

East Herts Council's Carbon Emissions: 2025



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1.0 Summary

East Herts Council's carbon emissions for 2025 were 2,370 tonnes of CO₂ equivalent (CO₂e).

We last reported our emissions figure in 2023. This was 2,436 tonnes of CO₂e. The reduction of 66 tonnes over the last two years is the result of the net impact of the following:¹

- the council's actions have reduced emissions 266 tonnes*
- revised government methods for calculating emissions from the amount of fuel used has added 6 tonnes*
- a more accurate way of measuring emissions from council officers working from home has added 33 tonnes*
- emerging best practice that the emissions created from 'well-to-tank' for all fuel used should be included has added 162 tonnes to the council's emissions figure.*

Reporting with integrity, in a transparent and open way

- The council has chosen to give as full a picture of its emissions as possible. Thus, acting with integrity and in a transparent and open way, the council's emissions total is based on:
 - not including any reduction in emissions that is solely due to a building being *temporarily* closed or partially closed. In such cases, we used the figure for the emissions the building in question used to produce when it was fully open, only shifting to use actual emission figures once the building in fully reopened

¹ Component figures and totals rounded so total may be different by +/- 1 tonne from the summation of the component figures.

- a more rigorous measure of emissions for officers working from home for part of their time and
- for the first time, the emissions created as the fuel we have used travels from 'well-to-tank'.
- The 2025 figure represents an 19% reduction in CO₂e since the council made its Climate Change Declaration in 2019 which set the council on a course to achieve net zero carbon by 2030. It should be noted, however, that the latest figure includes things which were not recorded in 2019, notably emissions from staff routinely working from home part of the week and 'well-to-tank' emissions relating to all fuel used. If these additions were excluded, the council's emissions on a like-for-like basis would have dropped by 26%.

The council has virtually completed its programme of switching to carbon free electricity tariffs whenever contracts need to be renewed

- The use of carbon free electricity tariffs in buildings directly run by the council rose from 92.7% in 2023 to 99.6% in 2025. We are working towards 100% of our electricity contracts being on carbon free tariffs as soon as existing contracts end.

The council's own vehicles are now all electric and our contractors are set to reduce their use of diesel-fuelled vehicles

- The council's own fleet of five vehicles is now all electric.
- During 2024/25, the council negotiated a new waste management contract jointly with our shared service partner, North Herts Council. This contract has been let to Veolia who, in 2025/26, will introduce electric vehicles for lighter duties, such as road sweeping, and utilise HVO to power the larger vehicles. HVO is hydrotreated vegetable oil, sometimes also known as Renewable Diesel. It's an advanced biofuel, made from verified waste feedstocks such as used cooking oil, that results in up to 90% reduction in greenhouse gas emissions when used in place of fossil fuels. While these changes to the waste management contract are yet to feed through into the council's emissions total, the changes are referred to in the forward projects of emissions discussed in chapter 5 of this report.

Several projects are underway to reduce emissions to a minimum

- The council is working with the contractor running the council's two large leisure centres – Hartham in Hertford and Grange Paddocks in Bishop's Stortford – to switch to a carbon free electricity tariff ahead of 2030.

- Greater use of the council's e-fleet for business journeys in place of officers' own fossil-fuelled cars is being promoted.

The council is exploring the most robust way to calculate how much carbon is sequestered by our trees and grasslands

- The trees and green spaces owned by the council sequester carbon. Research by the University of Hertfordshire – see section 6 – shows that it is legitimate to net this sequestration off the council's emissions total to give the council's *net* carbon figure. During 2025/26, we are exploring the most robust and transparent way to calculate how much carbon our green assets are sequestering.

The council is exploring innovative ways to further reduce emissions and sequester more carbon so as to achieve a net zero carbon position

- The council will commission independent analysis during 2025/26 to establish an accurate figure for the sequestration value of its current stock of trees and grassland and the sequestration value of new planting and pro-active green asset management.
- The council will explore innovative ideas such as the potential of using biogas, often referred to as 'green gas', in place of natural gas.

2.0 Approach to achieving net zero carbon

- 2.1 The council's Climate Change Strategy 2022-2026 makes clear our commitment to becoming a net zero carbon council by 2030. In July 2023, the council restated and reinforced its commitment by making a Climate Emergency Declaration. Thus, while retaining the 2030 net zero carbon target, the new declaration included that the council agrees, by March 2027, to reduce its own carbon footprint to an absolute minimum and to identify a pathway to offset its residual carbon, so that the council will be able to continue providing high quality services but with net zero carbon emissions.
- 2.2 The council is tackling its emissions by following the widely advocated² *calculate, avoid, reduce, offset* approach to planning for and achieving net zero. The council subscribes to the view that offsetting must be the last resort in the drive to net zero carbon. So, we are striving to bring down our emissions to minimise the need for offsetting.
- 2.3 In this year's report:
- section 3 explains the basis for our calculation of our emissions
 - section 4 lays out our current emissions, along with the year-on-year changes from the baseline year of 2019 and what we have done to date to reduce our emissions
 - section 5 presents work already in progress to further reduce our emissions so as to bring them to a minimum by 2027, including our latest forecast on what level of emissions we will need to offset by 2030
 - section 6 explains our emerging work to understand how best to offset any residual carbon emissions to achieve a net zero carbon position by 2030
 - section 7 lays out a projected timetable of actions to achieve a net zero carbon position by 2030.

² **The Role of Offsetting in Local Government Climate Change Plans.** Sharpe Pritchard LLP, January 2023

3.0 Methodology for calculating the council's gross carbon emissions

3.1 The council has used the latest iteration of the Local Government Association (LGA) / Local Partnerships model³ for calculating the CO2e emissions from its activity. This model provides an 'industry standard' approach to robust calculations. The sources used to calculate the council's emissions figure are listed in Table 1 below.

