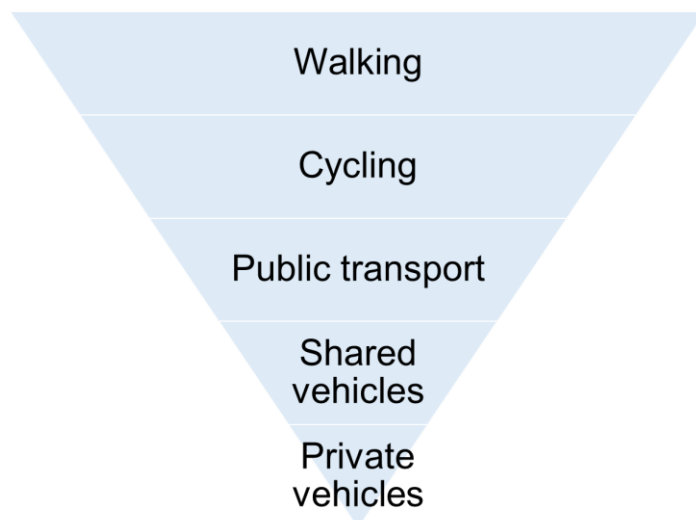
The council has delivered a range of policies and schemes to encourage active travel, reducing traffic, and making cleaner vehicle substitutions. Cycle lanes, low-traffic neighbourhoods, electric vehicle (EV) charging points, and an air quality action plan are just some of the transport-related actions already being undertaken. Current behaviours and infrastructure provide a strong foundation on which to build a net-zero transport system by 2030. For example, low-carbon modes (walking, cycling or public transport) already make up 72% of journeys in H&F<sup>21</sup>, and the borough is in a good position for the 'transition to electric' with 5% of all EVs registered in London and a network of over 500 charging points, one of the UK's largest, with an aim for 1,000 by the end of 2021.

The coronavirus pandemic has brought changes to travel behaviour. On the one hand, given the need to 'stay local' and the guidance on limiting use of public transport, residents have made fewer journeys and have adopted active forms of transport. However, with concerns and guidance around public transport use, private motor vehicles journeys could yet increase.

### What we need to do

The travel hierarchy depicted shows the order of preference for encouraging travel choices. Transport planning and investment should aim to move journeys up this pyramid.

H&F has a vibrant local culture and economy; meeting people's needs locally and enabling the infrastructure for virtual meeting and working can help reduce travel congestion. Planning for less travel will allow more road space to have community and ecological uses, as well as transport uses.



<sup>20</sup> London Energy and Greenhouse Gas Emissions (LEGGI)

<sup>21</sup> Compared to a London average of 64%.



This will also facilitate more walking and cycling, bringing benefits to health and wellbeing. The priority for transport is to encourage active travel, in line with the London target of 80% of all journeys to be by walking, cycling or public transport. We will further minimise the number of polluting journeys by supporting e-bike and e-scooter trials and schemes, high-reach public transport, the transition to EVs, opportunities for pooling journeys, and increasing the uptake of shared vehicle schemes.

Given London's growing and ageing population, the greening of H&F's transport system must support inclusive and accessible services, and the increasing demand for mobility. We will ensure that our network and the built environment supports the needs of all residents, and enables healthy and active lifestyles.

We need to tackle emissions from freight by enabling zero-emissions local delivery, building on our existing e-cargo bike and shared e-van schemes. We will also work with businesses and logistics firms to consolidate and rationalise deliveries to reduce traffic.

Transformation of the borough's transport system can be achieved by investment in infrastructure, improvements to public realm, and policies around road use that reward sustainable choices. It will need to be supported by partners such as Transport for London in setting wider London transport policy and investment priorities.

### **Opportunities and benefits**

- Cleaner, healthier air through reduced traffic and transition to electric vehicles.
- Allowing our streets to support other forms of economic and social activity.
- Safer streets with fewer accidents, through the reduction of traffic levels and improvement of walking & cycling infrastructure.
- Safeguarding ecology and increasing biodiversity through greening initiatives and the reallocation of road space.
- Improving mental and physical health and resilience of the borough's residents through active travel.

