East Herts Council Carbon Emissions: 2023

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1.0 Summary

East Herts Council's carbon emissions figure for 2023 is 2,436 tonnes of CO_2 equivalent (CO_2e).

Transparent and open reporting

- This report is based on transparent and open reporting of the council's emissions:
    - where a reduction is solely due to a building being *temporarily* closed or partially closed, we have not counted this as a reduction because, obviously, this could not be sustained once it reopened and so any reported reduction would, at best, be confusing. Instead, we have used the figure for the emissions the building in question used to produce when it was fully open
    - when a building has reopened, we have resumed using the building's actual emissions figure
    - the figures quoted in this report have been produced on this basis.

Emissions are reducing but not as quickly as hoped

- The 2023 figure represents a 17% reduction in CO_2e since the council made its Climate Change Declaration in 2019 which set the council on a course to achieve net zero carbon by 2030.
- The 2023 figure is less than the position aspired to in the Climate Change Strategy of a 40% reduction by this time, although the Strategy was predicated on the council beginning to offset its emissions, something for which we, in common with all councils, have yet to determine a robust methodology.

The council's redesigned leisure centres are significantly more energy efficient than before refurbishment, with the overall carbon emissions from leisure centres decreasing despite the new Grange Paddocks Leisure Centre being more than twice as big as before

- The overall carbon emissions from gas and electricity use at the council leisure centres and swimming pools shared with schools has decreased in 2023 by 38 tonnes as compared with when all the leisure centres were fully open.
- On the basis of CO_2e *per* m^2, the redesigns of both Hartham and Grange Paddocks Leisure Centres have resulted in them becoming significantly more energy efficient.
- Hartham Leisure Centre's emissions per m^2 have more than halved; a reduction of 51% per m^2. Hartham Leisure Centre's footprint remained unchanged but its emissions from gas and electricity use combined dropped by 92 tonnes
- Grange Paddocks Leisure Centre's emissions per m^2 have reduced by 22% per m^2. That said, the leisure centre's footprint has more than doubled – an 135.5% increase – so despite its greater energy efficiency, its overall emissions from gas and electricity combined rose by 20.6%, that is, 93 tonnes of carbon.

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

- In January 2023, the council replaced its six diesel vans with five e-cars. These are powered through the council's no-carbon electricity tariff and have contributed to a 5 tonne reduction in emissions in 2023. The full year impact the e-cars' introduction will be reflected in the 2024 emissions figure.
- The vehicles used by the council's grounds maintenance and, most notably, waste management contractors remain a large source of carbon emissions. Negotiations, now at an advanced stage, should see the inclusion of some smaller electric vehicles as part of the new waste management contract due to come into effect in 2025/26.

The council has identified a series of options for further reducing or avoiding carbon emissions

- The council is looking to:
    - discuss with the leisure management contractor options to further reduce emissions from Hartham and Grange Paddocks leisure centres
    - switch to a greater use of low emission vehicles as part of the council's new joint waste management contract with North Herts Council, which is set to commence in 2025/26
    - explore how to reduce gas use in the council's directly managed buildings
    - make more of the council's business journeys using the e-fleet rather than individual officers' fossil-fuelled cars
    - reduce staffing commuting by fossil-fuelled vehicles
    - switch to green, non-carbon electricity tariffs at the council's buildings not currently on such tariffs
    - encourage the council's contractors to switch to non-carbon electricity tariffs.

Work has commenced on robustly assessing the council's offsetting figure and route map

- Work has started on better understanding what the council can count towards offsetting its emissions. Initial work is focussing on:
    - the extent of carbon capture by the existing trees on the council's land
    - the benefit, over time, of additional tree-planting
    - quantifying the offsetting potential of the council's investment in domestic energy efficiency and retrofit measures and decarbonisation of community buildings.

2.0 Approach to achieving net zero carbon

2.1 The council's Climate Change Strategy 2022-2026 makes clear the council's 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 advocated[1] *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 avoid and reduce our emissions
- section 5 presents our latest thinking on further avoiding and reducing emissions so as to reduce them to a minimum by 2027, including our latest forecast on what level of emissions we will need to offset from 2027
- section 6 explains our emerging work understanding how best to offset our residual carbon emissions to achieve a net zero carbon position by 2030.

