

# Enfield climate action plan 2020



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This plan was adopted by Enfield Council's Cabinet in July 2020

# Foreword

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Our planet is facing an existential threat from climate change.

The Intergovernmental Panel on Climate Change report in 2018 served as a warning to the world about the urgent need to act on climate change to prevent catastrophic consequences for our community in Enfield and communities around the world.

Two years on and we continue to witness increasing climate change. The transformation is taking hold in unprecedented wildfires in Australia, floods in Venice, droughts in New Zealand and devastating storm surges in the UK. Without action these will be just the start of a process that could prove unstoppable by human activity.

The risks and dangers are not static, they evolve hand in hand with emerging situations. Studies have linked air pollution to significantly higher rates of death in people with Covid-19 and even a tiny, single-unit increase in particulate pollution levels in the years before the pandemic is associated with a 15% increase in the death rate.

The emergency is real and the action to remedy it must be local, national and global. In response to rising awareness and justified protest, Enfield Council has declared a climate emergency.

This plan is our response to that declaration.

The Council will be carbon neutral by 2030 but we must innovate to do this, taking bold and sometimes unpopular action to tackle the impact of climate change. Whilst the focus in this initial plan is on reducing the Council's own emissions, additional emphasis is given to borough wide activities, such as transport, housing and green spaces, and we have a new ambition for a carbon neutral Enfield by 2040.

Residents have the right to expect swift and decisive action, but the truth is we cannot do this alone. We must ensure our partners are brought with us and we must engage with our residents, Councillors, MPs and government in the delivery of this plan.

We need financial intervention and effective measures but frustratingly this government is not acting fast enough to meet its own climate targets. The problem we face is vast and multi-faceted, there will be costs and inconveniences inherent in the changes that we have to make – we all have to work together.

Our aim as an administration is to create a lifetime of opportunities in Enfield. By our actions, large and small, and those of our community, we will play our part in combating climate disaster and make sure future generations can take advantage of those opportunities.

*This Plan has been guided by the Climate Change Task Force and developed with input from across the Council. It has also been informed by engagement with climate change organisations and the public.*



**Ian Barnes**

Deputy Leader of  
Enfield Council

*Chair of the Climate  
Change Task Force*

# Our vision for climate action

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**We will work with our staff, suppliers, residents, businesses, schools, statutory partners and government to become a carbon neutral organisation by 2030 and create a carbon neutral borough by 2040.**

**To achieve this, we have developed a plan for climate action in the following areas:**

1. The Council's operations
2. Travel
3. Buildings
4. Waste
5. Energy
6. Natural environment
7. Influencing others

This plan sets out the action we will take in each of these areas. The first area – the Council's operations – sets out how we will reduce the Council's own emissions to zero and we have set targets for how we will achieve this. This section covers how we will reduce carbon emissions the Council creates from the operation of our own buildings (including our libraries, civic centre, other council buildings and our maintained schools); from the goods and services we purchase; and from how our staff commute to work and travel during the working day.

The remainder of the plan focuses on the actions we intend to take across the borough to reduce carbon emissions from all sectors, either through direct initiatives, using our statutory powers or by influencing behaviour. This includes tackling emissions produced from people travelling across the borough, from homes and businesses and from how waste is produced, managed and disposed of. It also includes the plans we have for low carbon energy for Enfield and how we will look after the natural landscape across Enfield to capture carbon emissions and improve biodiversity. Our current target is to achieve carbon neutrality across the borough by 2040. We will be reviewing this regularly following further developments in national legislation, regulation and policy.

We have also set out how we intend to finance the actions we are committing to take. This is in the context of significant budget pressures for local government, with £178m cut from the Council's budget since 2010 and further additional pressure as a result of the Covid-19 crisis.



**In summer 2019, we signed a Climate Emergency Pledge, which commits us to:**

- Make Enfield Council a carbon neutral organisation by 2030.
- Divest the Council from investment in fossil fuel companies.
- Only use environmentally friendly products where we are able to do so.
- Make our supply chain carbon neutral through ethical procurement.
- Work with local partners and communities and positively promote changing behaviours in Enfield to limit activities scientifically linked to climate change.

This plan sets out how we will deliver on this pledge.

## **Reporting our performance**

We will review performance and publish our progress on an annual basis, using the key performance indicators set out in our plan. When we do that, we will invite the public and other stakeholders to comment on our performance and ask us questions about the progress we are making.



# Enfield's emissions

## Calculating the Council's emissions

Between September and November 2019, Enfield Council calculated a new baseline to measure the footprint of our own operations. This baseline will be the carbon emissions figure against which we will measure our progress over the next 10 years.

A carbon footprint is the total amount of emissions an organisation will emit in the delivery of its objectives. This may be in the form of energy use or an organisational fleet. We measure our carbon footprint over 3 areas:

**SCOPE 1** – Carbon that is emitted directly from the council's gas usage and vehicle fleet.

**SCOPE 2** – Carbon that is emitted from electricity usage in council buildings and street lighting.

**SCOPE 3** – Carbon emissions from sources that the council does not own or control. This includes emissions associated with business travel, procurement, waste and water. It also includes estimated emissions from energy used by residents in council homes and capital goods for the construction of new homes.

We have previously only reported our scope 1 and 2 emissions. Recognising the severity of the climate crisis and the need to work with our partners and across the borough, for the first time we are establishing the carbon footprint of our scope 3 emissions as well. Whilst we are focusing on reducing scope 1 and 2 to zero by 2030, with support and financial assistance from Government, we also have an important role to play in reducing scope 3 emissions as well.

To make sure that the data is as complete as possible, we are using the financial year of 2018/19 as our baseline, using data from 1 April 2018 to 31 March 2019. To calculate our carbon footprint we have used our own data multiplied by the Government derived carbon factor for that particular emission to give the tonnes of carbon dioxide emitted. The calculation we apply is:

Energy (kWh) x carbon factor / 1000 = tonnes of carbon dioxide equivalent

Our emissions for 2018/19 totalled **21,907 tCO<sub>2</sub>e**. This is our new 'baseline', which we need to get to net zero by 2030.

### By way of comparison:

21,907 tCO<sub>2</sub>e is the equivalent of one person flying from London to Singapore and back 22 times<sup>1</sup>.

Greggs Bakery, which has a large distribution centre in Enfield, has a global corporate footprint of 101,208 tCO<sub>2</sub>e.<sup>2</sup>

This total provides the baseline for most areas of direct council activity.

We have also attempted to calculate our Scope 3 emissions for the first time. These include emissions over which we do not have direct control and so the data is harder to identify and analyse. Scope 3 emissions can be the most difficult to calculate and contain a higher degree of uncertainty than scopes 1 and 2. Further work will be undertaken during 2020 to more accurately calculate scope 3 emissions in areas of staff travel, waste, capital goods and procurement.

Over the next decade, the actions set out in this strategy are expected to reduce our emissions by around 16,057 tCO<sub>2</sub>e. We calculate that we will need to offset the remaining 5,850 tCO<sub>2</sub>e.

<sup>1</sup> [www.icao.int/environmental-protection/Carbonoffset/Pages/default.aspx](http://www.icao.int/environmental-protection/Carbonoffset/Pages/default.aspx)

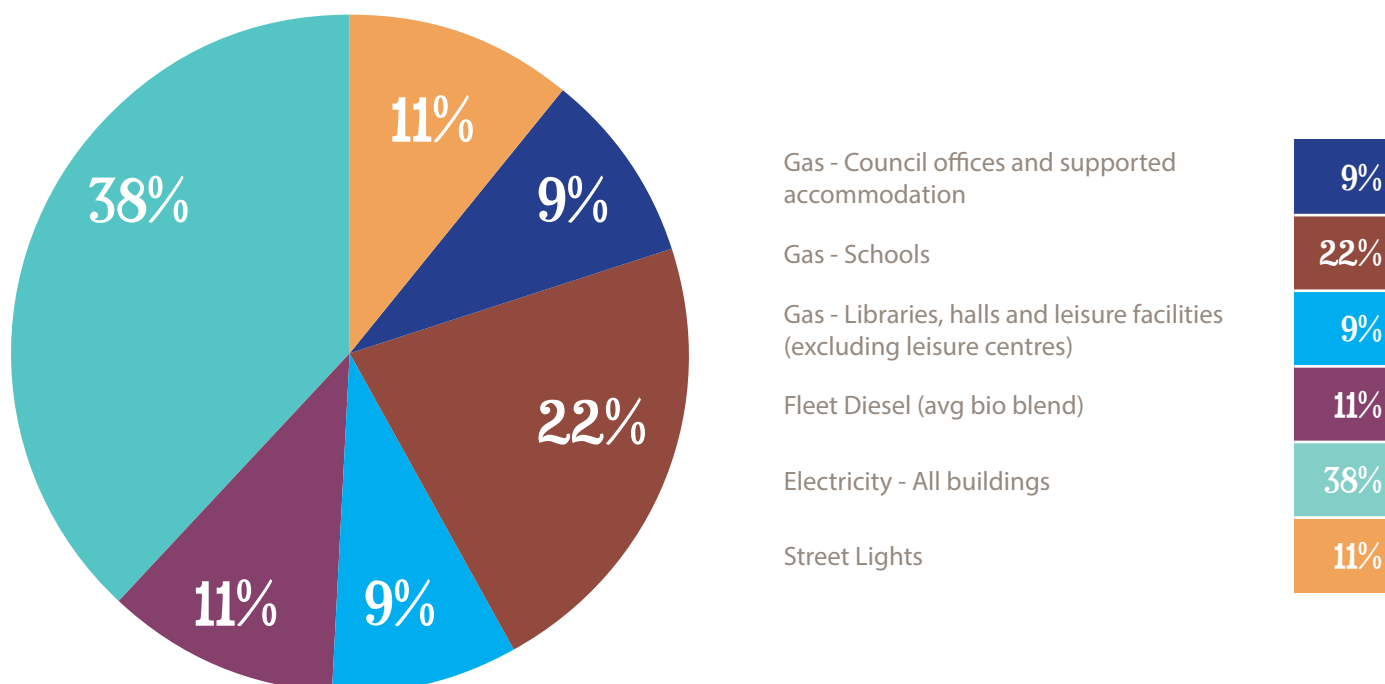
<sup>2</sup> Delivering our Strategy, Greggs plc Annual Report and Accounts, 2018