Table 1: Sources of carbon emitted by East Herts Council in 2024/25		
Carbon use source	Units	Data provided by
Source 1 emissions		
Gas used in all the buildings the council directly operates, including Hertford Theatre (recently renamed BEAM)	Kilowatt hours of energy used	East Herts Council's Property team
Gas used in the leisure centres and swimming pools with shared use with schools, with the latter pro-rata'd for the council's use only	Kilowatt hours of energy used	- East Herts Council's Operations team - SLM Leisure Contractor - Leventhorpe School for Leventhorpe pool
Mileage of council's own fleet ⁴	Mileage	East Herts Council's Finance team
Source 2 emissions		
Electricity used in all the buildings the council operates (including Hertford Theatre), excluding electricity provided on carbon free tariffs	Kilowatt hours of energy used	East Herts Council's Property team
Electricity used in the leisure centres and swimming pools with shared use with schools, with the latter pro-rata'd for the council's use only	Kilowatt hours of energy used	- East Herts Council's Operations team - SLM Leisure Contractor - Leventhorpe School for Leventhorpe pool

³ <https://localpartnerships.gov.uk/resources/greenhouse-gas-accounting-tool/>

⁴ There are now no emissions as our fleet is composed solely of electric vehicles, charged via our carbon free electricity tariff.

Source 3 emissions		
East Herts Council staff and elected member business mileage	Mileage	East Herts Council's HR team
East Herts Council staff commuting mileage	Mileage	East Herts Council's Communities and HR teams
Emissions from heating and other office equipment use when officers are working from home	Full time equivalent officer working hour	East Herts Council's Communities and HR teams
Transmission and distribution losses on electricity use	Kilowatt hours of energy used	East Herts Council's Property team
Well-to-tank emissions for all fuel used by the council and in its leisure centres	Kilowatt hours of energy used and mileage for commuting and business car use	East Herts Council's Property, Communities and HR teams
Source 3 emissions from outsourced services		
Fuel used by the council's waste and grounds maintenance contractors	Litres of fuel	- FCC (formerly operating as Urbaser) Waste Contractor - Glendale Contractor

3.2 The council's overall emissions figure has been calculated by inputting the data from the sources referred to in the above table to the LGA/Local Partnerships carbon accounting tool developed specifically to assist councils in this task. The model converts the council's raw data, in the units listed in the above table, to CO₂e by using the government's conversion figures.

4.0 East Herts Council's 2025 emissions figures and reasons for changes over time

4.1 In 2025, that is, the financial year 2024/25, East Herts Council's greenhouse gas emissions total was 2,370 tonnes of CO₂e.

4.2 The council last published its emissions total in 2023. At that time, the emissions figure was 2,436. How we have got from 2,436 tonnes in 2023 to 2,370 tonnes in 2025 is explained in Table 2 below.

Table 2: Breakdown of the change in the council's CO₂e emissions total from 2023 to 2025*	
	CO₂e tonnes
Council's total emissions in 2023	2,436
Changes by 2025	
• reduction due to the council's actions	-266
• addition to the government's calculated level of carbon emissions arising from the different types of fuel used by the council	+6
• addition due to a more accurate way of measuring emissions relating to council officers working from home	+33
• addition due to the council's decision to adopt emerging best practice to include 'well-to-tank' emissions for fuel used	+162
Resulting total emissions by East Herts Council in 2025	2,370

* Component figures and totals rounded so total may be different by +/- 1 tonne from the summation of the component figures.

4.3 It is important to understand how this figure fits with the overall movement in emissions since the council made its Climate Change Declaration, now a Climate Emergency Declaration, in 2019.

4.4 In keeping with the methodology adopted in the 2023 report, the council has chosen to give as full a picture of its emissions as possible. Thus, acting with integrity and in a transparent and open way, the council's emissions total is based on:

- not including any reduction in emissions that is solely due to a building being *temporarily* closed or partially closed. In such cases, we used the figure for the emissions the building in question used to produce when it was fully open, only shifting to use actual emission figures once the building is fully reopened

- a more rigorous measure of emissions from officers working from home for part of their time and
- for the first time, the emissions created as the fuel we have used travels from 'well-to-tank'.

4.5 The council's leisure centres at Grange Paddocks and Hartham fully reopened in 2023/24, so the current operational figures are now used to calculate the emissions totals, that is, the 2024 and 2025 figures in this report. In contrast, Hertford Theatre (now called BEAM) was closed to the public for refurbishment and extension throughout 2023/24 and until August 2024. So, the emissions figures for the full year prior to closure have been used to calculate the 2024 emissions total and for the assumed emissions in April to July 2024 before the actual emissions figures relating to the reopened building are used.

4.6 The council's emission figures since 2019 are given in Table 3. Given the date of the declaration, the 2019 figure, that is, emissions for 2018/19, has been taken as the baseline.

Table 3: East Herts Council's <i>gross</i> emissions since the 2019 baseline		
Financial year	Gross emissions – in tonnes	% reduction in <i>gross</i> emissions compared with the 2019 baseline
BASELINE 2019	2,940	
2020	2,800	5%
2021	2,565	13%
2022	2,446	17%
2023	2,436	17%
2024	2,380 ⁵	19%
2025	2,370⁶	19%

4.7 Table 4 lists the council's emissions over the last two years by source, along with a commentary on the changes over that time.

⁵ Includes for the first time (and thereafter) a more robust calculation of emissions from council officers working from home for part of the week.

⁶ Includes for the first time (and thereafter) 'Well-to-tank' emissions for all fuel used.

Table 4: Functions contributing to the East Herts Council's emissions total (modelled emissions figures)			
Function category	Tonnes of CO₂e in 2023 – <i>last published figure</i>	Tonnes of CO₂e in 2025	Commentary
Scope 1 emissions			
Gas use – council buildings including BEAM (formerly called Hertford Theatre) but <i>excluding leisure centres – see below</i>	146	144	Gas remains steady across the council's estate.
Gas use – leisure centres. Note: these are reported separately as they are managed by a third party of the council's behalf	928	651	Gas usage is reducing across leisure centres as the council withdraws from shared use facilities.
Electricity use – council buildings including BEAM (formerly called Hertford Theatre) but <i>excluding leisure centres – see below</i>	13	1	Since 2023, further switches to carbon free electricity tariffs have been made so only 0.4% of the council's electricity use is now from carbon-generating sources.
Electricity use – leisure centres. Note: these are reported separately as they are managed by a third party of the council's behalf	245	329	Electricity use has risen since the full reopening of the larger facilities. In addition, the conversion factors supplied by the government have changed between 2023 and 2025, such that it is assumed that each kilowatt hour of electricity (from carbon-generating tariffs) will produce 7.25% <i>more</i> carbon to reflect the fuel usage to power the national grid. <i>Note: the council is working with SLM, the council's leisure management contractor, on options for bringing forward their planned switch to a carbon free tariff from 2030.</i>
Council own vehicle fleet	8	0	The council replaced its six diesel vans with e-cars in January 2023. Thus, fleet use was exclusively electric from 2023/24 onwards. The cars are charged via the council's carbon free tariff, thus, there are no emissions from the fleet.