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

Methodology for calculating the council's carbon emissions

3.1 The council has used the Local Government Association (LGA) / Local Partnerships model[2] for calculating the CO_2e 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 2022/23

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 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 Operations team • SLM Leisure Contractor • Leventhorpe School for Leventhorpe pool
Mileage of council's own fleet	Mileage	• East Herts Council Finance team
Source 2 emissions		

[2] https://localpartnerships.gov.uk/resources/greenhouse-gas-accounting-tool/

Electricity used in all the buildings the council operates (including Hertford Theatre), excluding electricity provided on no-carbon tariffs	Kilowatt hours of energy used	• East Herts Council Property team
Source 3 emissions		
East Herts Council staff business mileage	Mileage	• East Herts Council HR team
East Herts Council staff commuting mileage	Mileage	• East Herts Council Housing and Health and HR teams
Source 3 emissions from outsourced services		
Fuel used by the council's waste and grounds maintenance contractors	Litres of fuel	• Glendale Contractor Urbaser Waste Contractor

3.3 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 provided, in the units listed in the above table, to CO_2e by using the government's conversion figures.

3.4 Previously, the council sought to apply the national conversion figures directly, outside of an established model. Using the LGA/Local Partnership model has eased the process of applying the conversion factors while enabling a consistency with previous years.

3.0 East Herts Council's 2023 emissions figures and reasons for changes over time

4.1 In 2023, that is, the financial year 2022/23, East Herts Council's greenhouse gas emissions total was 2,436 tonnes.

4.2 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.

4.3 In looking at the time series data, it has become apparent that, in common with several other authorities, the council found a dip in emissions for the financial year ending March 2021 as a result of the various Covid lockdowns. In East Herts, however, this dip was amplified by the further (part) closures of Grange Paddocks and Hartham Leisure Centres due to redevelopment and refurbishment. It may be considered confusing and perhaps unhelpful to report emission drops relating to leisure centre closures when it is known that these closures were only temporary.

4.4 To help minimise any confusion, now that the leisure centres have reopened, a modelled estimate of the council's emissions in 2022 has been constructed using emissions figures for the leisure centres when they were previously fully open prior to their works and Covid-related closures. Thus, the modelled figures only include *permanent* emissions changes arising from the leisure centre works. The 2023 figure for the leisure centres is the actual emissions figures now that the leisure centres are open.