The **21,907 tCO<sub>2</sub>e** is broken down by scope as follows:

SCOPE 1– those emissions arising from the council’s gas and fleet usage	
Category	Tonnes of CO <sub>2</sub> e emitted
Gas Council offices and supported accommodation	2,044
Gas Maintained Schools	4,763
Gas Libraries, halls and leisure facilities (excluding leisure centres)	1,922
Fleet Diesel	2,470
<b>Total</b>	<b>11,199</b>

SCOPE 2 - Carbon that is emitted from electricity usage in council buildings and street lighting	
Purchased electricity	8,230
Street lighting	2,478
<b>Total</b>	<b>10,708</b>

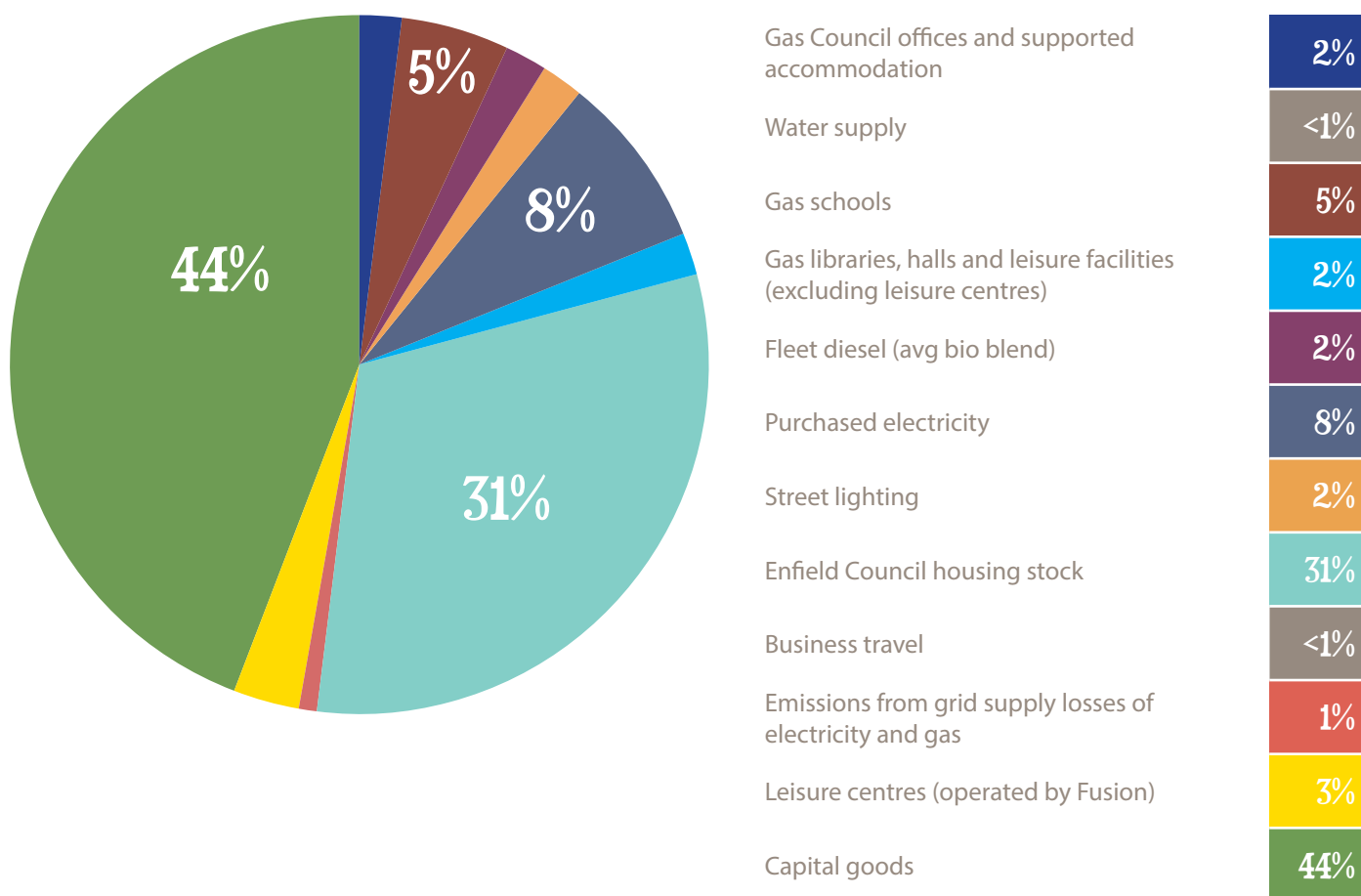
## The Council's scope 1 and 2 emissions



81,257 tCO<sub>2</sub>e of Scope 3 emissions is broken down as follows:

SCOPE 3 - 'Upstream' and 'downstream' emissions from the delivery of council operations	
Waste from Council buildings and schools	<i>We have identified a need for more accurate information to measure this and will review this by summer 2020</i>
Water from council buildings	49
Energy used by residents in council homes	32,237
Transmissions and distribution losses (calculation of carbon emissions resulting from energy lost through heat supply)	912
Business travel	140
Estimated staff commuting	<i>We will be undertaking a staff travel survey to estimate this by summer 2020</i>
Leisure centres (operated by Fusion)	2,479
Suppliers of goods and services	<i>We will be developing a new approach to procurement which allows us to estimate and evaluate carbon emissions from our suppliers by 2021. This will allow us to set a new baseline</i>
Estimated Capital goods (construction)	45,440
<b>Total</b>	<b>81,257</b>
Enfield Council's total carbon emissions	
<b>Scopes, 1,2 and 3</b>	<b>103,164</b>

## All emissions from the Council's operations



## Our approach to offsetting

Reducing emissions through direct action will be our main approach to becoming a carbon neutral organisation. But there will be a certain level of emissions which are currently not practically or financially possible to reduce within ten years. This includes emissions from our fleet which will be produced prior to the switch over to electric vehicles; and emissions from some heat systems. This will leave a gap between the emissions we continue to produce and our target of zero emissions. We have calculated this potential gap as 585 tCO<sub>2</sub>e per year, based on the 2018/19 financial year. Carbon offsetting is one of the methods we can use. To achieve meaningful offsets, we will apply the following principles:

- Offsetting will be levied against the identified yearly carbon gap based on the figure of 585 tCO<sub>2</sub>e per year. This will be reviewed on a yearly basis.
- If the council does not meet its yearly carbon reduction targets, the shortfall will be added to the carbon gap figure at the end of the financial year. If yearly performance is met then we will offset 585 tCO<sub>2</sub>e for that year.

- We will keep our offsetting in-borough and in-house and seek accreditation.
- We will focus on three solutions:
  - ♦ Natural offsetting through green infrastructure - including wetlands, tree planting and expansion of the natural environment;
  - ♦ Solar installation based on a 0.9 tCO<sub>2</sub>e saving for every 3.5 kWp of solar;
  - ♦ Wind technology, where viability will be investigated over the course of the next 3 years.

In future years we will use our understanding and learning from offsetting to look at offsets across the borough, how they can be identified and practically offset with a priority for in-borough offsetting. We will report on our offsetting progress on an annual basis.

# Borough-wide emissions

Over the past decade, carbon emissions from the whole borough have decreased by 21.3%, despite our population increasing by 8%<sup>4</sup>. This is because of the increasing share of renewable power in the electricity grid and the increased efficiency of vehicles and machinery.

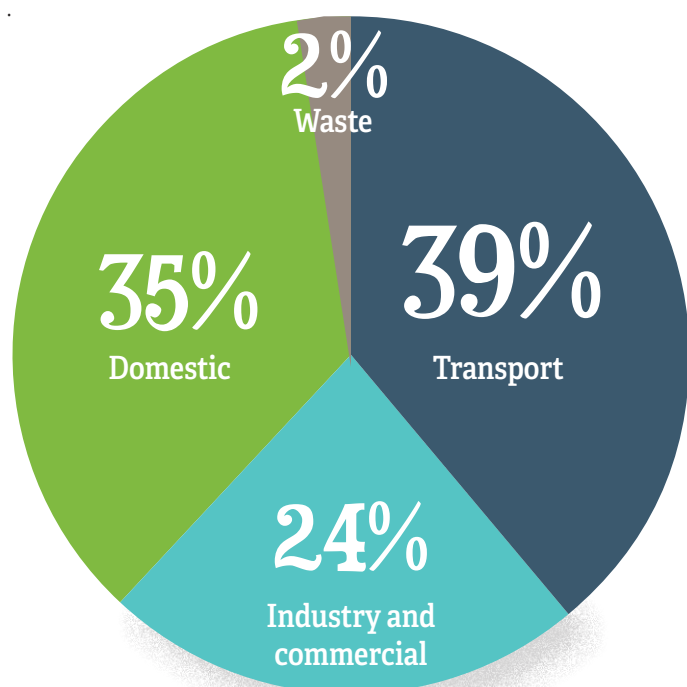
While the Council are committed to becoming carbon neutral by 2030, we anticipate that it will take longer for the whole borough to achieve carbon neutrality, which is why we have set a target to achieve this by the later time of 2040.