Staff and elected member business travel	29	21	The council's e-fleet is increasingly being used for staff business journeys.
Staff commuting	160	152	Emissions from staff commuting have dropped slightly, in part due to the gradual switch to hybrid and electric vehicles.
Emissions arising from home working	-	33	More robust measure of emissions from home working now applied.
Transmission and distribution losses relating to electricity usage	24	29	This is a direct correlation of the increased electricity use of the redeveloped leisure centres.
Well-to-tank emissions associated with fuel use	-	162	The Local Partnerships / LGA has added this measure to their model for the very first time in 2025. The council is choosing to act with integrity by including these additional emissions in its overall total.
Waste management and grounds maintenance contractors' fleet and machinery	884	847	The reduction since 2023 has been the result of the grounds maintenance contractor switching some equipment from diesel to electrically powered and the waste management contractor hiring/leasing slightly different waste collection vehicles. <i>Note: the new waste management contract came into operation in May 2025. The new contractor is using electric vehicles for lighter duties, such as road sweeping, with a switch from diesel to hydrotreated vegetable oil (HVO) anticipated later in 2025/26. In time, this will considerably reduce carbon emissions – see section 5 for more details.</i>
TOTAL*	2,436	2,370	

* Component figures and total rounded so the total may be +/- 1.

4.8 Table 5 summarises the functions contributing the council's overall emissions in 2025.

Table 5: Functions contributing to the East Herts Council's emissions total in 2025		
Function category*	Tonnes of CO₂e	% of East Herts Council's total emissions
Leisure centres – gas and carbon-generating electricity tariffs	1,123	47%
Waste and grounds maintenance contractors	847	36%
Council's directly managed buildings and assets and home working emissions – gas and carbon-generating electricity	202	9%
Council's transport-related emissions – own fleet, business travel, staff commuting	197	8%
Total**	2,370	100%

* All figures include emissions from transmission and distribution losses and well-to-tank emissions where appropriate.

** Component figures and total rounded so the total may be +/- 1.

5.0 Future priorities for avoiding and reducing emissions

- 5.1 Our [Climate Change Strategy 2022 – 2026](#) has set out the council's route map to become a net zero carbon council by 2030 and so having a clear picture of the sources of carbon emissions, as discussed above, enables the council to deliver and, if necessary, modify the plans laid out in the Strategy.
- 5.2 The council's Climate Emergency Declaration in 2019, made the council's trajectory to net zero by stating that all efforts would be made to reduce emissions to a minimum by 2027, with a robust plan put in place no later than 2027 to offset the remaining emissions by 2030 to achieve a net zero position.
- 5.3 Thus, it is incumbent on the council to make realistic plans to reduce its emissions as much as is practicable by 2027. Table 5 lays out the actions identified at the time this report was drawn up (October 2025) to reduce emissions along with estimate of the reduction each action will produce.
- 5.4 Table 6 lists actions already underway or planned to reduce emissions by 2027. The table indicates that the council could reduce its emissions by an estimated 1,041 tonnes by this date. Based on the total emissions in 2024/25, this would give a residual emissions figure of 1,329. This would represent a 55% reduction in emissions since the baseline year of 2019.
- 5.5 The council would, of course, seek to outperform this reduction by, for example, incentivising a switch to electric vehicles by our grounds maintenance contractor, but as such actions are not yet in progress (at October 2025) they have not been included in this table.

Table 6: Approach to further reducing the council's carbon emissions	
Actions in progress at October 2025	Anticipated reduction (tonnes of CO₂e) on the 2025 level that would be achieved by 2027
As part of the new waste management contract (a) deploy electric road-sweepers/small vehicles and (b) use HVO instead of diesel for the large vehicles.	488 – assuming (a) 5% of emissions arising in 2025 from the waste management service removed by a switch to e-vehicles powered by a carbon free tariff and (b) 75% of the remaining 95% of emissions from diesel use in 2025 subject to a 90% reduction due to a switch to HVO (which has 90% lower emissions than diesel), using the 2024/25 nationally defined diesel conversion to carbon emissions factor.
Continued reduction in the council's property portfolio.	139 – based on cessation of electricity and gas emissions (attributable to the council in 2024/25) as a result of a reduced office and shared use facility footprint, using the 2024/25 nationally defined conversion to carbon emissions factors.
Bring forward SLM's switch to carbon free electricity at Hartham and Grange Paddocks leisure centres to 2026.	365 – based on 2024/25 electricity use and the 2024/25 nationally defined conversion to carbon emissions factor.
Reduce staff commuting by fossil-fuelled vehicles.	35 – based on 25% of officers switching from petrol, diesel or hybrid to full electric vehicles, with electricity from carbon-generating tariffs used, and the 2024/25 nationally defined factors for various fossil fuel vehicle use conversion to carbon emissions factors applied.
Switch the council's business journeys to the e-fleet rather than individual officers' fossil-fuelled cars.	7 – based on 25% of council business journeys switching to the council's e-fleet, powered by carbon free electricity, and the 2024/25 nationally defined standard assumed vehicle conversion to carbon emissions factor.
Reopening of Hertford Theatre, now known as BEAM, with all heating provided by carbon free electricity rather than gas.	6 – based on four months of pre-closure gas usage included in the 2024/25 total and the 2024/25 nationally defined conversion to carbon emissions factor. <i>Note: the full year gas use before closure resulted in 17 tonnes of emissions.</i>
Switch away from the 0.4% of the council's electricity use still not on carbon free tariffs.	1 – based on all remaining carbon-generating tariffs switching to carbon free tariffs.
TOTAL reduction	1,041
Modelled residual carbon emissions by 2027, that is, emissions in 2025 minus estimated reduction by 2027	1,329