### **Key Challenges**

- Managing traffic that doesn't originate or end in the borough, but contributes a significant proportion of our road transport emissions.
- Finding the most effective moments and means to influence ingrained travel habits.
- Making vehicle-sharing people's first choice for private motor travel.
- Managing increases in population, housing and commercial space to reduce transport emissions.
- Managing the challenges of Covid-19 to public transport use and funding for transport projects in London.
- Financing capital and maintenance costs of large-scale change to highways infrastructure, including adapting to climate change and greening the borough.

## Travel: 2030 Vision

*Residents and visitors to the borough take pleasure in travelling by foot, bike and public transport along safe, healthy and green streets. The vehicles on our roads will be fewer and zero-carbon. Residents are able to travel sustainably, and improve their wellbeing with more walking and cycling.*

Theme	Objectives
Travelling less	Support the local economy and virtual infrastructure to reduce the need for travel.
Active travel	Enable more active travel, such as cycling and walking.
Public transport	Seek improvements in a public transport network that reach all residents.
Vehicles and road space	Support residents and businesses to adopt clean vehicles and car-sharing.
	Consolidate and electrify the council's vehicles, and increase use of active travel by council services.
	Use road space to encourage cleaner vehicles, biodiversity, and community and play space.
Freight	Work with public and private sector partners to consolidate, reschedule, and electrify deliveries.
Highways and infrastructure	Use highways investment to further net-zero objectives, with sustainable materials and infrastructure, and more space for walking, cycling and biodiversity.

### 3. Things we use

#### Background

While the most significant sources of emissions per person in H&F remain from heating and powering homes (2.7 tonnes CO<sub>2</sub>e) and transport use (3 tonnes), the things we buy and use as organisations and individuals, including food (0.9 tonnes), recreational equipment such as phones and computers (0.3 tonnes), home furnishings (0.3 tonnes), and clothing (0.2 tonnes), are some of the many products that add to this total.

H&F's consumption-based emissions have been estimated as 8.8 tonnes CO<sub>2</sub>e per capita<sup>22</sup>, 2.5 times H&F's production-based emissions per capita. As organisations and individuals using goods and services, we share responsibility for these emissions, and can reduce them through what we choose to buy and how we use those items.

In today's linear model of manufacturing and disposal, we largely use virgin materials to make products that are mostly sent for incineration or landfill once no longer useable. Examples of this model include:

- Single-use packaging for food and other products
- Products made from materials that aren't recyclable
- Poor quality goods with short useable lifespans.

When we throw these products away we waste the materials, and emit more greenhouse gases to replace them. In H&F an estimated 8,516 tonnes of CO<sub>2</sub>e were emitted disposing of our waste in 2019/20. Conversely, an estimated 8,114 tonnes were saved through the materials we recycled replacing virgin materials.

#### What we need to do

We will lead the way with our own procurement, purchasing and using resources more sustainably using circular economy principles. This means minimising waste and reliance on finite resources. We need to choose products that are designed, sold, used and treated at end-of-life in ways that extend their lifespan, and ensure they are cycled back into the economy with the least possible loss of value.

We will use our spending and our industrial strategy to grow the market and skills for innovative circular business models, and low-carbon goods and services.

We will help create the conditions for low-carbon living, using the levers available to us to make sustainable choices available, attractive, and accessible to all. We will support sharing, reuse and repair initiatives. We'll work with residents, considering the factors that shape people's choices, such as habits, cultural and social norms, wealth, convenience, and the options available within the local economy— as well as people's understanding and motivations towards the environment. We will amplify

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<sup>22</sup> GLA/Leeds University, [London's consumption based greenhouse gas emissions 2001-2016](#)

community action, and emphasise the wider personal, social and environmental benefits that come with a sustainable local economy.

We will increase the types of material we recycle, and push for higher standards around materials. Through our contracting we will seek to eliminate emissions from our waste collection and disposal.

Our efforts should take a systemic approach to the emissions from the things we use. This means thinking about all the emissions associated with a product, from its design and manufacture, to the emissions in its use, its lifecycle, and its impact on other system-wide sources of emissions. Taking the example of a laptop, a low-carbon approach will consider:

- **Embedded emissions:** what energy and materials went into making and delivering it?
- **In-use emissions:** how much energy will it take to run?
- **Lifecycle:** will it last ten years, or be replaced after two? Can it easily be repaired and reconditioned, or its materials recycled?
- **System-wide impact:** Will it increase the energy used in supporting infrastructure, such as data centres? Will it reduce printing?