Carbon emissions from waste, transport, homes and industrial and commercial buildings will reduce at different rates so that for each area, carbon neutrality will be reached at different times. For example, the waste sector is likely to decarbonise faster than housing.

Government has set a national target to be carbon neutral by 2050. We believe action needs to be taken faster than this and are committed to use our statutory powers and our role as facilitator and influencer, to achieve carbon neutrality by 2040. We cannot achieve this alone, and it will require significant changes in national policy, technology, further grid decarbonisation and significant financial intervention from central Government.

This chart shows the emissions produced from waste, transport, industrial and commercial buildings and from homes across the whole of Enfield. These figures have been compiled from nationally available data collected for all local authorities across the UK, showing the emissions produced by all activity within the area – not just those the council is responsible for.<sup>3</sup>

Category	tCO <sub>2</sub> e
Waste	16,087
Transport	364,743
Domestic	332,512
industry and commercial	226,098
<b>Total</b>	<b>939,440</b>



<sup>3</sup> <https://scattercities.com/>

<sup>4</sup> Central Trend ONS Household Population Projections

In setting our target of carbon neutrality for the borough by 2040, we have made the following assumptions:

- A net increase in green infrastructure of around 25%. This includes tree cover, green roofs, SUDs and general green space.
- Recycling rates of 65-75% achieved by the mid 2030's, with nothing sent to landfill and up to 25% of waste incinerated (with waste heat recovered).
- Deep retrofit of all council buildings and more than 50% of borough housing, with an increase in solar capacity from 400 kWh generated per household per year to around 1,550 kWh.
- Increased decarbonisation of the grid with most energy generated nationally by wind, solar, hydroelectric, nuclear and decentralised energy.
- Around 6,000 heat pumps installed every year and an expansion of the Council-owned Energetik community heat network. We expect to still be seeing some gas in the grid (around 6%). Data does not yet exist for hydrogen modelling.
- A fall of around 40% for heat demand in the industrial and commercial sector.
- 100% of cars and trains electrified, with a mix of biofuel and electrification of buses.
- The need to offset between 125,000 – 200,000 tCO<sub>2</sub>e on a borough wide basis.

The actions contained within this plan mark the starting point of reducing borough-wide emissions. While we understand current emissions and where we need to be by 2040, we will need to set interim targets on that journey. We intend to do this from 2021 onwards. The timeline of progress contained within the strategy outlines some of these aspirations.

We also acknowledge the need for all stakeholders to offset along the journey to carbon neutrality. The Council intends to offset its own emissions within the borough, using a mix of natural measures and low carbon technology, such as wind and solar. Over the next 5 years we intend to monitor the progress of this offset strategy to learn lessons and investigate the feasibility of developing an accredited, borough-wide offset plan. However, our focus will always be to reduce emissions as much as possible before offsetting.



# Our timeline to carbon neutrality



## The journey to carbon neutrality

We will achieve carbon neutrality through investing in energy saving technology, electrifying our vehicle fleet and changing staff behaviour. We will also review and update our approach to procurement to ensure we assess and effectively evaluate the environmental impact of goods and services in order to minimise carbon emissions and reduce the risk of negative impact on the environment from goods and services we use or consume.

Where we cannot reduce emissions further through direct activity, we will offset those emissions through renewable energy and natural measures.

Through these key actions we predict we will halve our carbon footprint by 2026 and that by 2028 our footprint will be 25% of what it is today.

The timeline below outlines the major milestones we expect to achieve over the next twenty years. This will be updated periodically and is based on the assumptions that have been used in this strategy. Changes in technology, policy and consumer behaviour will impact on this timeline. As we get nearer to 2040, the planned actions are less certain and specific, but the trajectory of emissions has been calculated as to where we expect emissions from transport, waste, housing and commercial and industrial to be.

Year		Borough wide			
	Council	Transport	Waste	Housing / homes	Commercial and industrial
2020	<b>Scope 1 and 2: 21,907 tCO<sub>2</sub>e</b>	<b>Total Borough Footprint: 939,440 tCO<sub>2</sub>e</b>			
2020	<ul style="list-style-type: none"> <li>Enfield Climate Action Plan published</li> <li>Local plan reflecting net zero regional and national policies published</li> <li>Council offices switched to 100% renewable energy</li> <li>Climate change and carbon integrated into all commercial and council decisions</li> </ul>			Publication of Enfield Local Plan outlining net zero development across the borough	
2021	<ul style="list-style-type: none"> <li>Roll out of council wide carbon literacy programme.</li> <li>Green leases developed for commercial tenants</li> <li>New Council Low Carbon Retrofit Plan established</li> <li>Council and borough 10 year energy strategy published.</li> <li>Schools summit held</li> <li>50,000 trees planted</li> <li>47% reduction in street light emissions</li> </ul>	30% of population within 400m of Enfield cycle network		Two trained retro-fit coordinators in post	Establishment of borough wide low carbon partnership.  All new non-domestic property to be BREEAM In use as a minimum
2022	<ul style="list-style-type: none"> <li>Low carbon retrofit programme starts</li> <li>Expected reduction in emissions of 3,800 tCO<sub>2</sub>e</li> <li>Council building retrofit programme commences</li> <li>Total of 100,000 new trees planted</li> </ul>	55% of trips in borough made by sustainable means	49% recycling rate achieved	Energetik Energy Centre comes online	
2023	100% water metering at all council offices		Borough wide offset strategy initiated		

2025	<p>Electric vehicle charging available for each council office site</p> <p>All council funds and investments (relating to pensions) divested of fossil fuels</p> <p>Enfield council reduces emissions by 52%</p>	<p>Transport emissions reduced by 35.7% (by 130,299 tCO<sub>2</sub>e)</p> <p>250 electric charging sockets installed</p>	<p>Emissions from waste reduced by 19.3% by 3,084 tCO<sub>2</sub>e</p>	<p>Emissions from homes reduced by 23.5% by 72,674 tCO<sub>2</sub>e</p> <p>Minimum of 4,000 homes supplied by Energetik</p> <p>30k heat pumps installed across the borough</p>	<p>Emission from business reduced by 21.1% by 47,135 tCO<sub>2</sub>e</p> <p>80 local businesses members of the Enfield Climate Change Partnership</p>
<b>Total carbon reduction of: 264,503 tCO<sub>2</sub>e by 2025</b>					
2026	60% council fleet converted to electric				
2027	Council office refurbishment programme fully completed				
2028	Full scale review of progress				
2029	20% increase in solar capacity on council buildings				
2030	<p>Enfield Council carbon emissions reduced by c.73% compared to 2019</p> <p>Council offsets nearly 6,000 tCO<sub>2</sub>e</p> <p>New climate action plan published, focus on being carbon positive</p>	<p>Transport emissions reduced by 58.9%</p> <p>20 school streets established</p> <p>5 rapid charging hubs across the borough</p>	<p>Waste emissions reduced by 33.5%</p>	<p>Emissions from housing reduced by 44.7%</p> <ul style="list-style-type: none"> <li>• Minimum of 8,000 homes supplied by Energetik</li> <li>• All Enfield council housing with a minimum SAP of 86</li> </ul>	<p>Emissions from business reduced by 35.17%</p> <p>Over 150 local businesses part of the Enfield Climate Change Partnership.</p>
<b>Total carbon reduction of: 464,765 tCO<sub>2</sub>e</b>					
2035	<p>Potential carbon positive target for Enfield met.</p> <p>100% of Enfield schools supplied by low carbon sources</p>		<p>Recycling rates of 75% needed</p>		
<b>Total carbon reduction of: 541,959 tCO<sub>2</sub>e (transport, waste, domestic, industry and commercial)</b>					
2040		<p>Emissions from transport reduced by 79.5% (compared to 2019)</p> <p>Nearly 70% of trips made by sustainable means</p>	<p>Waste emissions reduced by 57.5%</p>	<p>6% of homes supplied by natural gas</p> <p>Emissions from homes reduced by 61.76%</p> <p>Solar capacity per household increased by 237%</p>	<p>Emissions from business reduced by 45.38%</p>
<b>Total carbon reduction from 2019: 616,919 tCO<sub>2</sub>e</b>					

# The Council's Operations

## Our vision

By 2030 Enfield Council's operations will all be supplied by renewable energy. We will emit the lowest amount of carbon possible through capital investment and training our staff and will transparently offset remaining carbon emissions where needed. In all decisions we make, we will ensure that the lowest amount of carbon possible is emitted.

This will mean:

- **We will reduce our emissions by nearly 75% before 2030.**
- **Council buildings will use the lowest carbon equipment available.**
- **Energy will be supplied exclusively from renewable sources.**
- **Our fleet will be 100% electric.**
- **We will offset emissions we cannot reduce in an honest and transparent way.**
- **We will make procurement decisions that prioritise carbon reduction.**

**How Enfield Council, as an organisation, will become carbon neutral by 2030 is a key part of our climate action plan.**

This means reducing the emissions the Council creates from the operation of our own buildings (including our libraries, civic centre, service centres and our maintained schools); those produced from the goods and services we purchase; and those produced by staff commuting to work and travelling during the working day.

This is a huge challenge and one that can only be achieved by making some radical changes to how we use our buildings, how we travel to and from work, how we look after existing council homes and build new ones, how we procure services and how we deliver our services day to day.

We already have a track record of driving emissions down as an organisation and influencing better behaviour across the borough, but more is needed. We need to

reduce energy use across our estate, switch to renewable energy and convert our fleet to 100% electric before 2030. We will also need to offset remaining emissions and plan to do so through continuing our pioneering work in enhancing biodiversity and increasing trees and other green infrastructure across our parks and open spaces.