6.0 Net carbon emissions

- 6.1 One thing that it is vital to bear in mind is that all the discussion in the preceding sections has focused solely on East Herts Council's *gross* carbon emissions. That is, the amount of carbon the council's activities emit into the atmosphere.
- 6.2 Section 4 above has discussed in detail the latest calculated level of gross carbon emissions by the council. Section 5 has then discussed actions in progress to reduce this by 2027, this being the date by which the council's Climate Emergency Declaration of 2023 committed the council to reduce its emissions to a minimum.
- 6.3 In order to fulfil the second key element of the Climate Emergency Declaration of 2023, the council needs to have in place a robust plan by 2027 to achieve a net zero carbon position by 2030.
- 6.4 At this point, understanding the mechanisms related to carbon management becomes crucial. Three key concepts often used in climate policy and sustainability strategies are **carbon emissions**, **carbon sequestration** and **carbon offsetting**. Though interconnected, each represents a distinct aspect of the carbon cycle and climate mitigation effort. Although these terms are widely used, in the interests of transparency and clarity, it is worthwhile laying out definitions of each term so that the council's efforts and priorities to achieve a net zero position can be fully understood.

Carbon Emissions

Carbon emissions refer to the release of carbon dioxide (CO₂) and other greenhouse gases into the atmosphere, primarily from human activities, notably burning fossil fuels (coal, oil, gas) for heating and transport, industrial processes and deforestation.

These emissions are the main driver of anthropogenic climate change, contributing to global warming by trapping heat in the Earth's atmosphere.

East Herts Council emits carbon both directly from heating its buildings with gas and indirectly via its officers or contractors using petrol or diesel fuelled vehicles.

For completeness, it's worth noting that if the council were to reduce its existing tree numbers, this would be classed as deforestation, albeit on a very small scale. This is not something the council has done or has any plans to do.

Carbon Sequestration

Carbon sequestration is the process of capturing and storing atmospheric CO₂ to mitigate or defer climate change. It occurs naturally and artificially:

- natural sequestration: via forests, oceans and soil that absorb CO₂ through biological processes like photosynthesis and microbial activity. In essence, the carbon is 'locked in' tree trunks and branches, soil and marine flora for example
- artificial sequestration: through technologies such as carbon capture and storage where CO₂ is captured from emission sources and stored underground.

Sequestration is already happening and can be a proactive means of reducing net CO₂ concentrations in the atmosphere.

East Herts Council owns a considerable amount of green open space and trees and so the council's estate is already enabling natural sequestration to mitigate some of the council's production of carbon emissions.

Carbon Offsetting

Carbon offsetting is a widely used term although no formal definition has been universally established. The report by the Hertfordshire Climate Change and Sustainability Partnership (HCCSP), 'Carbon Offsetting Standards for Local Authorities in Hertfordshire', published in 2025, draws on the Association for Public Service Excellence (APSE) definition that, *'offsetting compensates for residual emissions through activities that reduce carbon emissions by the same amount'*. APSE (2022)⁷. The HCCSP report states that it is generally agreed that carbon offsetting refers to the process of compensating for carbon dioxide equivalent or greenhouse gas emissions by investing in environmental or technical projects that remove or avoid emissions elsewhere.

Examples of carbon offsetting include:

- reforestation projects and projects to create new woodlands

⁷ [Voluntary Carbon Markets and Offsetting \(2022\)](#), APSE

- renewable energy development
- methane capture and storage
- carbon credits purchased on voluntary or regulated markets.

Offsets do not directly reduce emissions from the original source but aim to balance the net impact.

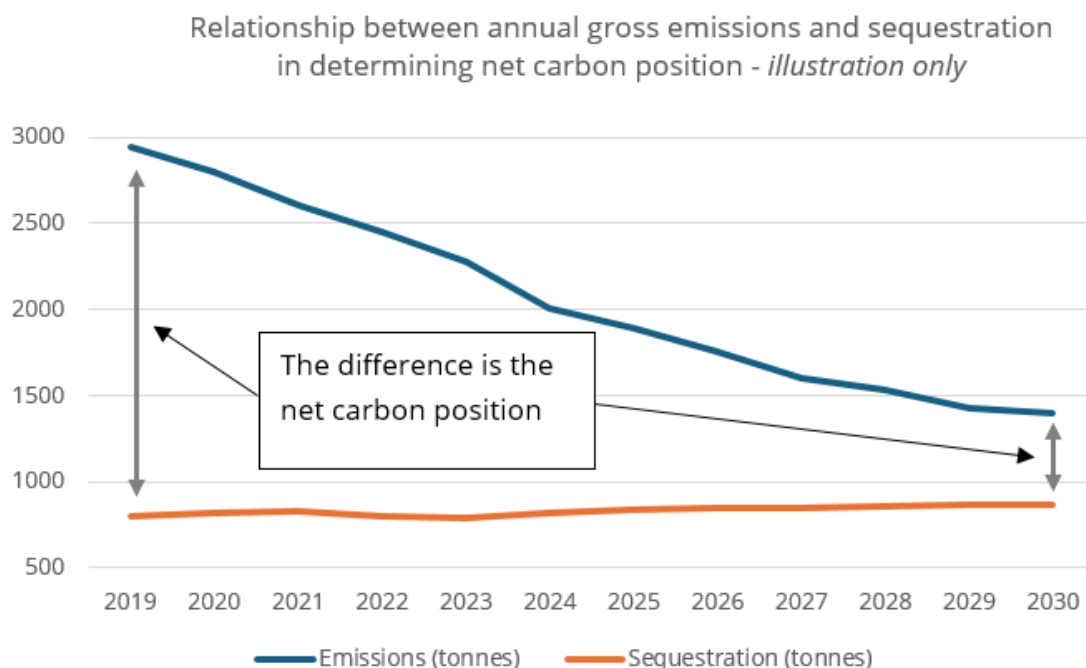
A subclass of carbon offsetting that has emerged in recent years is **carbon insetting**. The HCCSP report defines this as the introduction of projects, for example, forestry and renewable energy, *'into a company's [or other organisation's] own value chain: bringing practices that aim to reduce the carbon emissions from the company's activities within the business itself (in comparison with carbon offsetting, which utilises completely external carbon projects to neutralise emissions)'*.