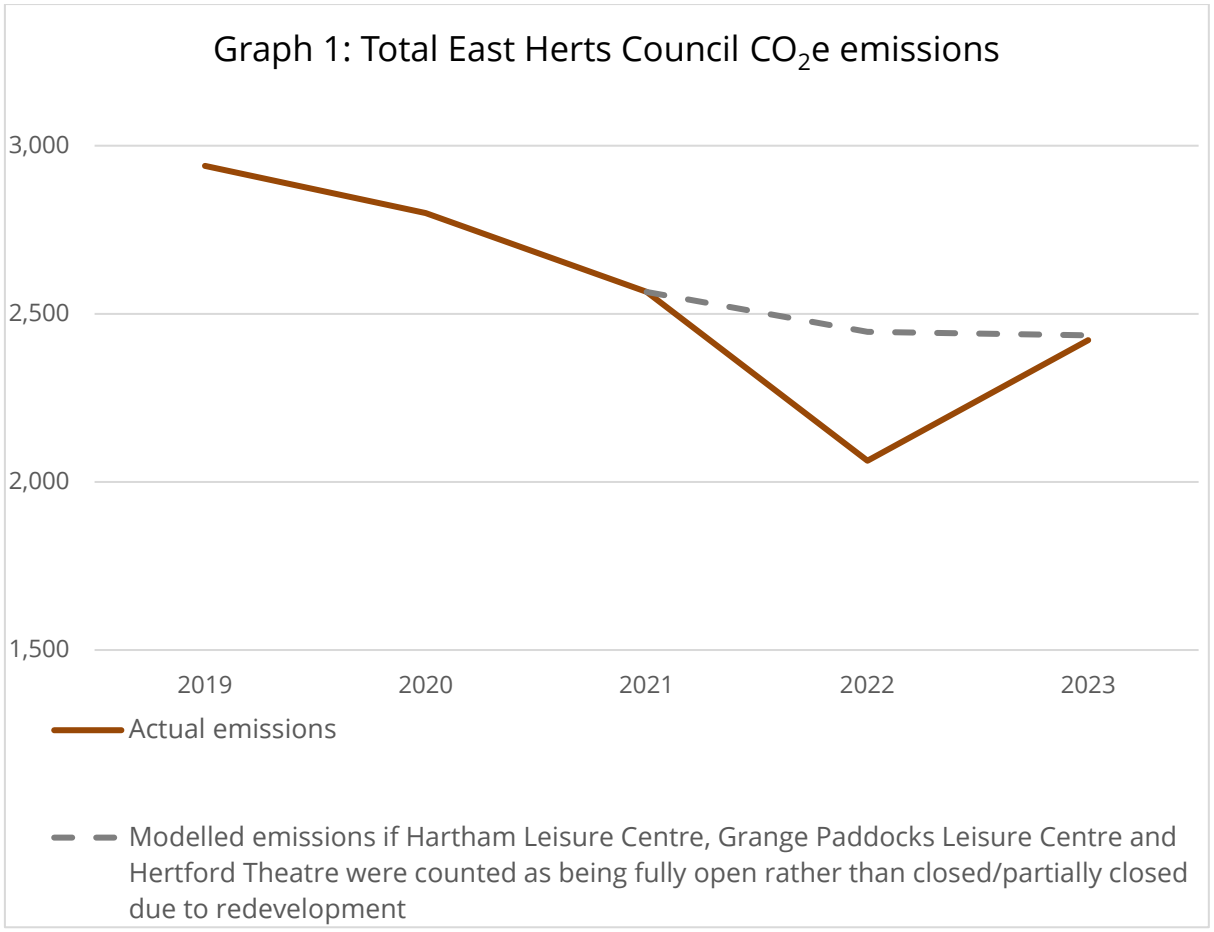
4.5 Akin to reflecting leisure centre closures, we have sought to exclude emissions changes relating to the temporary closure of Hertford Theatre due to its redevelopment and Covid-related closures. Of particular note, during 2022/23, Hertford Theatre was closed to the public for refurbishment and extension. So, to avoid any future problems with the integrity of the data arising from any emissions reductions being solely attributable to the temporary closure of the building, for 2023, two emissions figures have been produced, (a) actual emissions which include reduced fuel use at Hertford Theatre during its closure and (b) a higher modelled figure based on the theatre operating normally as in previously. As we know the theatre will open again during 2024/25, we wish to use the higher modelled figure for both the years ending March 2023 and March 2024 before resuming use of the actual emissions arising from the theatre.

4.6 The actual and modelled figures since 2019 are given in Table 2. Given the date of the declaration, the 2019 figure, that is, emissions for 2018/19, has been taken as the baseline.

Table 2: East Herts Council's emissions reductions against the 2019 baseline

Financial year	ACTUAL annual recorded emissions – in tonnes	MODELLED emissions without reduction due solely to (partial) closure of council buildings for refurbishment – in tonnes	TARGET % reduction since 2019 baseline	% reduction from 2019 baseline in ACTUAL recorded emissions	% reduction from 2019 baseline in MODELLED emissions
BASELINE 2019	**2,940**	**2,940**			
2020	2,800	2,800	5%	5%	5%
2021	2,565	2,565	18%	13%	13%
2022	2,063	2,446	30%	30%	17%
2023	2,422	2,436	40%	18%	17%

4.7 Graph 1 displays the same information in graphical form. It can be seen that even if the (partial) closures of Hartham Leisure Centre, Grange Paddocks Leisure Centre and Hertford Centre are not counted towards the ongoing reductions, in line with our transparent and open approach, the council's CO_2e emissions are falling, albeit not as quickly as aspired to in the Climate Change Strategy.



4.8 In order to better understand the change in emissions between 2022 and 2023, Table 3 below uses the modelled emissions figures for each year. We believe they arguably give a more accurate picture as they do not include *temporary* reductions due to time-limited (partial) closures of buildings.