## Recent Successes

- With support from the RE:fit programme, retrofitted 18 council buildings with energy efficiency and low carbon energy generation measures.
- Started a programme to retrofit street lamps with LED bulbs. This will reduce energy usage by c.47%, a reduction of around 1,200 tCO<sub>2</sub>e once fully rolled out.
- Confirmed that corporate Council buildings will use 100% REGO certified renewable electricity from October 2020.
- Purchased our first 3 fully electric vans in December 2019.
- Removed single-use plastic cups from council buildings.

Enfield Council reduced its emissions by around 50% between 2009 and 2019, halving our carbon footprint in 10 years. This was achieved by investing in our buildings to make them more energy efficient, investing in low carbon energy sources and consolidating our operations into fewer buildings.

**42,000**  
tCO<sub>2</sub>e in 2008/9,  
down to  
**21,907**  
tCO<sub>2</sub>e in 2018/19

## Action: Achieve significant emissions reduction from council buildings and assets through an energy efficiency investment programme

Actions in detail	Completed by
Review and improve how we use our buildings to minimise carbon emissions through a staff behaviours campaign.	December 2020
Set new recycling targets for waste from council buildings and increase the quality of waste separation.	January 2021
Switch all street lighting to LED.	March 2021
Review building heating systems and operations, including a review of the feasibility of lower carbon systems.	March 2021
Install light sensors in all council buildings.	September 2023
Install sub-metering at the civic centre to comprehensively meter energy consumption on a floor by floor basis.	September 2023
Install water metering for all council buildings.	September 2023
Install Electric Vehicle charging points to serve all council owned office sites.	March 2025
Deliver a comprehensive refurbishment programme including LED lights in all council buildings, voltage optimisation, battery storage and replacement of office equipment (photocopiers, refrigerators, monitors) with the lowest energy versions.	September 2025
Using the available roof capacity available on council owned buildings, increase solar coverage by 2% per year.	September 2029
Convert the Council fleet to 60% electric by March 2026 and 100% electric by March 2030 as contracts come up for renewal.	March 2026 and March 2030

## Action: Ensure all procurement decisions prioritise low carbon and resilient options

Actions in detail	Completed by
Integrate climate assessment into the council decision-making process, focusing on carbon emissions and climate resilience.	June 2020 onwards
Survey the top 30 suppliers by value about their carbon footprints.	December 2020
Switch to 100% REGO certified renewable electricity supply. This means no longer buying energy generated from fossil fuels. Switch for council offices. Switch for the contract we offer to maintained schools. Switch for communal housing.	October 2020 October 2022 October 2022
Identify the 30 products we purchase which produce the greatest carbon emissions (by value or volume) in order to better understand our scope 3 emissions, and to set targets for emissions reductions for these largest emitters.	From March 2021

Provide advice to smaller suppliers on how they can assist the council's efforts to be carbon neutral.	From March 2021
Undertake an investigation to understand the embodied carbon from a) construction b) other products and services and identify lower carbon alternatives.	By March 2021
Survey the top 50 suppliers by value about their carbon footprints.	December 2021
Review opportunities for being supplied by green gas.	March 2023
Work with our top 30 suppliers to identify lower carbon alternatives.	March 2021-23

## Action: Encourage and enable energy saving behaviour by council staff and those who use our buildings

Actions in detail	Completed by
Trial an internal carbon price with one Council department and extend that if it helps with decision-making.	From December 2020
Require carbon and climate impact to be considered when making decisions.	July 2020
Develop 'green' leases for commercial lessees to encourage better low carbon installation and operational behaviour.	March 2021
Implement a rolling carbon / climate literacy programme, prioritising teams with the greatest impact.	From March 2021
Achieve 100% divestment of fossil fuels from all council pension funds.	March 2025

## Performance

Element	Monitoring	KPI	Baseline	Expected performance
Carbon footprint	Annual	1. % reduction in carbon emissions 2. Emissions per employee (tCO <sub>2</sub> e/employee) 3. Emissions per home managed (tCO <sub>2</sub> e/home).	1. 21,907 tCO <sub>2</sub> e 2. 7.3 tCO <sub>2</sub> e 3. 2.96 tCO <sub>2</sub> e (2018/19 FY)	1. 7.3% - 9.1% reduction year on year 2. 1.83 tCO <sub>2</sub> e/employee by 2030 3. 0.52 tCO <sub>2</sub> e/home managed by 2030
Fleet	Annual	% of fleet that is fully electric	1% in 2018/19	60% by 2025/26 100% by 2030
EV charge points at council offices	Annual	Number of council offices with access to charging provision for council fleet and staff vehicles.	1 in March 2020	Charging provision at all council offices by 2025
Climate literacy	Annual	% of staff who have completed climate related training.	0	10% staff by March 2021 30% of staff each year
Suppliers	Annual	% of respondents to carbon neutral suppliers survey.	0	2020/21 – 60% 2021/22 – 70% 2022/23 – 80%

Renewable energy on council buildings	Annual	Increase in on site renewable energy (kWh/annum).	55,512kWh/ annum in 2018/19	2% increase per year
Invest / divest	Annual	Percentage divested from fossil fuel investments.	Baselines are currently being calculated	100% by 2025

## Divesting the Council's pension fund

Our climate emergency pledge commits the Council to divest from investment in fossil fuel companies.

Divestment is the process of removing an asset for financial, ethical or environmental reasons. In this case divestment is focused on the removal of fossil fuels from Enfield's pension funds.

The Council's Pension Policy and Investment Committee has already agreed to transfer £190m, nearly a fifth of the fund, into a low carbon fund, reducing the carbon exposure of this investment down from 12% to 3%. An additional 10% of the Fund is going to be invested in fossil free equities and renewable / clean energy funds.

The Committee has also established a set of Investment Beliefs and Values with the support of an ESG (Environmental, Social, Governance) expert. Building on this, the Committee has agreed to commission a specialist to assess the carbon impact of all of its investments and develop an Investment Strategy. This work will include setting out how the pension fund will invest in low carbon and fossil free equities and funds, taking into account the underlying need to ensure there is asset growth to support the current and future members of the pension scheme.

## Action: The Council's pension fund will invest in low carbon and fossil free equities and funds

Actions in detail	Completed by
Further 10% of the pension fund is invested in fossil free equities and renewable / clean energy funds.	December 2020
Develop and agree a Pension Fund Investment Strategy which increases the level of investment in low carbon and fossil free equities and funds whilst still meeting obligations to pension fund members.	March 2021

# Travel

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## Our vision

By 2030, we will have already transitioned to having a 100% electric fleet for the Council's operations. By 2040, the majority of journeys that originate in the borough will be made by methods that are either low carbon, or do not emit carbon.

This will mean:

- **There will be more high-quality cycling and walking routes and facilities, such as cycle parking, across the borough, encouraging everyone to enjoy active travel.**
- **There will be greater capacity on the public transport network, with buses powered by non-fossil fuels.**
- **There will be enough electric vehicle charging provision to enable people to choose electric vehicles if they have their own vehicle.**
- **Residents will be able to access shared mobility options, such as car clubs, and the use of private vehicles will be significantly reduced.**

Emissions from transport in Enfield account for an estimated 39% of the borough's total emissions.<sup>5</sup> Shifting movement to low carbon transport, prioritising walking and cycling, will achieve the Mayor of London's target to increase active and sustainable mode share across London to 80%. It is also an important part of delivering the UK's commitment to have net zero emissions by 2050. We will develop planning policy and infrastructure which supports active travel, reduces private vehicle parking and increases electric vehicle charging provision, in line with the New London Plan.

Our approach to electric vehicle infrastructure is to deliver 250 additional charging sockets by 2025 based on the following principles:

- Continue to roll out rapid chargers in town centres and at strategic locations.
  - Provide community charging points to serve smaller areas.
  - Trial low cost and less obtrusive approaches to charging, such as lamp column chargers.
  - Ensure new developments are electric vehicle ready.
  - Work with third parties to provide publicly available charging on private land.
  - Focus on meeting forecast demand, while avoiding cluttered streets and the promotion of vehicle use above active and sustainable travel.
- 

## Recent Successes

- Built over 30km of high-quality cycle routes on key corridors.
- Provided 5,000 cycle training spaces so that, in every school in Enfield, children in one school year will have a place.
- New Meridian Water train station opened in June 2019, with 5.5km of new track to enable two more trains per hour to run between Stratford and Meridian Water.
- Two School Streets have officially opened, making the environment immediately surrounding the schools healthier, safer and more pleasant for everyone.

<sup>5</sup> Department of Business, Energy and Industrial Strategy, 2017

## Low Traffic Neighbourhoods

Low traffic neighbourhoods involve introducing measures which reduce the number and speed of cars going through a neighbourhood. This encourages more people to cycle and walk, making the streets healthier and more pleasant for people.

## School Streets

School street schemes are where cars are prevented from going up to the school gates at drop off and pick up times. Enfield launched its first two schemes in early 2020 and we plan to roll out more schemes across the borough in the coming years.

## Play Streets

Play Streets are where local authorities use their existing powers under road traffic legislation to allow temporary street closures at regular weekly or monthly intervals, so that children are able to play out in the streets where they live. In Enfield there are currently 18.