We need to tackle sustainability systemically, rather than only focusing on a few high-profile products. Campaigns targeting single use plastics, for example, will also illustrate broader approaches to low-carbon and low-waste living. We will undertake policies and projects that help residents reduce the impact of particular high-emitting goods such as food, vehicles, and electronics, while using these to embed a broader carbon literacy.

### Opportunities and benefits

The changes that reduce emissions from the things we buy and use bring various co-benefits, including:

- Healthy, affordable, and community-oriented food for residents in line with H&F's developing food strategy.
- Lower costs to residents from the sharing economy and reduced food waste.
- Environmental benefits of sustainable food and reduced waste beyond H&F's boundaries, including lower land use, water use, and pollutants.
- Environmental and human benefits from lower demand for new resources, including labour conditions, resource scarcity, water demand, and pollutants.
- Cost savings to the council from collecting less residual waste and commissioning low-waste, lower-carbon food.

### Key Challenges

- Making sustainable choices more accessible and attractive than low-cost goods.
- Normalising sharing and reuse over buying new.
- Overcoming perceptions that sustainable choices are more expensive.
- Achieving durable improvements in waste reduction and recycling in the context of a high proportion of flats, and high population turnover.

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## Things we use: 2030 Vision

*We value all the things we use and understand their impact on the climate. People are enabled and motivated to make sustainable choices so that little is thrown away, and goods and materials have a second life through reuse, repair and recycling.*

Theme	Objectives
Enabling low-carbon options	Improve access to healthy, sustainable food, and reduce food waste.
	Enable low-carbon living, making sustainable choices visible, attractive, and accessible to all.
Circular economy	Increase the sharing, reuse and repair of consumer goods.
	Substantially reduce the amount we throw away, and recycle more of our remaining waste.
	Enable the circular economy as a field of high-quality employment.

## 4. Ecology

### Background

Prior to its climate emergency declaration, H&F has pursued its ambition to become the greenest borough. Since 2016 it has established and enacted recommendations from resident-led biodiversity, parks and air quality commissions, followed a 2018-22 business plan covering improvements in habitats and pollution, and become the first council in London to halt the use of glyphosate weed-killer due to its risks to human health and pollinators.

Recent global assessments of biodiversity and ecosystems paint a stark picture of current planetary health. A 68% decline in global wildlife populations has been observed since 1970, with worldwide targets for conservation and restoration missed<sup>23,24</sup>. The Intergovernmental Panel on Biodiversity and Ecosystem Services (IPBES), the ecological counterpart to the Intergovernmental Panel on Climate Change (IPCC), reported that despite insufficient action to date, it is not too late for biodiversity with transformative action at all societal levels. At the heart of this is a call to welcome wildlife back everywhere: from parks and wilderness, to cities, gardens, and verges.

Biodiversity underpins Earth processes necessary for our own survival: from oxygen supplied by plants, to ecosystem engineering by local H&F keystone species like the Eurasian Jay, which distribute tree seeds. Natural processes are extremely costly to artificially replicate when nature falters.

H&F is heavily urbanised, with only 28% of land vegetated<sup>25</sup> and 12% canopy cover<sup>26</sup> compared to London-wide averages of 43% and 21%. The borough offers a fantastic opportunity to exhibit what urban conservation can look like when space and resources are limited. Forty-six UK Biodiversity Action Plan priority species have at one point been recorded in the Borough, including nightjars and stag beetles.

H&F has plenty of potential for ecologically rich green space, including 285 hectares of space designated for nature conservation. Some of these sites can provide crucial connecting habitat for species travelling between green and blue space beyond the borough. There are 161 hectares of land in H&F (10% of the borough's footprint) suitable for restoring acid grassland, a nationally important habitat<sup>27</sup>.

The climate and ecological crises are inextricably linked: they share common drivers and solutions. Land use change is one of the most pressing drivers of biodiversity decline, as well as emitting greenhouse gases; reclaiming green space can allow nature to recover while simultaneously locking up carbon in biomass.