4.9 Table 3 lists the council's emissions over the last two years by source, along with a commentary on the differences.

Table 3: Functions contributing to the East Herts Council's emissions total (modelled emissions figures)

Function category	Tonnes of CO_2e in 2022	Tonnes of CO_2e in 2023	Change since 2022 – tonnes	Commentary
Gas use – council buildings including Hertford Theatre but *excluding leisure centres*	155	146	-9	Reduction from ongoing efforts across the council's estate to reduce gas usage.
Gas use – leisure centres. Note: these are reported separately as they are managed by a third party of the council's behalf	966	928	-38	**Hartham Leisure Centre refurbishment** • Despite no change the size of the leisure centre, energy efficiency improvements during refurbishment have led to a reduction of 65 tonnes of CO_2e from gas use. • The emissions per m^2 from gas use have dropped from 142kg to 111kg. **Grange Paddocks Leisure Centre redevelopment** • The new leisure centre more than doubled in size from 2,158m^2 to 5,083m^2 – a 135.5% increase in floor area. • There was only a 14.9% increase in emissions from gas use – an extra 52 tonnes of CO_2e emissions. • The leisure centre's emissions per m^2 from gas used have halved from 163kg to 80kg. An average reduction of 9 tonnes of CO_2e at each of the three shared use swimming pools arising from ongoing efforts to reduce gas consumption.
Electricity use – council buildings including Hertford Theatre but *excluding leisure centres*	19	13	-6	Continued improvements, including remaining non-LED lighting swapped to LEDs.
Electricity use – leisure centres. Note: these are reported	234	245	+11	**Hartham Leisure Centre refurbishment** • Despite no change the size of the leisure centre, energy efficiency improvements during refurbishment have led to a reduction of 27 tonnes of CO_2e from electricity use.

separately as they are managed by a third party of the council's behalf				• The emissions per m^2 from electricity use have dropped from 41kg to 28kg. **Grange Paddocks Leisure Centre redevelopment** • Despite a 135.5% increase is floor space, there was only a 41.2% increase in emissions from electricity use, giving an extra 40 tonnes of CO_2e emissions. • The leisure centre's emissions per m^2 from electricity use have reduced significantly from 45kg to 27kg. There has been a modest 2 tonne increase in CO_2e emissions across the three shared use swimming.
Council own vehicle fleet	13	8	-5	The council replaced its six diesel vans with e-cars in January 2023 which are primarily fuelled using the council's carbon free electricity tariff.
Staff business travel	26	29	+3	This reflects the full resumption of visits after the pandemic. Officers are now being encouraged to use the council's e-fleet for business journeys which will see emissions from this source reducing in future years.
Staff commuting	156	160	+4	This reflects the post-pandemic position as well as a slight change in methodology whereby individual officers' cars and journeys have been recorded rather than modelled based on sampling as in previous years. It is to be expected that the proportion of staff with electric or hybrid cars will continue to increase from the 5% in 2023, thus reducing emissions from this source.
Emissions arising from home working	22	24	+2	This is formulaic calculation within the LGA/Local Partnerships model based on other inputs. No appreciable change.
Waste management and grounds maintenance contractors' fleet and machinery	848	884	+36	This increase has arisen from the council's waste management contractors hiring/leasing slightly different waste collection vehicles in 2023. Of note, the new waste management which will come into operation in 2025/26 has prioritised the inclusion of electric vehicles for road sweeping and lighter duties and so emissions from this source should begin to reduce.
TOTAL*	2,440	2,436	-4**	

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

** Summation of rounded differences 2 tonnes less than the actual total difference. This does not detract from the total difference which is 4 tonnes of CO_2e less in 2023 as compared with 2022.

4.10 Table 4 summarises the functions contributing the council's overall emissions in 2023.

Table 4: Functions contributing to the East Herts Council's emissions total in 2023

Function category	**Tonnes of CO_2e**	**% of East Herts Council's total emissions**
Leisure centres	1,173	48%
Waste and grounds maintenance contractors	884	36%
Council's transport-related emissions – own fleet, staff business travel, staff commuting	197	8%
Council's directly managed buildings and assets and home working emissions	183	8%
Total*	2,436	100%

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

4.0 Future priorities for avoiding and reducing emissions

5.1 Our Climate Change Strategy 2022 – 2026 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 reality is that as much as 75% of the council's emissions total is, in effect, 'locked in' for the foreseeable future given the refurbished/redeveloped leisure centres' reliance on, albeit very efficient, gas boilers and the practicalities of transitioning to non-fossil fuelled alternatives to large, diesel-powered waste disposal vehicles. That said, technological advancement in renewal energy sources and energy efficiency is increasing at an extraordinary rate and we have already identified a series of potential opportunities for continuing our downward emissions trajectory since 2019. While it is to be expected that new options will continue to emerge, the current options for emissions reduction identified are discussed in Table 5.