**Action: Work with partners to change the way people move around the borough so that they are less dependent on private vehicles and use public transport, walk and cycle more.**

Actions in detail	Completed by
Complete delivery of the main Cycle Enfield routes.	December 2021
Roll out Low Traffic Neighbourhoods across the borough.	Ongoing to 2030
Continue to work with Transport for London, train operators and Network Rail to increase public transport service provision. This includes delivering new infrastructure across the borough.	Ongoing to 2030
Limit the provision of car parking spaces on new developments in line with the New London Plan and better manage existing kerbside space.	Ongoing
Support the provision of car clubs where it reduces car use and ownership.	Ongoing
Increase the provision of cycle parking on-street, at Council buildings and in new developments (in line with London Plan standards).	Ongoing
Introduce at least two new 'school streets' each year so that parents and children are encouraged to travel to school using active and sustainable transport.	March 2030

**Action: Support staff to travel less and to choose low carbon travel when they do**

Actions in detail	Completed by
Review staff mileage policy and approach to business travel.	By December 2020 for launch in March 2021
Deliver year on year investment in pool cars and pool bicycles.	From March 2021 onwards
Increase charges for staff parking at council offices.	March 2021
Reduce the number of available parking spaces at council offices for private vehicles.	March 2022
Install charging infrastructure at all council office sites.	March 2025
Encourage staff to work from home when they can.	Ongoing

## Action: Reduce emissions from road-based transport

Actions in detail	Completed by
Include Electric Vehicle charging infrastructure in all new developments meeting the minimum London Plan threshold.	Ongoing
Work with TfL to increase the number of low and zero emission buses.	Review progress in 2022
Increase the provision of public highway and car park electric vehicle charging infrastructure to provide at least 250 sockets.	March 2025

## Performance

Element	Monitoring	KPI	Baseline	Expected performance
Staff travel	Bi-annual	% of staff commuting and business journeys taken by active, efficient and sustainable modes – public transport, walking and cycle.	Methodology for calculating baseline currently being developed	Target to be set once baseline established.
Fleet	Annual	% of Council fleet that is fully electric.	1% in 2018/19	60% of fleet by 2026 100% by 2030
Modal shift	Annual	Trips made by active, efficient and sustainable modes – public transport, walking and cycling.	53% average from 2015/16 to 2017/18	2021 – 55% 2041 – 69%
Quality cycle network	Annual	Percentage of population within 400m of strategic cycle network.	16% in 2018	2021 – 30% 2041 – 61%
Electric vehicle charging	Annual	Number of sockets on public highway and in public car parks.	19 in 2019/20	250 in 2025

# Buildings

## Our vision

By 2040 all buildings in Enfield will be able to achieve carbon neutrality through a combination of connecting to the Energetik heat network, a reduction in on site energy use, the roll out of renewables, commitment to the highest standards and transparent offsetting. They will also be resilient to the effects of a changing climate.

This will mean:

- **More buildings will be connected to the Energetik decentralised energy network.**
- **Enfield's own council housing stock will have a minimum SAP of 86 (Energy Performance Certificate B).**
- **All new builds will meet or exceed the carbon neutral standards set in the new London Plan.**
- **We will have a Local Plan for Enfield which focuses on net zero resilient buildings, including the requirement for all new build non-domestic buildings to BREEAM 'Outstanding' or equivalent.**
- **Residents of all housing tenures will have the knowledge and ability to decarbonise their homes.**
- **Buildings across the borough will be resilient to extreme weather events.**

Emissions from homes in Enfield account for an estimated 35% of the borough's total emissions.<sup>6</sup> Estimating emissions from commercial premises is harder, but they also contribute to the boroughs' carbon footprint.

In the context of a changing climate with hotter summers and more frequent heatwaves in the UK it is also important that buildings are resilient to future climate.

To meet the challenge, we need to both ensure new buildings of all types are built to the highest sustainability standards; and retrofit existing buildings to significantly reduce the amount of carbon they emit and ensure they are resilient to extreme weather.

We want to achieve high standards for new homes. Currently, this can be achieved through the 'passivhaus' standard for domestic homes and BREEAM for non-domestic buildings. Energy standards in new building regulations will become tougher in the next few years, and the London Plan already sets higher planning requirements for large developments.

At Meridian Water, the Council-led regeneration scheme to build 10,000 new homes and create thousands of jobs, environmental sustainability is a cornerstone of the project. The roadmap for the project over the next 10 years focuses on reducing the carbon impact of the scheme in the following ways.

- There will be a progressive increase in energy standards for new homes being built, including the 'Passivhaus' standards and principles
- Homes will be built so that they are resilient to flooding and overheating.
- Homes will be connected to Energetik, our community heat network.
- Renewable energy generation will be included into the site.
- There will be a progressive reduction in the embodied carbon in construction materials. Local manufacturing (within Enfield and adjoining boroughs) and the use of natural, recycled, reused or refurbished materials will be increasingly prioritised.
- A low carbon transport system will minimise emissions from travel, including through cycle routes and cycle parking; creating walkable neighbourhoods; improving frequency of bus and rail connections; and creating high quality jobs and workspaces within the development.
- Low carbon consumption, decreasing waste and increasing recycling and composting will be encouraged through how neighbourhoods are designed and built.



<sup>6</sup> Department of Business, Energy and Industrial Strategy, 2017

As well as setting high standards for new builds, we want to see large scale retrofitting of existing buildings in Enfield to make them more energy efficient and more resilient to extreme heat. Achieving this will require large financial intervention from Government, but it is possible.

Embodied emissions are the emissions associated with the construction of a building. This includes emissions from extraction, manufacture, transportation, assembly, maintenance, replacement, deconstruction, disposal and end of life aspects of the materials and systems that make up a building. These emissions can be substantial - for example, to construct a new two bedroom house generates about 80 tonnes of CO<sub>2</sub>e<sup>7</sup>.

For developments we build, we will develop an approach for measuring the embodied carbon which will include:

- The carbon footprint of the most commonly used building materials in the development of a home.
- The emissions from the energy used in construction.
- Emissions from transport of construction materials to a site.

We expect to refine this measure over the next ten years, but we will set a baseline and targets for reducing embodied carbon emissions by 2021.

Many of our net zero aspirations and requirements for buildings will be contained within Enfield's Local Plan, which is due to be completed in December 2020.

## Recent Successes

- Heat pumps installed in four Council housing tower blocks at Exeter Road, saving 170 families 50% on their annual heating bills.
- Insulated 343 homes through the Smart Homes project and accessed ECO funding to improve the energy performance of 101 flats at Scott House in Edmonton.
- Retrofitted 18 council buildings with energy efficiency and low carbon energy generation measures.
- The new Metaswitch Headquarters, under construction and owned by Enfield Council, is on track to achieve a BREEAM Excellent environmental standard.

## Action: Deliver net zero emission new builds across Enfield

Actions in detail	Completed by
Connect first new homes on Meridian Water to the Energetik decentralised heat network.	In line with first Phase of development
Deliver a new local plan that is in line with the higher standards of the New London Plan in terms of climate change and net zero carbon homes.	December 2020
Require new homes to meet the net zero requirements outlined in the New London Plan or exceed this where the opportunity arises.	December 2020
Require developers to build net zero homes in line with the New London Plan, pushing for the highest standards and renewables before offsets are considered.	December 2020
Require every new development over 20 units in size to undertake post occupancy evaluation for two years after occupation on a percentage of properties and to supply performance data to Enfield's Planning and Climate Action teams.	March 2021
Ensure any new planning applications for council facilities are BREEAM 'Outstanding'.	March 2021
Develop an approach for measuring the embodied carbon for the Council's new developments.	March 2021

<sup>7</sup> <https://citu.co.uk/citu-live/what-is-the-carbon-footprint-of-a-house>

## Action: Deliver and encourage net zero emission retrofit across Enfield

Actions in detail	Completed by
Join the Coalition of Energy Efficient Buildings (CEEB) to develop new instruments to deliver low carbon retrofit across tenures in Enfield.	September 2020
Work proactively with housing associations and other housing providers to share knowledge and embed a zero carbon approach across mixed tenure homes.	To begin by December 2020
Develop a low carbon council housing retrofit plan.	March 2021
Identify and access funds for low carbon retrofit of Enfield schools.	March 2021
Ensure that Enfield always has two trained retrofit coordinators.	March 2021 onwards
Investigate whether Enfield can set higher EPC/SAP targets for private rented property.	March 2021
Research the impact of different low carbon retrofit approaches (eg Energiesprong) to understand which is the most suitable for the minimum SAP of 86.	September 2021
Retrofit council housing to increase SAP to a minimum score of 86.	March 2030

## Action: Deliver net zero non-domestic properties across Enfield

Actions in detail	Completed by
Ensure that all non-domestic developments are built to BREEAM Outstanding.	December 2020
Enforce the standards set out in the New London Plan.	December 2020

## Performance

Element	Monitoring	KPI	Baseline	Expected performance
Decentralised energy network	Annual	Number of homes connected.	200 in 2019	4,000 by 2025 8,000 by 2030
Home energy efficiency	Annual	Percentage of Enfield managed council homes with a current EPC (no more than 18 months old).	Baseline currently being established	100% with date to be confirmed
Retrofit	Annual	Minimum SAP score of Enfield managed homes of 86.	SAP 30.5 in 2019/20	100% by 2030
Home energy efficiency	Annual	Number of private rented properties improved to meet minimum standards.	Baseline and targets to be established during 2020/21.	Baseline and targets to be established during 2020/21

Post occupancy reports for new builds	Bi-annual	Percentage of new builds with a post occupancy report.	0 in 2019	10% on Enfield's development stock by 2022.  5% for all other developments over 20 properties by 2022.
Working with registered providers	Annual	Number of housing associations engaged on climate change.	0	100% by 2021
Non-domestic buildings	Annual	% of non-domestic new buildings meeting BREEAM Outstanding.	New target	100% of all new developments to meet BREEAM standard by March 2021.



# Waste

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## Our vision

By 2040, people who live or work in the borough, and those visiting, will have reduced the amount of waste they produce. No waste will end up in landfill and waste will be used as a resource.