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<sup>23</sup> WWF, Living Planet report 2020

<sup>24</sup> Fifth Global Biodiversity Outlook, 2020

<sup>25</sup> Greater London Authority London Green and Blue Cover 2018

<sup>26</sup> Curio Canopy - London Tree Canopy Cover 2018

<sup>27</sup> London Biodiversity Partnership's Habitat Action Plan 2010

## **What we need to do**

We want to make space for nature in the Borough. Small actions aggregate to produce global movements. Through our membership of ICLEI (Local Governments for Sustainability) we are signatories to the Edinburgh Process, a framework helping local authorities contribute towards global biodiversity agreements. The Process centres around education, engagement and mainstreaming ecological knowledge across sectors to underline nature's contribution to our lives. H&F will ensure that the actions we take in the borough complement biodiversity recovery strategy across the country and beyond.

The council will lead by example and employ evidence-based interventions in its parks and green spaces, striving to increase habitat cover and diversity, as well as building shared spaces for people and nature, for example by de-paving unnecessary hard surfacing. We will work hard to “retrofit” ecology into our building estate, including investigating the significant potential for green roofing.

Moreover, we want to empower our residents to help support urban nature as much as possible by continuing to provide guidance and expanding education on the ecological emergency. There are many daily decisions we take that have significant repercussions on global ecology: from the food we eat, to the clothes we wear. Much like the climate emergency, we aim to equip residents with the knowledge to tackle the ecological emergency at work, in public, and at home.

## **Opportunities and benefits**

A year of lockdowns and calls to remain indoors to tackle the COVID-19 pandemic have put the public's need for quality green space in sharp relief. Biodiversity, and the benefits we gain from it, underpin much of the global economy. Tackling the ecological emergency in the Borough can have myriad potential co-benefits:

- Improved air quality from planting
- Flood and heat regulation: functioning ecosystems can buffer against excess rain and heat, which are likely to become more frequent.
- Carbon sinks from well-managed plants and soil, capturing carbon.
- Health and well-being: a GP in the Borough has been prescribing isolated patients gardening and food growing
- Encourage innovation: H&F owns relatively little greenspace, so becoming the “greenest Borough” will require innovative and inspiring solutions that can provide a template of success for similarly restricted local authorities.

## **Key Challenges**

- Limited public green space and competing demands for use.
- Higher costs and challenges to viability of urban planting.
- Onward maintenance costs of new planting.
- Limited local data on biodiversity and greening of private spaces.



- Transboundary challenge: interconnectedness of habitat necessitates working closely with neighbouring Boroughs and the wider London network.

## Ecology: 2030 Vision

*Green space is expanded, enriched, and nurtured by all, providing a haven for nature and a beautiful public realm. It is properly valued for the benefits it brings, including to biodiversity, clean air, wellbeing, food, and a safe climate, among others.*

Theme	Objectives
Biodiversity	Understand the borough's ecosystems and communicate their value.
Green spaces	Improve and manage our public green spaces for people, nature and the climate.
	Celebrate biodiversity, and encourage people to foster nature through their private and community spaces.
Greening the grey	'Green the grey', pursue innovations in urban greening, and mainstream greening into our public works.

## 5. Adapting to a changing climate

### Background

Many of the changes associated with a heating climate are already locked in. The UK has warmed by around 1°C since the pre-industrial period, with the ten hottest years ever recorded all occurring since 2002. Summer daytime temperatures in London are expected to be 2.1-4.8°C hotter by mid-century<sup>28</sup>, with heatwaves a consistent feature. Sea levels have already risen by 20cm, with ranges as high as 1m projected by 2100<sup>29</sup>.

The changing climate poses risks to life, health and economic prosperity. Extreme weather such as heatwaves, droughts and flooding are expected to increase in frequency and severity. The borough must also develop its resilience to less well-understood climate risks such as to food security, diseases and pests.

H&F is vulnerable to the main climate risks. Flooding is a well-understood risk to H&F, with much of its area less than five metres above sea level, a great extent of hard surfacing, and low drainage capacity. The borough has pioneered work to manage flood risk to date, including award-winning sustainable drainage systems (SuDS) in two council estates.

London faces a steeply rising water deficit, projected to reach 400M litres per year by 2040<sup>30</sup>; a growing risk with low public understanding. When droughts emerge the impacts occur quickly, affecting health, business operations, infrastructure and amenities; the cost to London during droughts is over £330m per day. The risks are not evenly distributed, with those worst affected frequently in lower socio-economic status groups.