East Herts Council favours carbon insetting as it has the additional benefit over carbon offsetting of enabling co-benefits for local people. For example, increasing the number of trees in the district can improve biodiversity, recreational activities and the overall quality of the life.

Mapping out the relationship between emissions, sequestration and offsetting – an illustration

- 6.5 The relationship between emissions, sequestration and net carbon is shown in Figure 1. In this hypothetical illustration, an organisation's emissions are projected to drop between 2019 and 2030 with the annual level of sequestration projected to rise slightly over the same period. The difference between the two figures in any year represents the organisation's net carbon position in that year. So, in 2019, the graph shows a net carbon figure for the organisation of over 2,000 tonnes of CO₂e. In this illustration, while emissions fall and sequestration rises, there is still a projected positive net carbon position at year 2030 of around 600 tonnes. If the organisation wanted to achieve net zero carbon by 2030, it would need to offset those 600 tonnes of residual carbon and ensure that the sequestered and/or offset CO₂e remains at a level no lower than the organisation's gross carbon emissions each year from then on.

Figure 1: Illustration of how an organisation's offsetting requirement can be determined – *illustrative figures only*



Applying this illustration to East Herts Council

- 6.6 As noted earlier, to date, the council has only calculated its gross emissions. We have not calculated how much carbon we sequester. This begs the immediate questions, do any of the council's current activities or assets currently sequester carbon?
- 6.7 The answer is, yes, the council does currently sequester carbon through its green infrastructure, these being trees and grassland. We need to be certain, of course, that we can legitimately deduct the sequestration by our green infrastructure from our emissions total to determine our *net* carbon position.
- 6.8 To investigate this, we have paid particular attention to academic reviews and debate. Of note, we have paid close attention to HCCSP's 'Carbon Offsetting Standards for Local Authority in Hertfordshire' 2025 report, which states that a council's '*reported carbon emissions may include the measured carbon sequestration achieved by green assets managed on LA-owned land. LAs may explore the use of their green assets when calculating their emissions profile and decarbonisation trajectory*'.⁸

⁸ [Kuppuswamy C., and Asif, H. \(2025\)](#) Rethinking Residual Emissions of Local Authorities in England: Utilising Green Assets. Hatfield, UK: Centre for Climate Change Research, University of Hertfordshire. DOI: 10.5281/zenodo.14999471

- 6.9 Sequestration of an organisation's carbon emissions via its own green infrastructure, as described in the HCCSP report, is a widely accepted concept. For example, it underpins much of the discussion in the UK government's Voluntary Carbon and Nature Markets: Raising Integrity document which they consulted on earlier this year. The outcome of the consultation is now awaited. Interestingly, the consultation has much to say about the inseting variant of offsetting. The report states, *'insetting is associated with Forest, Land, and Agriculture (FLAG) due to the ability of land to deliver carbon removals (sequestration) through improved land and soil management. The Greenhouse Gas Protocol's (GHGP) draft Land Sector and Removals Guidance, which sets out how companies should measure and report on emissions from land use, allows companies to use land-based carbon removals to contribute towards abatement when specific requirements are met – crucially, that the removal occurred on land within the companies' supply chain and there is traceability to the first point of aggregation within the sourcing region, or land management unit. This approach to carbon removals is unique to the FLAG sector'*.
- 6.10 In short, taking account of carbon capture by the council's green assets when determining the council's net carbon position is in line with rapidly growing standard practice. So, we can safely conclude that it is legitimate for the council to take into account the value of sequestration by its green assets when determining the council's net carbon position. Therefore, East Herts Council will calculate the sequestration value of its trees and grassland and net this off of its gross emissions total.

Is investment in green infrastructure a statutory duty of East Herts Council? And what difference does the answer to this question make?

- 6.11 Figure 1 above showed the interaction of projected emissions and projected sequestration in determining an organisation's net carbon position. If the illustrative graph in Figure 1 was to be replicated for East Herts Council it is crucial to be able to confidently project sequestration by the council in order to determine whether there are likely to be residual carbon emissions to offset and if so, how much.
- 6.12 Put another way, if by 2030, modelled sequestration by the council's green assets is less than the anticipated carbon emissions at that time, the council will obviously need to do something additional to offset the carbon to at least the level of the difference between emissions and sequestration. So, in projecting forward

to 2030, should investment in its trees and grassland be counted as sequestration or additional offsetting?

- 6.13 The key point here is, is the investment in green assets additional? This begs the question, additional to what? The answer is, additional to what is included in the projection of the green assets' sequestration value.
- 6.14 Michael Gillenwater of the Greenhouse Gas Management Institute in Maryland, USA, has written extensively about defining and gauging additionality in the context of carbon offsetting⁹. His studies have been cited in several important pieces of work, for example, the University of Oxford's well-regarded 'Oxford Principles for Net Zero Aligned Carbon Offsetting'.
- 6.15 Gillenwater articulates a series of key elements of additionality in the context of carbon reduction. He describes additionality in terms of whether '*a proposed activity is better than a specified baseline*', stating that a baseline is '*a quantified amount of good or harm produced by the behaviour... in the absence of one or more policy interventions, holding all other factors constant*'. He concludes by stressing that inherent in additionality is that '*a proposed activity is being caused to happen by a policy intervention... [as determined by] whether a proposal is different than its baseline, which is defined as the scenario absent the same policy intervention*'.
- 6.16 A further important element of Gillenwater's articulation of additionality has been emphasised by other authors. That is, that a policy intervention would fall outside the definition of additionality if it were something mandated by regulatory regimes. An example given in the Oxford Principles of Net Zero Aligned Carbon Offsetting is '*avoided deforestation*' projects in regions that have already put in place commitments and policies to end deforestation'. Of crucial importance here is that by applying Gillenwater's reasoning to the University of Oxford's example, we can see that such a project to avoid deforestation should already be counted in the net carbon projected baseline as the assumption (however optimistic) has to be that its mandatory basis means it will happen.
- 6.17 Absolutely vital in Gillenwater's discussion is (a) the saliency of a baseline (that is, the position pre-offsetting) and (b) the mandatory nature of what is being considered. The two are inextricably inter-related. Put simply, if a council (or any organisation) is mandated to do something, it *has* to work on the basis that it *will*