This will mean:

- **Waste will be recycled or composted from all buildings in Enfield.**
- **Businesses in Enfield will have reduced the plastic they sell to customers.**
- **Everyone in Enfield will understand the importance of keeping resources in use for as long as possible, getting the highest possible value from them whilst in use, and then recovering and regenerating products and materials at the end of their 'service life'. This is sometimes referred to as the 'circular economy.'**
- **Everyone will be encouraged to buy their food locally and to use land locally for growing food.**

Waste makes up around 2% of the borough wide footprint. Enfield is committed to reducing waste and increasing recycling. Our current Reduction and Recycling Plan (RRP), set out in the Mayor of London's Environment Strategy, details how the authority plans to achieve a 49% recycling rate by 2022.

We have introduced a separate food recycling service to over 89,000 kerbside properties and have adopted alternate weekly collection for refuse and recycling. The aim of these changes is to make significant steps towards our target for at least 49% of waste being recycled.

In line with requirements of the Mayor's Environment Strategy and the Resources and Waste Strategy for England, we collect all six main recyclable items:

- Paper
- Cardboard
- Plastic bottles, pots, tubs and trays
- Metal tins and cans
- Glass bottles and jars
- Food

We have a clear policy to prevent waste going to landfill. This is due to the toxic substances leaching into the soil, groundwater and waterways; and the release of methane from food and green waste when it is compacted down and covered.

Food waste in particular presents a methane risk, which has a short-term high impact on the environment; ensuring any biodegradable waste is not going to landfill will have a higher positive climate impact than letting it break down or compost in landfill.

The North London Waste Authority (NLWA) is responsible for making decisions on how waste is managed. It is made up of seven north London boroughs (Barnet, Camden, Enfield, Hackney, Haringey, Islington and Waltham Forest) and its primary function is to arrange for the transport and disposal of waste collected by these seven boroughs and to promote waste minimisation and recycling.

The NLWA will be building a new energy recovery facility at Edmonton EcoPark. This will save the equivalent of 215,000 tonnes of CO<sub>2</sub> which would be emitted if this waste was sent to landfill – the equivalent of taking 110,000 cars off the road.

The Council-owned decentralised energy network, Energetik, presents an opportunity to generate low carbon heat from this waste. Harnessing energy from residual waste is a key part of a holistic waste management system, with the Energetik facility future-proofed so it can use other energy sources. We will continue to work as part of the NLWA to promote waste minimisation, increase recycling rates, reduce the amount of residual household waste and prevent waste being sent to landfill.

## Low Plastic Waste Zone in Southgate

We are working to reduce plastic in the borough, including through our support for Low Plastic Waste Zones. The North London Waste Authority (NLWA) and seven north London partner boroughs are working together to create these zones, and Enfield Southgate is one of the participating areas.

To be involved, businesses must demonstrate their commitment to reducing plastic waste to their customers. Over 50% of businesses in Southgate are compliant with the standard, and so the area is a designated Low Plastic Waste Zone.

### Recent Successes

- Rolled out free weekly food waste collections to over 89,000 kerbside households across the borough, increasing the composting of food waste.
- Adopted alternate weekly collection for refuse and recycling.
- Invested in our decentralised energy network, Energetik, which uses waste heat to heat households across the borough.
- Partnered with Real Nappies for London to offer money-off vouchers and support for parents who are keen to try real nappies.
- Supported Enfield Southgate to become a Low Plastic Waste Zone.



<sup>8</sup> <https://resourcelondon.org/what-we-do/innovation-and-development/flats-recycling-project/>

## Action: Decrease waste and increase recycling rates across the borough

Actions in detail	Completed by
Create a waste strategy for flatted properties to expand and improve recycling and food composting, adopting the good practices and recommendations from the Resource London Flats Recycling Project <sup>8</sup> .	March 2021
Identify initiatives to increase local food production and opportunities for using land for growing, starting with Council owned land.	March 2021
Develop construction waste targets.	March 2021
Work with schools to help decrease waste and increase recycling and food composting.	2021-2023
Overhaul and improve the Council's own recycling and waste sorting and collection from council buildings, and intensify the campaign to educate all staff on recycling, to increase our corporate recycling rates and introduce circular economy principles.	2020-2023

## Action: Reduce the consumption of single use plastics

Actions in detail	Completed by
Support the NLWA on all waste reduction campaigns, including low plastic zones initiative which encourages businesses to reduce the use of excessive and unnecessary plastic.	Ongoing
Expand Refill Enfield, whereby businesses are encouraged to offer free tap water, to prevent the need to purchase single use plastic bottles.	Ongoing
Run a campaign with residents to promote circular economy principles, increase recycling rates and reduce food waste within the home, reducing unnecessary packaging.	Ongoing
Identify where circular economy principles can be included in Enfield's procurement policies and processes and develop ways of measuring progress.	March 2021

## Performance

Element	Monitoring	KPI	Baseline	Expected performance
Increase recycling rates	Annual	% kerbside waste which is recycled, reused or composted.	36% in 2017/18	49% by 2022
Household residual waste collected	Annual	Total Annual Household Residual Waste Collected per Household (kg per household).	605kg per household for 2017/18	412kg per household by May 2022

# Energy

## Our vision

By 2030, Enfield will have laid the foundations for a low carbon energy future where businesses and homes are supplied by low or zero carbon energy. By 2040 the majority of homes in Enfield will be able to achieve low or zero carbon performance.

This will mean:

- **The borough will have a highly efficient decentralised energy network, able to supply homes and businesses.**
- **All new buildings will be supplied by non-fossil fuel energy.**
- **Residents of all housing tenures will be able to make the switch from a gas boiler to a low carbon heat source from a potential range of options.**
- **Energy across the borough will be on track to be fully decarbonised by 2050.**
- **All types of carbon energy supply will be considered for properties across the borough, including 'energy as a service.'<sup>9</sup>**

We will promote renewable and low carbon energy generation as well as the need to be ready for a more complicated energy future. This includes continuing to invest in the council-owned low carbon heating, Energetik, and also reviewing the council's land ownership to identify opportunities for renewable energy generation.

The way our homes and businesses are supplied with energy is changing and will continue to change rapidly over the course of this plan. As the Committee on Climate Change has established, the future of energy in the UK will become more complex and decentralised. Increased renewables, a decarbonised grid, further electrification and an increase in lower carbon products means that making decisions on energy supply is increasingly difficult.

In order to meet the UK's net zero targets by 2050, the Committee on Climate Change (the CCC) and National Grid state that there will need to be an energy mix that is both low carbon and which ensures security of supply for the coming decades. Nationally, this means:

- Gradual phasing out of gas boilers over 25-35 years.
- Increased heat pump installations.
- Expansion of renewable energy.
- Expansion and maintenance of decentralised energy systems and networks.
- Hydrogen boilers and a hydrogen gas grid utilising the existing gas network.

With Government assistance to fund further initiatives, Enfield is well placed to meet the requirements for a low carbon energy system. Our strategy takes the approach of diversification in line with Committee for Climate Change recommendations. This will mean generating heating and cooling from a range of sources, taking into account all available options.

Our work to date to install heat pumps for four of our council housing tower blocks means that we understand the capital cost and skills needed to do this; and Energetik is well placed to develop the borough's heat network. We will be future-proofing large developments by providing low carbon heat from a range of sources across the borough.

Regardless of the diversified options, the change to low carbon and renewable energy sources must be complemented by high levels of retrofit and building refurbishment to bring down energy demand overall. This requires financial assistance and support from regional and national Government. We see all of the following areas as part of Enfield's energy future:

**Fabric and insulation**

**Switch to Renewables**

**Heat pumps to provide heating and summer cooling**



**Decentralised energy**

**Hydrogen**

<sup>9</sup> <https://www.rff.org/publications/issue-briefs/energy-service-business-model-expanding-deployment-low-carbon-technologies/>