Heat-related deaths in the UK are projected to rise 500% to over 12,000 by 2080<sup>31</sup>. Being densely built, H&F is particularly vulnerable to 'urban heat island' (UHI) effects, in which urban areas can be up to 10°C warmer than surrounding areas. Heat threatens infrastructure such as roads, and is expected to lead to more frequent blackouts. Heatwaves of the kind seen in 2018 are expected to occur every other year by the end of the century.

Other risks hinge on global movement and economic change. These are in some cases less well understood at the borough level, and include risks to supply chains including food, as well as novel pests and diseases.

### What do we need to do?

<sup>28</sup> UKCP18 -

<https://www.metoffice.gov.uk/binaries/content/assets/metofficegovuk/pdf/research/spf/london-city-factsheets-3-of-3-the-results-v0.2.pdf>

<sup>29</sup> Intergovernmental Panel on Climate Change (IPCC), *Special report on the ocean and cryosphere in a changing climate*, [Summary for Policymakers — Special Report on the Ocean and Cryosphere in a Changing Climate \(ipcc.ch\)](#)

<sup>30</sup> London Environment Strategy - [london\\_environment\\_strategy\\_0.pdf](#)

<sup>31</sup> Committee on Climate Change, *Heat and Preventable Deaths in the Health and Social care System*, <https://www.theccc.org.uk/wp-content/uploads/2019/07/Outcomes-Heat-preventable-deaths-case-study.pdf>

We need to develop a more detailed geographical understanding of the risks and level of response required, and mainstream climate adaptation into strategic and capital planning. New homes and buildings must be adapted to higher temperatures and able to manage heavy rainfall, and modifications to existing buildings will be needed in many cases. Public space and infrastructure will need to be designed to manage surface water and protect residents from extreme heat. Through planning and engagement with private landowners, further measures can be taken to implement SuDS and manage water demand. Water stress is an area in which many small measures can have a significant aggregate impact. We need to work across the council's own building portfolio and encourage residents to undertake modifications and behaviour changes to reduce our water consumption. The Covid-19 pandemic laid bare the importance of social capital and resilient communities: public information, bolstering community networks and coordination across all of these risks will help build resilience and sustainable coping strategies.

### **Co-benefits**

This workstream is primarily focused on assuring the health and wellbeing of residents (as well as security for their homes and possessions) in the face of the changes in climate now underway. The co-benefits include:

- Health: including protection from heat-related illness; the physical and mental health impacts of flooding; and resilience to future diseases.
- Cost avoidance and risk management: from the impacts of flooding; requirement to rehouse; damage to infrastructure; and loss of business during water shortages.
- Carbon reduction and fuel poverty: from reduced needs for mechanical ventilation of buildings.
- Biodiversity and air quality: from greening measures undertaken to manage climate risks.
- Pollution: from reduced surface water run-off.

### **Challenges**

- Funding gap for direct intervention.
- Potential competition between the demands of climate mitigation and adaptation.
- Unspecified or diffused responsibility for managing risks such as heat.
- Weak or misaligned incentives, such as an absence of water metering for many properties.
- Low public awareness and comprehension of risks.

## Adapting to a changing climate: 2030 Vision

*Our people and places are prepared for the impacts of climate change. The borough's buildings, spaces and infrastructure are well adapted, and its residents and communities are resilient. The health and wellbeing of our residents is protected against climate impacts and risks.*

Theme	Objectives
Understanding the risks	Understand and communicate H&F's exposure to climate change risks.
Resilient places and infrastructure	Ensure our buildings, infrastructure, public spaces and natural capital are resilient to a changing climate and protect people from its impacts.
Resilient communities	Ensure our communities are resilient to climate change, with strong plans and networks in place, and vulnerable groups protected.

## Enabling action

### Engagement, education and influence

H&F's vision for engagement and influence is that in 2030 '*residents in H&F are engaged with the climate agenda, empowered to grow their own ideas and to actively participate in local action. The council supports a resident-led response to the climate and ecological crisis, maintaining an ongoing, open and honest conversation, ensuring that all voices of the borough are heard and included. Our residents, communities, and organisations are engaged, educated and empowered to live net-zero carbon lifestyles in an ecologically rich borough*'.

To deliver sustained and transformative change, a collective understanding is needed among all our residents and communities of the urgent need for action, and the benefits that come with it. The council will build on the engagement it has undertaken so far through its resident-led commission and pioneering climate education programme, to continue to support and grow networks and grassroots action.