⁹ [What is Additionality? Part 1: A long standing problem](#) MICHAEL GILLENWATER, Greenhouse Gas Management Institute, Silver Spring, MD and Science, Technology and Environmental Policy Program, Woodrow Wilson School of Public and International Affairs, Princeton University, Princeton, NJ (email: gillenwater@alum.mit.edu) Discussion Paper (version 03): January 2012

do it and thus it should include the impact in terms of carbon in its baseline and its projected baseline at a future date.

6.18 So:

- if a council is mandated by national legislation or local, political decision-making to invest in its green assets in a certain way, then the impact of that investment should be included in its current and projected baselines of emissions prior to offsetting, while
- if a council is *not* mandated by national legislation or local, political decision-making to invest in its green assets in a certain way, then any decisions taken at a future date should be counted as additional to the projected baseline and should count as offsetting (and could be included in future rebasing exercises).

6.19 This example begs the question as to whether an English district council's proactive maintenance of and investment in its green assets is mandatory and therefore should be counted in its baseline projection or not. Detailed work by the University of Hertfordshire has looked into this very point. In their academic report, Kuppuswamy and Asif (2025) have concluded that (a) notwithstanding overall health and safety requirements in relation to tree management, responding to the requirements of tree preservation orders in a minority of cases and the broad duty to promote biodiversity, there is no legal duty to keep or maintain trees or particular green habitats on council land and thus doing so represents an additional activity and (b) ancient woodlands are not protected under the law and any decision to invest in the preservation of ancient woodland on local authority land is a discretionary, additional activity.

6.20 So, by applying Gillenwater's definition of additionality to Kuppuswamy and Asif's findings we can conclude that any investment in its trees and green habitats is *not* mandated by legislation and so it follows that if a council locally commits itself to investment, this should be included in the projected baseline, while if it wishes to see whether to make any investment at a future point when it needs to offset its emissions, this should not be included in its baseline and would count as offsetting.

Isn't taking into account the council's green infrastructure simply 'green washing' away its emissions?

6.21 East Herts Council is earnest in its ambition to achieve a net zero carbon position by 2030 and wishes to use as robust and open methodologies and measurements as possible to counteract any claim of green washing.

- 6.22 Unfortunately, the rush by some organisations to demonstrate their ‘green credentials’ has led to practices that are often termed, ‘green washing’. Greenwashing can be defined as the practice of misleading people into believing that an organisation, product or service is more environmentally friendly than it actually is by, for example, false or exaggerated claims about environmental practices or benefits.
- 6.23 Given this context, the residents of East Herts, and indeed anyone with an interest in the council’s activities, will quite rightly want to review any claims made or information produced by the council regarding its own net zero position. So, we wish to make as clear as possible how the council will count the contribution of its trees and green habitats to the achievement of a net zero carbon position. This is explained in the two following boxes.

Carbon sequestered by the council’s trees and green habitats

We will count sequestered carbon as carbon captured by our existing green assets (as of the date of the independent evaluation of tree stock which will be carried out during 2025/26), taking into account the net impact of die back and self-seeding. We will project this to 2030 on the basis, *for modelling purposes only*, that the council does *not* use its discretionary powers to invest any further in its current trees or green habitat *nor* plant any new trees.

The assumption of no pro-active management or investment is important here because, crucially, such work would meet the definition of an additional project to, in effect, reforest or create new green habitats, thus it will be considered as an offsetting project – see below.

Carbon offsetting via the council’s trees and green habitats

In 2025/26, we will model the council’s emissions in 2030 and the amount of carbon that would be sequestered by the council’s trees and green habitats anticipated to be in existence at that date, without any pro-active work to maintain, replace or add to the stock since the baseline year.

The baseline year will be the year in which a robust, independently conducted piece of work into the carbon capture value of our trees and green habitats is carried out. We are planning for this to be done in 2025/26.

Should the sequestration value in 2030 be projected to be less than the carbon emissions projected in that year, we will carry out additional project

work to, at the council's discretion, maintain, replace or increase our tree stock and green assets to ensure a net zero position well beyond 2030. This project work will be counted as offsetting as soon as it takes place prior to 2030.

The route to achieving net zero carbon emissions. How can the council know how many trees and/or how much green habitats it needs in order to make a meaningful contribution to offsetting via future sequestration?

6.24 Put as simply as possible, the council needs to take the following steps to achieve net zero carbon:

- step1 – reduce emissions
- step 2 – calculate the amount of sequestration by the council's green assets
- step 3 – determine the amount of offsetting required by calculating the difference between the council's emissions and sequestration at a future date, this being the residual carbon emissions figure
- step 4 – reduce further the gross emission and/or offset all the residual carbon by that future date.

6.25 The immediate difficulty is that while a robust methodology for calculating the council's emissions is available – see section 3, there is no commensurate measure for calculating the sequestration delivered by the council. This situation is summarised in Table 7.