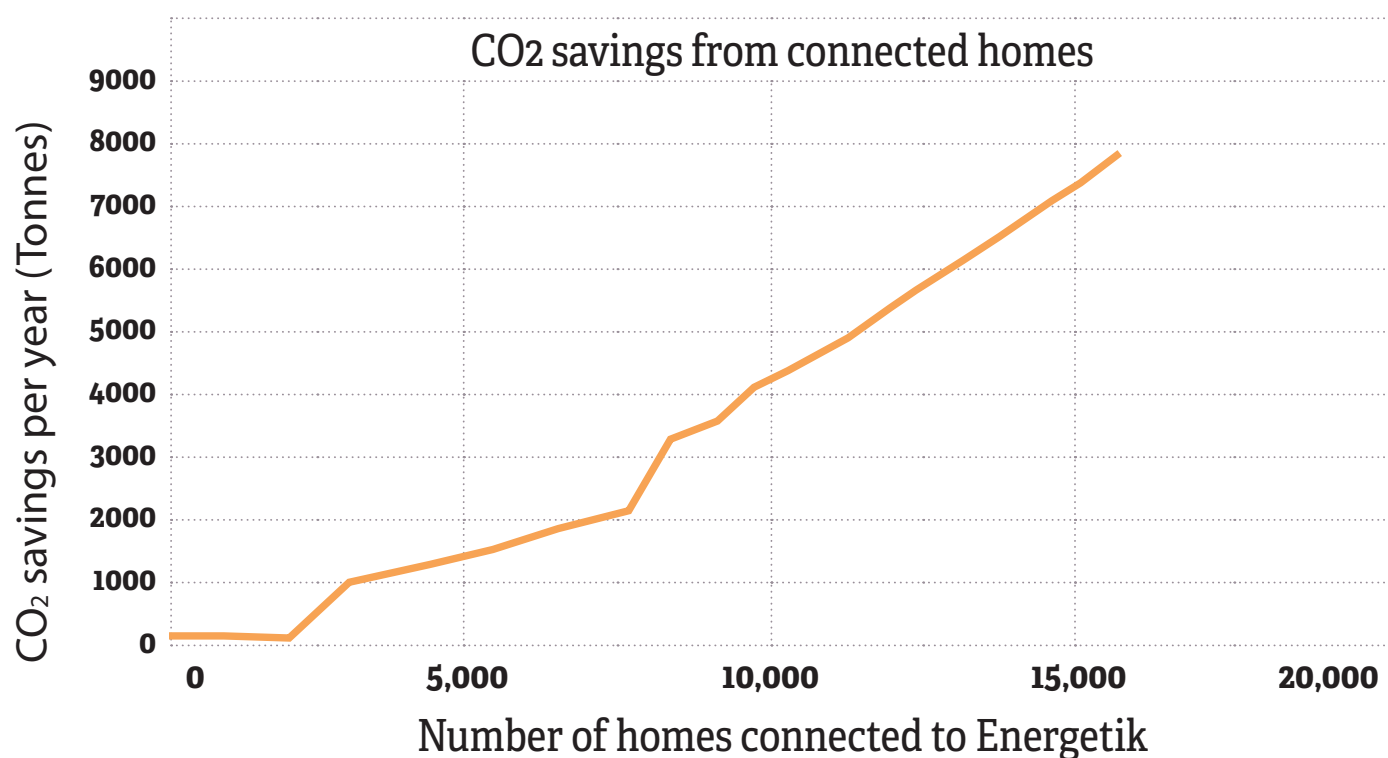
## Recent Successes

- Installation of 150kW of solar panels on the Civic Centre, providing renewable energy to the building.
- Connecting over 200 homes to low carbon heat networks through council owned company Energetik.

We have invested in the Council-owned company Energetik, a central energy centre generating heat, connected to a network of highly insulated pipes. A district heating network allows us to generate low carbon heat from a number of sources. Energetik was set up to supply heat and hot water to over 15,000 homes and businesses across North London. It already serves a number of housing developments in the borough including, Ladderswood (517 homes), Electric Quarter (167 homes), Alma Estate regeneration (1,000 homes), New Avenue (400) and will eventually support Meridian Water (10,000 homes).

Heating is supplied through four heat networks consisting of energy centres connected to insulated pipes that transport heat to homes and businesses in Enfield. These networks use different heat sources ranging from gas fired boilers to large scale heat pumps. In Enfield we have the option of connecting the Energetik network to a range of sources in future including heat from waste.

This future-proofed energy infrastructure can be extended to meet increasing energy demands and adapted for changes in heat generation technology.



## Action: Increase access to zero and low carbon energy across the borough

Actions in detail	Completed by
Continue to invest in Energetik with more homes connected each year.	Ongoing
Develop a 10-year energy strategy to deal with anticipated changes in energy markets over the next decade.	March 2021
Review the council's land ownership and identify viable renewable energy generation options, prioritising wind and solar.	April 2021

## Performance

Element	Monitoring	KPI	Baseline	Expected performance
Low carbon installation	Annual	Renewable energy generation on council owned land.	Under development	Under development
Decentralised energy network	Annual	Number of homes connected.	200 in 2019	4,000 by 2025 8,000 by 2030



# Natural environment

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## Our vision

By 2030, we will have a natural environment that enhances biodiversity, provides significant protection against flooding and which helps to mitigate overheating in London. By 2040 we will have achieved a net increase in green infrastructure of 25% compared to today.

This will mean:

- **More blue green infrastructure across the borough with examples including green roofs, new parks and better access to waterways, with high levels of carbon sequestration.**
- **More trees and tree canopy coverage across the borough, both in urban areas across the borough, and in the new woodland in the north, which could offset up to 230 tCO<sub>2</sub>e each year.**
- **There will be a net gain in areas of biodiversity across the borough, not just in already biodiverse areas.**
- **We will have a robust and established programme of using the natural environment as one of our key offsetting options, not just for the Council, but for partners within the borough and beyond.**
- **The Greenbelt will play an enhanced role in biodiversity, carbon-offsetting and in helping to facilitate low-carbon living.**
- **Buildings and infrastructure across Enfield will be protected from flood damage and heatwaves.**

Enfield is one of London's greenest boroughs, including the Lee Valley Regional Park, 123 parks and public open spaces, 37 allotment sites, more than 300 hectares of woodland and 100 kilometres of rivers and streams. We have an important role to play in protecting and enhancing the borough's biodiversity, helping London to respond to the changing climate and helping to decrease carbon through green infrastructure.

As the summers of 2018 and 2019 demonstrated, our weather is becoming more extreme, with events such as heatwaves and flooding occurring more regularly and with higher intensity. Across the UK we will continue to expect:

- Hotter, drier summers.
- Milder winters.
- Changing rainfall patterns, with periods of dry weather and intense rainfall.
- More extreme, intense events such as heatwaves or extreme cold.

These changes are impacting on the council and its operations as well as the natural environment. Specific risks within Enfield include:

- 19 schools are at high risk of flooding.
- 5 hospital sites (private and public) are at high risk of flooding.
- Large areas of Enfield, including Enfield Town, are at significant risk of surface water flooding.
- The Eastern part of Enfield is at particular risk from flooding due to its position in the Lea Valley Floodplain. This has an impact on critical infrastructure.
- The areas in which there is the highest levels of deprivation correspond with the areas where there is the highest flood risk.

We need to respond to these risks through proactive flood alleviation work, as well as capitalising on the natural assets the borough has to help offset the emissions we cannot prevent in the coming years. Our approach to green infrastructure is about both mitigating and adapting to climate change. We are aiming to significantly increase carbon sequestration<sup>10</sup> opportunities across Enfield.

Increasing provision of blue green space in the borough will also be beneficial for health by providing opportunities for physical activity and through known benefits of blue green space on mental health and wellbeing. Enhancing green and blue space across the borough is a vital part of our Council aim to deliver a lifetime of opportunities for everyone – now and in the future.

<sup>10</sup> Carbon sequestration is the long-term storage of carbon in plants, soils, geologic formations, and the ocean.

## Recent Successes

- Enfield Town Park wetlands completed in 2019, providing 5,000m<sup>3</sup> flood storage, creating more than 1,000m<sup>2</sup> wetlands and enhancing wildlife habitat with wildflower planting.
- Broomfield Park wetlands completed in 2019, providing 3,000m<sup>3</sup> flood storage, improving water quality, creating a new space for education and community involvement in nature, improving biodiversity and creating new natural habitats.
- Prince of Wales wetland completed in 2018, providing more than 3,000m<sup>3</sup> available for flood storage, enhancing wildlife habitat and providing an educational resource for nearby schools.
- Firs Farm wetland completed in 2017, providing up to 30,000m<sup>3</sup> of flood storage during extreme rainfall events, protecting 140 properties from flooding and enhancing wetland habitat.

## Action: Increase blue green infrastructure across the borough

Actions in detail	Completed by
Develop a green infrastructure planting programme across urban areas, increasing the number of trees and other greenery, particularly where this is currently lacking.	December 2020
Plant 100,000 new trees through Enfield Chase woodland creation in the north of the borough.	March 2022
Deliver a 10-year tree planting and woodland creation programme in the north of the borough to further increase the amount of woodland from the initial 100,000 new trees.	March 2030
Continue to develop wetland capacity to increase flood resilience.	Ongoing
Integrate blue green infrastructure features such as rain gardens and trees into the Meridian Water development and naturalise Pymmes Brook.	First interventions by 2021

## Performance

Element	Monitoring	KPI	Baseline	Expected performance
Offset emissions	Annual	Maximum yearly offset of 585 tCO <sub>2</sub> e.	We have not previously had an offsetting policy so this is a new baseline of 0	585 tCO <sub>2</sub> e offset per year
New woodland creation	Annual	New hectares of woodland established.	This is a new project, so our baseline for this measure is 0	60 hectares by 2022. Future targets are in development based on the progress of the Enfield Chase project. We are reviewing the possibility of 140 hectares by 2025
New trees planted	Annual	Number of trees planted.	This is a new indicator so baseline is set at 0	100,000 by winter 2021 Target to be reviewed in early 2021
Wetland capacity	Annual	Increase in wetland schemes.	This is a new indicator so baseline is set at 0	12 by 2030

# Influencing others

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## Our vision

By 2030, residents, businesses and local partners will all be committed to achieving a carbon neutral borough.

This will mean:

- **We have used all available low carbon funding streams to make Enfield carbon neutral.**
- **There will be a robust council-led borough-wide offsetting programme for local businesses.**
- **The Council has worked with partners to successfully lobby for changes in regional and national policy where zero or low carbon are the default option.**
- **There will be a thriving carbon neutral economy where we have helped create the conditions for low carbon business.**
- **People who live or work in Enfield, or those who visit, are making low carbon choices, encouraged and enabled to do so by the Council's proactive approach to communication and engagement on climate action.**

We cannot tackle the climate emergency without working with our partners, suppliers and residents and without increasing support and intervention from national and regional government. To achieve a carbon neutral borough by 2040, we need to lead a proactive agenda to change behaviours and make it easier for people to live in a way which significantly reduces their carbon footprints.

We also need to influence government to support us to achieve our ambitions. The actions set out in this plan require significant investment, not all of which is currently within our existing budgetary envelope. We will work proactively with others to coordinate our approach, help facilitate partners to adapt and change and to influence government to make the scale of the change required.

## A regional and national agenda: Our key asks of government

To achieve this plan, government will have to step up its existing efforts to address climate change. We can only deliver the full scale of the action needed with further financial investment and policy intervention from government.