Table 5: Approach to further reducing or avoiding the council's carbon emissions

Options to reduce current emissions / avoid future emissions	**Current approach**
Discuss with the council's leisure management contractor options to further reduce emissions from Hartham and Grange Paddocks leisure centres.	The council will investigate with the contractor which operates our leisure centres the feasibility of: • reducing both electricity and gas use at the buildings • using the gas-operated combined heat and power unit at Grange Paddocks leisure centre in such a way that maintains the economic benefits of its use while, if at all possible, reducing the consumption of gas • extending onsite renewable electricity production • switching to a green, non-carbon electricity tariff • using gas generated through anaerobically digested organic matter which may have lower net carbon emissions that natural gas

	• onsite carbon emissions offsetting.
Switch to a greater use of low emission vehicles as part of the council's new joint waste management contract with North Herts Council, which is set to commence in 2025/26.	Contract negotiations are well underway. Current, prudent estimates suggest a 3% reduction in net emissions, that is, 26 tonnes. This will be kept under review.
Explore how to reduce gas use in the council's directly managed buildings.	In 2022/23, gas use at Wallfields produced 80 tonnes of CO_2. The council has conducted a detailed feasibility study into switching from gas heating at its main offices at Wallfields, Hertford. The study has found, however, that a switch from gas power to air source heat pumps is prohibitively expensive even with financial support from the government's Public Sector Decarbonisation Programme. This is the result of two important considerations, (a) the increased load on the national grid would be such that a new electricity sub-station would need to be installed and (b) the costs associated with air source heat pumps and associated works to the building are still very high compared with other options. The council is currently exploring several options for Wallfields: • maximising the usable lifespan of the existing, out-dated gas boiler in case more generous funding becomes available and/or the cost of air source heat pumps and associated works reduce making the option economically viable • replacing the gas boiler with a high energy efficient gas boiler thus reducing, though not eliminating, continued emissions • investigating the potential and value of using gas generated through anaerobically digested organic matter which may have lower net carbon emissions that natural gas

	• keeping the air source heat pump feasibility study under review to check if/when this option becomes (more) economically viable.
Switch the council's business journeys to the e-fleet rather than individual officers' fossil-fuelled cars.	Since the switch in the council's fleet from diesel vans to e-cars, more business journeys have swapped to these vehicles. Work is continuing to encourage and incentivise use of the e-fleet by officers.
Reduce staff commuting by fossil-fuelled vehicles.	The hybrid office/home working arrangements have seen emissions due to commuting drop from pre-pandemic levels. In addition, we are seeing more officers replacing their own cars with electric and/or hybrid vehicles. This will be monitored.
Switch away from the approximately 6% of the council's electricity use still not on no-carbon tariffs.	Options are to be explored.
Encourage contractors to switch to non-carbon electricity tariffs.	Options are to be explored.

5.0 Offsetting emissions

6.1 The council has recognised for some time that to achieve a net zero carbon position, some remaining emissions will need to be offset by carbon sequestration or other measures.

6.2 Unlike when calculating the council's emissions, no widely accepted model or toolkit yet exists to calculate how much carbon offsets the council can legitimately count as a result of its activities and interventions. The council is taking a leading role to promote dialogue across the public sector in Hertfordshire, notably through the Hertfordshire Climate Change and Sustainability Partnership (HCCSP), on developing a tool for accurately measuring carbon offsets, perhaps by working with Local Partnerships, the authors of the carbon accounting model used by the council.

6.3 In common with councils and other public sector bodies up-and-down the country, we are grappling with how efficiently, honestly and cost-effectively to offset the emissions we foresee remaining once all efforts to reduce existing emissions from our activities have been instigated. Of course, we recognise that green technologies are advancing at pace so our efforts to reduce our actual emissions, without offsetting, to zero will never stop. That said, we anticipate minimising our emissions by 2027 while at the same time laying out a robust and achievable plan to attain a net zero carbon position by 2030.

6.4 In this section of the report, we would like to explain our current thinking on and investigations into offsetting. This is very much 'work in progress'. We welcome views and know that we will need to refine our approach over the coming few years.