Table 7: Difficulties and next steps to enable a robust methodology for measuring the council's route to net zero			
	Element of the carbon reduction journey		
Issue	Emissions	Sequestration	Offsetting required
Measurement methodology	The well-established and widely used Local Government Association (LGA) / Local Partnerships emissions model using the government's annual revised activity-to-carbon factors – see section 3 for more details of the model	No established model in place	Emissions minus sequestration hampered by the lack of a sequestration calculation tool
Does the council currently have a robust calculation?	Yes, the output of the model – see section 4	Only estimates at present	Only estimates at present
Steps needed to ensure robust measurement	Continue to use the annually updated model	Commission a baseline calculation of the sequestration value of the council's green assets from a suitably qualified organisation. The council will do this in 2025/26 Continue to support HCCSP's work with the LGA and Welsh LGA on establishing a robust sequestration calculator	Once a robust figure for sequestration, including the carbon value of discretionary maintenance of existing woodland and/or planting of new trees, is established, determine the amount of offsetting via tree planting required to achieve net zero

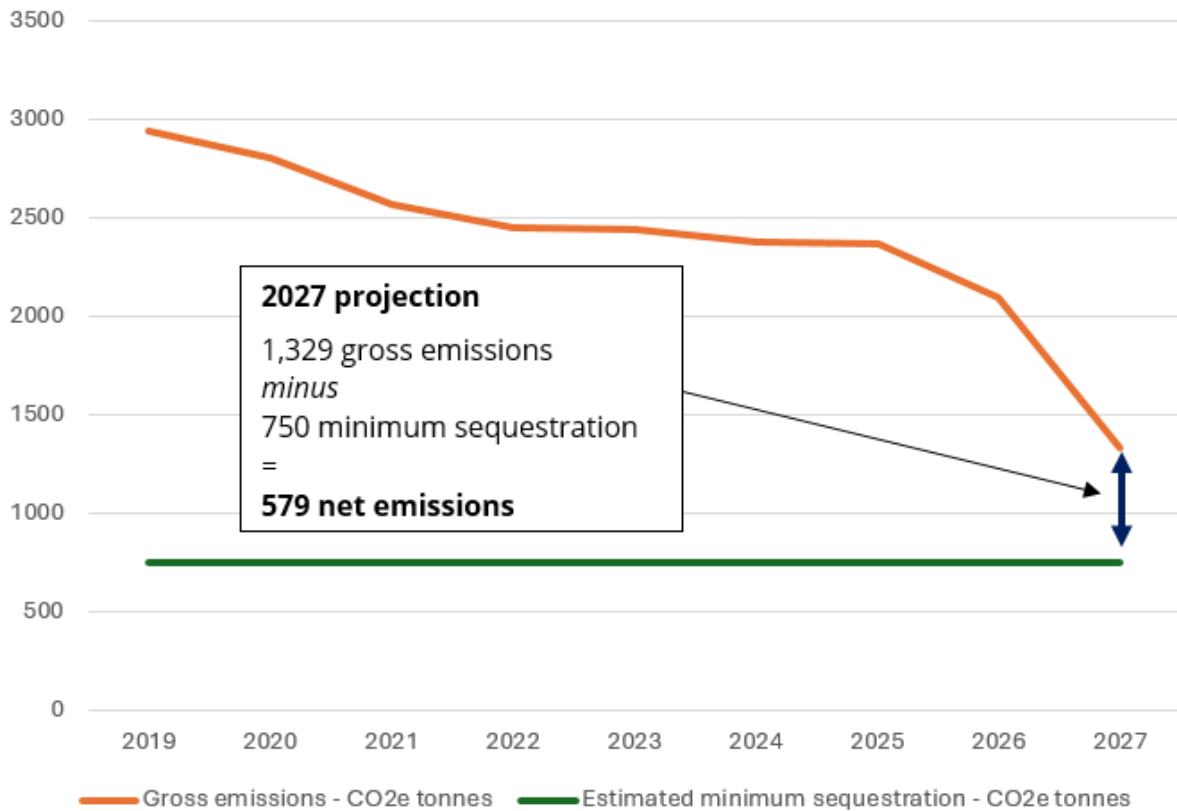
Preparing now to achieve net zero emissions in 2030

- 6.26 Section 4 above has discussed in detail the latest calculated level of carbon emissions by the council. Section 5 has then discussed actions in progress to reduce this by 2027, this being the date by which the council's Climate Emergency Declaration of 2023 committed the council to reduce its emissions to a minimum.
- 6.27 In order to fulfil the second key element of the Climate Emergency Declaration of 2023, the council needs to have in place a robust plan by 2027 to achieve a net zero carbon position by 2030. This, in theory, could be achieved by eliminating all carbon emissions by the council in their entirety. In the spirit of openness and transparency, the council has to say that this would be virtually impossible to achieve as it would require significant investment to, among other things, replace the relatively new gas boilers at Hartham and Grange Paddocks Leisure Centre with electric heating that could be fuelled by a carbon free tariff and invest in new electric waste collection vehicles that would, similarly, be powered by carbon free electricity.
- 6.28 Section 5 provides modelling that indicates the council's carbon emissions will have been minimised to around 1,329 tonnes per year by 2027. So, taking the least optimistic view that there will be no further reductions in emissions between 2027 and 2030, the council will need to in some other way to offset 1,329 tonnes of carbon per year from 2030 onwards.
- 6.29 The council's 2023 Carbon Emissions report discussed the potential ways to handle residual emissions in some detail. The report introduced the consideration of the value of the trees owned and managed in the sequestration of carbon emissions.
- 6.30 Very high level illustrative work to date suggests that the council's trees and grassland currently sequester between 750 and 1,200 tonnes of CO₂e a year. We also need to better understand the sequestration value of new planting. Obviously, this is a wide range so, in 2025/26, the council will commission an independent report into the sequestration value of its green assets.
- 6.31 Even when counting the current sequestration value of the council's green assets and the potential for offsetting through additional investment in trees and grasslands, other routes to achieve net carbon zero are likely to be needed. Thus, in 2025/26, the council will begin to investigate more innovative solutions including, the use of biogas in place of natural gas, further incentives to switch business car journeys from officers' own petrol or diesel vehicles to the council' e-fleet and roll out of HVO and electric vehicle use by our grounds maintenance contractor.