We will lobby government on key actions needed to create a carbon neutral borough by 2040. This will include the following key asks:

- Identify clearer and simpler low carbon funding streams for low carbon retrofit.
- Remove, or at least significantly reduce, VAT on materials used for retrofit, to accelerate the conversion of homes to zero carbon homes across all tenures.
- Clearly set passivhaus as the default option for new build in the UK.
- Re-establish solar and renewable subsidies, with clear time limits, to bolster the low carbon economy and allow businesses and residents to access renewable energy at scale.
- Create clear funding streams for climate resilience solutions for residents and businesses across the borough.
- Create the conditions required for sustainable charging infrastructure for electric vehicles.
- Work with Transport for London, train operating companies and Network Rail to continue to increase and improve low carbon public transport in Enfield.

## Action: Influence residents to adopt zero carbon lifestyles and take low carbon decisions

Actions in detail	Completed by
Use established council and community communication channels to engage with households across Enfield on: <ul style="list-style-type: none"> <li>• Energy efficiency</li> <li>• Renewable energy installation</li> <li>• Low carbon refurbishment</li> <li>• Low carbon consumption choices and how to reduce waste</li> <li>• Low carbon travel</li> <li>• Adapting to climate change.</li> </ul>	Ongoing
Identify fuel-poor households in the private rented sector and in owner-occupied homes to prioritise support for low carbon retrofit using a mixture of EPC data and information from across Enfield services.	2020-2021
Use the CEEB to identify options for zero carbon retrofit across all tenures.	January/February 2021
Establish feasibility of using 'green doctors' to engage specific households on energy switching and efficiency.	March 2021
Identify the effective ways of actively engaging residents across Enfield with targeted messages relating to climate change, through home visits, phone calls and third party visits.	April 2021 onwards

## Action: Influence the behaviour of Enfield's key partners, suppliers and the wider economy to transition to low or zero carbon

Actions in detail	Completed by
Work with our partners to raise the importance of adaptation and mitigation to protect residents from extreme weather.	Ongoing
All events held by Enfield Council where catering is provided to offer only vegan or vegetarian options.	December 2020 onwards
Encourage and support schools in their work to cut carbon and raise the importance of adaptation and mitigation, including by holding a school climate summit at the earliest opportunity.	December 2021
Work with regional partner local authorities to support small and medium businesses (SMEs) to address barriers to becoming more energy efficient and reducing their carbon footprint.	Ongoing to 2030
Establish a borough wide climate change partnership, initially focused on the largest emitters across the borough.	March 2021

## Performance

Element	Monitoring	KPI	Baseline	Expected performance
Passive engagement	Annual	Percentage of homes passively engaged on climate change mitigation, adaptation and sustainability (through communications campaign).	This is a new target so current baseline is 0	Enfield Council Homes 2020 – 50% 2021 – 100% All households 2020 – 20% 2021 – 35% 2022 – 50%
Active engagement	Annual	Percentage of homes directly engaged through active measures (home visits, phone calls, third party visits).	This is a new target so baseline is 0	Target to be established by December 2020
Climate Change Partnership	Annual	Number of local business members.	This is a new target so baseline is 0	2021 – 20 2023 – 40 2025 – 80



# Financing the action

Achieving carbon neutrality and tackling emissions across the borough will be hugely challenging given the budgetary pressures on local government. Since 2010, £178m has been cut from Enfield Council's budget.

We will have to make difficult choices to ensure we can deliver on our strategy while balancing a budget as a local authority with a huge range of challenges, responsibilities and ambitions for local people. We will look to the mayor, the government and other sources of funding alongside our existing budget, in order to deliver the action that is needed.

We will need to work in a smart, coordinated way to maximise the financial resources needed to deliver our carbon neutral aspirations.

We will maintain a dedicated resource to oversee and coordinate the delivery of the strategy, and we will train existing staff to improve their carbon literacy. This resource will work across the local authority and with our

partners to coordinate decisions and projects and ensure that climate and carbon reduction is integrated into all decision making for the Council.

Funding for low carbon has become more complex in the last 10 years. However, we think that we will be able to finance our actions through the following:

- Existing budgets.
- Accessing the renewable heat incentive (RHI).
- Using SALIX funding for specific projects.
- Using the borough carbon offset fund generated from new development to retrofit or develop renewable energy schemes across the borough.
- Bidding for bespoke pots of funding for specific initiatives (low carbon infrastructure, renewables) when they become available.
- Accessing the Heat Networks Investment Project funding to further develop Energetik's heat network.
- Accessing borrowing that is focused only on low carbon or climate related outcomes.

## Action: Maximise all funding options

Actions in detail	Completed by
Take advantage of grant and low-cost loan funding available to enable us to take the action required to become carbon neutral.	Ongoing
Maximise funds such as the non-domestic renewable heat incentive to upgrade energy supply to the borough's schools.	Ongoing
Undertake exercise to identify costs associated with delivery of the CAP so that this can inform the Council's budget setting process and our ask of partners, in particular the Government.	Autumn 2020
Develop and test a price for carbon associated with the Council's decisions and activities. Use this to charge a levy against poor internal carbon performance, with income used to fund zero carbon investment to reduce carbon emissions from council buildings.	April 2021
Maximise the Carbon Offset Fund to provide capital to invest in housing retrofit and renewable energy projects.	Summer 2021

# Glossary of Terms

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## **Carbon footprint**

The amount of carbon dioxide released into the atmosphere as a result of the activities of a particular individual, organisation or community.

## **Carbon literacy**

Having a general awareness of climate change and the impact of humankind on the climate.

## **Carbon neutral**

Where some emissions are still being generated by an organisation after carbon reductions, these emissions are being offset making the overall net emissions zero.

## **Carbon positive**

Activity that goes beyond achieving net zero carbon emissions to actually create an environmental benefit by removing additional carbon dioxide from the atmosphere.

## **Carbon pricing**

A carbon price is a cost applied to carbon pollution to encourage polluters to reduce the amount of greenhouse gas they emit into the atmosphere.

## **Circular economy**

A circular economy is an alternative to a traditional linear economy (make, use, dispose) in which we keep resources in use for as long as possible, extract the maximum value from them whilst in use, then recover and regenerate products and materials at the end of each service life.

## **Climate change**

A large-scale, long-term shift in the planet's weather patterns and average temperatures.

## **Climate emergency**

The intention to take immediate action and develop policy to mitigate climate change beyond current government targets and international agreements.

## **Climate mitigation**

Efforts to reduce or prevent emission of greenhouse gases.

## **Climate resilience**

Climate resilience is the ability to anticipate, prepare for, and respond to hazardous events, trends, or disturbances related to climate.

## **Climate risk/adaptation**

Inertia in the climate system means that rising temperatures, changing rainfall patterns, changes in extreme weather events and sea level rise are unavoidable. These impacts will have consequences for business operations, social services, human lives and many other areas vital to economic and social development.

## **Carbon sequestration**

The long term storage of carbon. In this instance using natural measures to store carbon.

## **Divestment**

This the process of removing an asset for financial, ethical or environmental reasons. In this case divestment is focused on the removal of all fossil fuels from Enfield's pension funds.

## **Energy as service**

An emerging approach to charging for electricity to end users. This describes not only the selling of energy, but also technology, analytics and personalised services to the end user.

## **Green House Gas**

Greenhouse gas, any gas that has the property of absorbing infrared radiation (net heat energy) emitted from Earth's surface and reradiating it back to Earth's surface, thus contributing to the greenhouse effect. There are seven main GHGs that contribute to climate change: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF<sub>6</sub>) and nitrogen trifluoride (NF<sub>3</sub>). Using the conversion factor relating to CO<sub>2</sub>e covers all of these GHG's.

## **Offsetting**

Carbon offsetting is used to compensate for emissions which may have reached their limit of reduction by using low carbon technology, natural environment or funding an equivalent carbon dioxide saving.

## **Stranded Assets**

Assets that turn out to be worth less than expected as a result of changes associated with the energy transition and the physical impacts of climate change.

# Related Strategies

Strategy	Rationale
<b>Housing and Growth</b>	All tenures across Enfield emit c. 330k tCO <sub>2</sub> e with Enfield council housing emitting approximately 31% of the organisation's overall carbon footprint. It is clear we must tackle our own stock and those that are being built in the borough. The Future Homes Standard will begin to be rolled out through building regulations over 2020.
<b>Transport</b>	Enfield Council will be moving its own fleet to full electric by 2030. However, the borough can influence behaviours and invest in infrastructure to encourage lower carbon forms of transport. Combustion engines will be banned from 2040 and possibly earlier.
<b>Local Plan</b>	<p>The Local Plan provides a positive vision for the future of each area and a framework for addressing housing needs and other economic, social and environmental priorities.</p> <p>This Local Plan and our new Local Plan, to be published by December 2020, are complementary and consistent with one another. However, the Climate Action Plan is not part of our Planning Policy Framework.</p>
<b>Joint Health and Wellbeing</b>	Climate change a significant risk to those people with existing health conditions. Whilst severe cold represents an ongoing risk in terms of excess winter deaths, increasing temperatures and heatwaves represent a growing risk for the over 50's, under 5's and those that deliver services.
<b>Education and skills</b>	The low carbon economy will require a workforce with different knowledge where carbon foot printing and understanding climate risk are a standard element of any role. At present this is a skill that is highly specialised and non-diffuse within the general work force.
<b>Parks and green spaces</b>	Green infrastructure represents a significant opportunity for offsetting, encouraging active travel and carbon.
<b>Economic Development</b>	The macro-economic picture is that the UK is the only economy to reduce fossil fuels and grow GDP levels in the last 20 years. The low carbon economy represents a significant positioning opportunity for Enfield to attract employers and workers because of its green credentials.
<b>Commercial</b>	Including climate change risk and carbon impact into the commercial process, Enfield can achieve both low carbon and climate resilient decisions.
<b>Strategic asset management</b>	Buildings represent a significant share of overall carbon emissions. A strategic approach that integrates the lowest carbon with the best value decision would mark Enfield as a leader.