Offsetting via carbon sequestration through trees and biodiversity on our land

6.5 Carbon sequestration is the process of capturing, securing and storing carbon dioxide from the atmosphere. The aim is to make this carbon stable by keeping it in solid or dissolved forms so that it doesn't cause the atmosphere to warm up. Biological carbon sequestration involves storing carbon dioxide in vegetation, such as woodlands and grasslands.

6.6 East Hertfordshire has a rich and diverse green environment, with many large parks and green areas directly managed by the council. Our ownership of the wonderful green spaces provides opportunities for carbon sequestration by the trees and other flora on that land.

6.7 Currently, we are reviewing the complexities of measuring how much carbon woodlands can sequester as different trees and locations have different sequestration characteristics and there isn't an easy-to-use guide or model that we can turn to. Estimates of the carbon capture value of trees often look at their whole lifetime. For example, North Northamptonshire Council talks of a tree typically absorbing one tonne of carbon dioxide over its lifetime[3], while Staffordshire County Council's research[4] indicates that it takes approximately 20-25 years of growth for a tree to be able to sequester carbon.

6.8 We are keen to understand the carbon capture value of our existing trees each year, given that we calculate emissions on an annual basis, so that we can assess what contribution the council's trees are making to carbon capture.

6.9 We have looked at the findings from several studies and assessments. These are summarised below.

Table 6: Findings from studies into trees' carbon sequestration characteristics

Study	Reported annual carbon capture per tree
"Carbon Sequestration by Trees in Urban Parks in the United Kingdom" by McMorrow et al. (2009)	Six to 25 kilograms of carbon per year, depending on species and environmental factors.
"Assessment of Carbon Sequestration Potential in UK Urban Forests: A Case Study in Manchester" by Rahman et al. (2015)	Urban trees in Manchester could sequester between five and 25 kilograms of carbon per tree per year, depending on factors such as species, age and management practices.
Nowak, D. J., & Crane, D. E. (2002). Carbon storage and sequestration by urban trees in the USA. Environmental Science and Pollution, 116(3)	An urban tree in the United States sequesters an average of 21 kilograms of carbon dioxide annually.
Viessman, a company traditionally providing gas powered heating product but not transition in green technologies[5]	A typical tree can absorb around 21 kilograms of CO_2 per year, although they point out that this figure is only achieved when the tree is

[3] https://www.northnorthants.gov.uk/climate/carbon-management-plan/carbon-sequestration-biodiversity-and-offsetting

[4] https://moderngov.staffordshire.gov.uk/documents/s186306/Appendix%201%20Climate%20Change%20Working%20Group%20report%20Carbon%20Sequestration%20and%20Woodland%20Creation.pdf

[5] https://www.viessmann.co.uk/en/heating-advice/boilers/how-much-co2-does-tree-absorb.html

	fully grown; saplings will absorb significantly less than this.

6.10 For the sole purpose of an initial exploration of the potential amount of carbon being sequestered by the trees on the council's land and within the council's management, a simple average of the four studies above (using the midpoint where a range is reported) gives a figure of 18kg sequestered per tree per year.

6.11 We estimate that at the end of 2022/23, there were some 94,500 on our land. For modelling purposes, it has been assumed that some 20% of these trees are immature and so not capturing 18kg of carbon per year. So as to model as prudent a sequestration figure as possible, trees under 20 years of age have been considered only capable of, on average, capturing one half of the carbon a mature tree can. Using these assumptions, the following formula is indicative of the carbon capture being performed each year by the council's stock of trees.

Table 7: Indicative modelling of annual sequestration by the council's tree *for illustrative purposes only*

East Herts Council's total number of trees	**94,500**
Of which	
% which are *mature*	80%
% which are *immature*	20%
Giving	
Number of *mature* trees able to capture 18kg of CO_2 per year	75,600
Number of *immature* trees able to capture 9kg of CO_2 per year	18,900
Total annual carbon capture by *mature* trees – tonnes	1,361
Total annual carbon capture by *immature* trees – tonnes	170
TOTAL annual carbon capture by East Herts Council's trees – tonnes, rounded	**1,521 tonnes**

6.12 This illustration of *potential* annual carbon capture by East Herts Council's trees is indicative and, in addition, no additional sequestration relating to grasslands has been estimated. We fully appreciate that it will be incumbent on the council in the coming few years to:

- satisfy itself of the legitimacy of including established woodlands and grasslands in its offsetting calculation
- establish a verifiable methodology for calculating the sequestration amounts.