The council will follow six principles for its engagement:

- **Work in the open**
  - We'll demonstrate our commitment by working in the open, sharing our progress, highlighting the logistical and financial challenges, and inviting dialogue.
- **Amplify community action**
  - We'll uphold the council's value of doing things with residents, by co-producing and supporting community initiatives to ensure a resident-led response to the climate crisis.
- **Champion under-represented voices**
  - We will prioritise engagement with under-represented groups who are likely to experience the more immediate effects of climate change, to ensure policies and projects bring about a just transition.
- **Build collective knowledge**
  - We'll communicate the urgency of the climate crisis, build awareness through education and work alongside our community to develop a collective understanding of what solutions work for our borough.
- **Create the conditions for change**
  - We'll empower people to take action in their own lives by supporting and incentivising residents and businesses to make sustainable choices.
- **Partner and collaborate**
  - We'll collaborate with partners across the borough and support residents, councillors, officers and local organisations to work together to create inclusive and sustainable communities.

Engagement will be one of the main drivers of climate action in the wider borough, and is critical for achieving the borough-wide target. More detail on our engagement approach and planned action is contained within the Climate Engagement Strategy at **appendix C**.

## Finance and decision-making

The vision of this workstream is that in 2030 *'council decisions and spending will support net zero carbon, and this commitment is reflected throughout our partnerships and supply chain. Innovative financing opportunities will feed a sustainable funding model for council action and encourage further public and private investment.'*

The ambition to meet our net zero targets cannot be secured by the Council's own resources. We shall, wherever possible, align budgets to meet this objective, while maximising the external funding opportunities which will be necessary to meet the overall ambition.

The council can exert significant influence through its spending, investments, and frameworks for decision-making. H&F's pension fund already has a target to achieve carbon neutrality by 2030, with 49% of funds (£544m) invested in low-carbon assets as of June 2020. The council's spend on procured goods and services is up to £420m a year, associated with an estimated 65,000 tonnes CO<sub>2</sub>e of emissions. The enabling activity in this workstream will support the 2030 goal through a number of mechanisms:

**Finance:** We will match our ambition for net zero in our own business with the management of our budgets, as well as maximising external funding opportunities. We will influence, incentivise and support government and private investment to tackle emissions outside our direct control. Our sustainable funding model will be built around maximising the resources that can be secured directly and indirectly, and promoting the health, wellbeing and financial co-benefits that investment will bring.

Our Capital Programme is the single greatest lever under our direct control, with three key elements: our housing stock; our land, buildings and accommodations portfolio; and works across the public realm including waste, transport and highways. The latter aspect already incorporates a well-established and complex range of partnering and external funding elements. Climate action will be a key aspect of capital development to reflect our ambition for the future.

**Investments:** Through the progressive decarbonisation of our pensions portfolio we will ensure the council's investments beyond the borough are in harmony with its commitments within the borough.

**Procurement:** The development of our low carbon procurement framework will offer a huge opportunity to progressively reduce the impact of our £420m yearly spend. We will develop our internal mechanisms to ensure our procurement meets the objectives of this strategy. Where possible, we will maximise the environmental and social performance of the council's contracts by prioritising local supply chains, supporting our local economy, and delivering greater value for money for our residents.

**Commercialism, innovation and incentivisation:** To develop a sustainable funding model for climate action, commercial opportunities to attract finance and investment will be necessary. We will encourage public and private investment in our infrastructure and projects by ensuring there are positive financial and non-financial returns. We will particularly look for opportunities in renewable energy generation and innovation as the UK moves towards a decarbonised national grid and energy mix.

**Decision-making:** the council's climate goals will form a key consideration in our decision-making processes, and a regular reporting system will allow residents to monitor the council's progress.

In order to enable and support the climate programme, this workstream acknowledges four fundamentals up front:

- The scale of the cost to substantially reduce emissions.
- The gap between our net zero commitment for our own assets, and the current focus, available funding and developments within our capital programme.
- That the greatest share of current emissions within the borough target relates to homes, buildings and transport outside the council's direct control.
- That our strategy must provide exceptionally strong leadership to transform how we manage our money, investments and relationships with partners, business and residents.