7.0 Options and outline timeline to achieve a net zero carbon position by 2030

- 7.1 In section 6, we laid out the complexities of preparing to achieve our goal of achieving a net zero carbon position by 2030. We are doing this in the context of newly emerging best practice, methodologies and metrics for robustly assessing the value of sequestration and the accurate measurement of and accounting for offsetting actions.
- 7.2 Added to this, the government's English Devolution and Community Empowerment Bill, which at this current time (October 2025) is going through the committee consultation stages in the Houses of Parliament, lays out that the government's intention that all parts of England with both an upper tier county council and a lower tier district should be reorganised under unitary authorities. The government sees Hertfordshire County Council and the ten district councils in the county being replaced from spring 2028 with a small, yet to be determined, number of unitary authorities. Under these arrangements, East Herts Council would cease to exist from 2028, however, the council feels it is imperative to continue its journey to net zero carbon by 2030. Thus, the council aims to have in place a robust mechanism to assess whether this goal has been achieved by that time for the council's current services based on the current boundaries of the district council while at the same time recognising that the new unitary authority covering this part of the county is likely to want to set out its own aspirations, goals and plans regarding environmental sustainability. It would appear possible to continue with two accounting geographies until 2030.
- 7.3 Notwithstanding the complexities and uncertainties inherent in both carbon accounting and the changing structure of local government in Hertfordshire, the context and options relating to achieving a net zero carbon position by 2030 are discussed below.

Figure 2: East Herts Council's carbon emissions
actual to 2025, projected in 2026 and 2027 based on
interventions currently in progress



- 7.4 Using the projection of gross emissions in 2027 based on interventions currently in progress – section Table 6 above – and the minimum estimated sequestration value of the council's trees and grassland, which we will refine in 2025/26, gives a projected net emissions total in 2027 of 579 tonnes of CO₂e. This means that, based on this projection and modelling, we would need to reduce the difference between gross emissions and sequestration by 579 tonnes by 2030 to meet our target of achieving a net zero carbon position by that date.
- 7.5 We clearly need to start planning now what we are going to do to achieve net zero. Therefore, we have identified a series of potential options. These options are presented in Tables 8 and 9 below.

Table 8: Possible ways to further reduce gross emissions		
Possible intervention	Maximum possible impact – tonnes CO₂e	Comments
Replace gas use for water and space heating with ground source and/or air source heat pumps, powered by zero carbon electricity, at Grange Paddocks and Hartham Leisure Centres or Switch from natural gas to biogas at Grange Paddocks and Hartham Leisure Centres or Adopt one solution or the other at the two sites	543 to 634 reduction	• The options would require consent of the contractor managing the leisure centres • The options have significant revenue impacts (not yet quantified) in terms of financing costs for ground/air source heat pump installation, additional costs associated with electricity or biogas use in place of natural gas
Increase use of HVO rather than regular diesel by our waste management contractor	215 reduction	• Maximum reduction based on no further use of regular diesel at all • Higher fuel costs for HVO rather than regular diesel
Switch our grounds maintenance contractor's diesel and petrol use to HVO	138 reduction	• Maximum reduction based on total switch from regular diesel and petrol • Higher fuel costs for HVO rather than regular diesel and petrol
Switch the gas used directly by the council from natural gas to biogas	127 reduction	• Higher costs associated with biogas as compared with natural gas
TOTAL potential reduction in gross emissions	1,023 – 1,114 potential reduction as compared with the estimated 579 tonnes of residual gross emissions at 2027	

Table 9: Possible ways to increase sequestration and/or offset emissions		
Possible intervention	Maximum possible impact – tonnes CO₂e	Comments
Plant more trees on council land and/or amend management of the council's green assets	Unknown – being assessed in 2025/26	Unlikely to be significant as the council's existing green assets are currently estimated at enabling a minimum of 750 tonnes sequestration
Purchase carbon credits on the open market	Up to the amount required to offset all remaining emissions	- Carbon credit markets are stabilising but they are still characterised by difficulties with verification - Could be expensive to purchase high quality carbon credits
Explore innovative <i>insetting</i> (as a form of offsetting) ideas	Unknown	There could be the possibility of counting the reduced emissions due to council-funded retrofit works to residents' homes but this is not a tried-and-tested approach and so would require more work to establish its legitimacy and robustness
TOTAL potential value of additional sequestration and/or offsetting (including <i>insetting</i>)	Up to the required amount, currently modelled at 579 tonnes at 2027	

7.6 Tables 8 and 9 suggest that interventions are available that mean the council could achieve or even outperform its net zero carbon target for 2030. Careful analysis, planning and implementation are essential. Thus, Table 10 below sets out a timeline to explore and, if/when required, enact the possible options to ensure an enduring net zero carbon position from 2030 onwards.

Table 10: Anticipated timeline to net zero carbon emissions by 2030

Year	Anticipated deliverables
2026	- Reduced emissions arising from beginning to implement the emission reduction initiatives listed in Table 6 above, notably: - full year impact of BEAM no longer using gas - majority of reductions to emissions due to changes in shared office space and shared use facilities made - partial year benefits of in-year switch to e-vehicles and HVO for waste management operations - initial in-year benefits of other interventions listed in Table 6 - combined impact on emissions <i>estimated at around a 275 tonne reduction</i> - Publication of the carbon sequestration value of the council's trees and grasslands, based on refining the current estimated range of 750 to 1,200 tonnes using a robust, respected methodology - Exploration of costs/benefits and viability of the possible options listed in Table 8, that is, reducing and/or switching away from carbon-emitting fossil fuel use in various situations - Exploration of costs/benefits and viability of the possible options listed in Table 9 to sequester and/or offset (including insetting) more carbon - Publication of the council's first ever end of year actual <i>net</i> carbon emissions figure and projected net position at 2030
2027	- Additional reduction in emissions due to, notably: - full impact of the changes in shared office space and shared use facilities - full year benefits of switching to e-vehicles and HVO for waste management operations - reduction arising from a switch to carbon free electricity by the council's contractor managing Grange Paddocks and Hartham leisure centres - full benefits of other interventions listed in Table 6 - combined impact on emissions <i>estimated at around a 766 tonne reduction</i> in addition to the reduction in 2026 - Publication of the year end net carbon emissions figure and projected net position at 2030 together with a plan for reducing the projected figure to zero by 2030
2028	Publication of the year end net carbon emissions figure reflecting the impact of any interventions to reduce and/or offset made in the previous year
2029	Publication of a revised projected net position at 2030 together with a plan for reducing the projected figure to zero by 2030
2030	Achievement of a robust and sustainable net zero carbon emissions position