Offsetting by facilitating others to reduce their direct emissions

6.13 When the council directly reduces its own emissions or those of its contracts with to provide its services, this is counted in our own emissions total. If, on the other hand, we facilitate others to reduce their emissions, this could count as an offsetting measure. Sharpe Pritchard Legal Partners, in their paper on offsetting options for local authorities, make the exact point that where investment by the council doesn't directly lead to the council reducing (or avoiding) carbon emissions, this can contribute to the council's offsetting figure rather than the council's own emissions total.

6.14 We are currently reviewing the number and type of grants for energy efficiency works that we have funded or part-funded since the baseline year of 2019. We then wish to explore further two key factors associated with these grants which, when taken together, could legitimately count towards our offsetting figure. These factors are:

- to what extent have the works to properties led to reductions in energy use and/or switches to less carbon emitting forms of energy? This would determine the amount of carbon emissions directly reduced
- how much of this reduction could the council legitimately count as an offset against its own emissions totals? For example, if the works were fully funded by a grant from the council, could the council count the entire emissions reduction? Alternatively, if the council part-funded the works, could the council count all the carbon reductions on the basis that its contribution levered in the additional resources and thus without its input the energy efficiency works wouldn't have happened or could the council only count an amount of the carbon reduction, pro rata to its contribution to the overall costs of the works?

6.15 In addition, in 2024/25 the council is funding, entirely or in part, energy efficiency works to various community buildings. The same questions as posed above regarding domestic improvements apply.

6.16 As Sharpe Pritchard Legal Partners have already raised the example of council investment counting towards offsetting, we are confident that robust answers to our questions are available. During the coming year, we will focus on

assessing our grant programmes and seeking advice of how to determine legitimate and robust offsetting amounts from our investment.

Offsetting through carbon avoidance measures

6.19 Carbon avoidance relates to preventing the creation of carbon emissions in the first place by avoiding activities that would produce them. Within the context of offsetting measures that could be taken by the council, carbon avoidance could cover:

- avoiding a reduction in tree numbers. Reductions are not anticipated and indeed the invests time and financial resources in maintaining the health of our trees
- assisting residents, businesses and community organisations to reduce their draw on the national electricity grid, either by reducing their electricity use or generating their own electricity, say, from solar panels. This counts as carbon avoidance as it would obviate emissions being created by the electricity producer as it would need to generate less electricity and thus burn a lower amount of fossil fuels.

6.20 Just as discussed above regarding how to legitimately account for other parties' carbon reductions, the extent to which the council can legitimately offset its emissions via investment to avoid electricity production from fossil fuels, and thus the associated emissions, will need to be fully explored over the coming few years.

Offsetting by buying carbon credits

6.21 There is an increasing propensity for organisations to look to offset their carbon footprints by purchasing carbon credits from other parties who operate CO_2 absorption projects of various kinds.

6.22 This option is available to the council. It is, however, arguably a less attractive means of offsetting the council's emission for several reasons including:

- such schemes are very unlikely to be operated within East Herts, Hertfordshire or, often, even the United Kingdom. Thereby, local people are not directly benefitting, unlike in the case of the council's investment in local residents', businesses' or community organisations' carbon reduction or avoidance or through the benefits of the council planting more trees in the district

- carbon credit schemes operating across the globe can be difficult to verify and audit. While increasing safeguards on the veracity of carbon credit trading are being put in place, both the carbon credit market and the public sector's knowledge and expertise in this market are still in their relative infancies. This brings into question how robust such offsetting is
- the carbon credit market is rapidly developing and there is a danger that the council may not be able to readily achieve best value.

6.23 Over the coming few years, the council will work with HCCSP, the East of England Local Government Association and national bodies to develop its understanding of the carbon credit market. That said, at present, the purchase of credits on the open market would probably be the last resort on our route to a net zero carbon position.

Offsetting summary

6.24 As discussed earlier in this report, the council will need to offset its residual carbon emissions when we have reduced them as much as practicable. We are very keen to stress that our work on calculating offsetting figures is, at this stage, only illustrative. We fully expect our initial work to change once our understanding of offsetting develops further based on expert guidance and advice that we will seek over the coming few years.