The objectives of this workstream are to:

- Align our **financial and capital planning** with the net zero target
- Seek to ensure the council's **investments** are aligned with its commitment to net zero carbon
- Seek to ensure that carbon reduction is considered as part of all **spend on goods and services**
- Attract **funding, investment and commercial partnerships** to support the council's financial position on climate actions
- Explore investment in a **portfolio of renewable energy** to increase local generation, supply and resilience, and to reduce the borough's reliance on the grid and fossil fuels.
- Secure **wider buy in, participation and investment**, using: new financial instruments; work with financial institutions; opportunities for social funding; financial incentivisation that the council can offer
- Support net zero through council decision-making and embed net zero into business planning.
- Provide a regular opportunities for residents to **monitor our progress** on our climate goals



## Green Economy

The vision of this workstream is that in 2030 *'a decade of low-carbon training from school through to adult education brings jobs for our residents in growing green sectors, and ensures that all businesses have the skills to reach net zero. H&F's economy makes a green recovery from Covid-19, with our existing low-carbon pioneers and a growing sustainability sector supporting H&F, the UK and beyond to transition to net zero.'*

### Background

H&F was the first local authority to publish a ground-breaking Industrial Strategy, and has been working with its partners including institutions like Imperial College, anchor businesses, and regional partners to foster the field-leading green innovations and skills needed for a net zero future. H&F has a thriving economy, with the seventh largest gross value added (GVA) per capita in the country. H&F's businesses are highly successful at selling goods and services both inside and outside the borough – and like all goods and services today these cause carbon emissions.

Businesses and organisations emit 42% of H&F's direct greenhouse gases<sup>32</sup>. Many H&F businesses are consumer-facing, and sectors with high associated consumption emissions are prominent in the local economy including retail (18% of H&F jobs), accommodation and food services (8%) and arts, entertainment and recreation (5%). Local pioneer organisations in these and other sectors are already leading change, and all businesses should be supported to decarbonise over the next decade.

H&F has a growing environmental goods and services sector, employing around 3,300 people in 2017/18 with £436m sales<sup>33</sup>. It hosts a cutting-edge research and development community in low-carbon technologies through Imperial College and the associated tech cluster. Low-carbon sectors, such as retrofitting, must grow substantially over the coming decade to meet the decarbonisation challenge.

Covid-19 has disrupted normal economic life. Research reveals broad support for the UK's economic recovery being designed to help achieve net-zero, including from the UK citizens' Climate Assembly<sup>34</sup>. Green recovery investments such as the Green Homes Grant are underway, with the Greater London Authority's 'Green New Deal' plan targeting a doubling in size of low-carbon sectors by 2030.

### What we need to do

We want to equip residents of all ages with the enthusiasm and skills to lead this growing green economy. Through our education and skills provision we need to

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<sup>32</sup> Based on borough-wide scopes 1 + 2 emissions: BEIS, 2018.

<sup>33</sup> kMatrix data for GLA, 2018

<sup>34</sup> Ipsos Mori, April 2020, [Two thirds of Britons believe Climate Change as serious as Coronavirus and majority want Climate prioritised in economic recovery | Ipsos MORI](#)

ensure all learners from childhood through to the workforce understand how to tackle the climate emergency in their work and lives, enabling all jobs to be green jobs.

Businesses face barriers to decarbonising including knowledge, time, cost, and understanding where to begin on a daunting challenge. The council, businesses and other partners should support each other on this journey by sharing knowledge and resources, and highlighting best practice. The council will use its convening power and influence over local policy to support and incentivise organisations to reduce their emissions.

As the local economy recovers and adjusts in the wake of Covid-19, the council and its partners should provide the conditions for low-carbon sectors to thrive. This will include investment in low-carbon infrastructure and coordination around key sectors such as retrofit to ensure reliable supply and demand.

### Benefits

The driver for this workstream is to decarbonise our local economy, but various additional benefits and opportunities arise from this work including:

- Economic recovery and green growth.
- Jobs for residents fit for the future.
- Future-proofing businesses, and gaining an early adopter advantage in the growing market for low-carbon products.
- Opportunities for residents to buy local and green.
- Positive spill-over effects of carbon awareness from work into lifestyles

### Objectives

The workstream will aim to:

- Prepare young people and adults for the green economy, ensuring provision exists that enables residents to access green economy jobs.
- Support existing low-carbon pioneers, and build H&F as a leader in the green economy
- Support a green recovery from Covid-19.
- Influence and support our local businesses and partners to reach net zero by 2030.