[title page]

[large text] Pathway to Net Zero

[sub text] How we intend to:

reduce the Council's **direct** carbon emissions to net zero by 2036, with milestone steps of a 50% reduction by 2025, and a 80% reduction by 2030;

reduce the Council's **indirect** carbon emissions to net zero by 2040

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Contents

Executive Summary

This document sets out East Cambridgeshire District Council's 'pathway to net zero'.

The Council has previously set itself the target of becoming net zero for direct emissions by 2036, and a truly net zero council (including indirect emissions) by 2040.

Such targets are achievable, based on science and affordable. Indeed, progressing towards such targets offer considerable opportunity for other benefits including financial savings, improved air quality and improved staff well-being.

Our targets, and how we will get there, are transparent and based on internationally recognised reporting methods. We will not 'buy' our way to net zero through offsetting, nor will we invest in measures which are not value for money or don't deliver wider gains for people or nature.

By around 2030/31, we intend to have virtually eliminated direct burning of fossil fuels such as gas and diesel, thereby virtually eliminating what are known as scope 1 emissions. We will do this by investing in electric vehicles and shifting away from gas as our heating source. These measures will also improve local air quality.

We will progressively invest in electricity-based solutions (for our buildings and vehicles). This will be aligned to the decarbonisation of the grid (due between 2030-35), meaning our emissions arising from electricity use (known as scope 2 emissions) will be virtually eliminated by 2035. Where possible, we will also continue to invest in renewables, building on our successful deployment of large-scale solar panels on The Hive leisure centre and on our E-Space North business unit, which are presently saving over £25,000 a year in electricity costs.

We acknowledge that a considerable source of emissions (known as scope 3 emissions) come from the goods and services we buy, and the new buildings we construct. We are working hard to accurately report these figures and bring them down. These will be more challenging to reduce, but we believe through improved procurement processes and efficient use of goods, we can bring such emissions down to close to zero by 2040.

We are also going to contact our pension fund provider, to request that as far as practical and affordable the funds that they invest in are aligned to a decarbonising world.

Since declaring a climate emergency in 2019 we have made some considerable progress to date, such as more than halving our scope 1 (fossil fuel) emissions compared with our 2018/19 baseline and nearly halved of our scope 2 (electricity) emissions. But we know we have much further to go and this report sets out our plan to do so.

1. The context for our Pathway to Net Zero

Council commitment

1.1. In June 2024, East Cambridgeshire District Council reaffirmed its commitments to reducing its own carbon emissions, as part of its Climate and Nature Strategy 2024-28. The targets, using a 2018/19 baseline year, are:

- Reduce our direct (scope 1) and indirect (scope 2) emissions by 50% by 2025; 80% by 2030; and 100% by 2036.
- Become a fully net zero council by 2040, by reducing our direct and all indirect (scope 1, 2 and 3) emissions by 100% (on a net basis).

1.2. From 2020 onwards, the council has monitored its carbon footprint annually, as well as put in place a series of annual actions with the aim of reducing its emissions.

1.3. However, in June 2025, the council also committed to publishing by the end of 2025 a more detailed action plan setting out how we intended to meet the above targets. This ***Pathway to Net Zero*** document is that action plan.

Our current emissions

1.4. Greenhouse gas emissions are generally reported under three main sources, or internationally defined 'scopes':

- **Scope 1** emissions are typically where fossil fuels (or other carbon releasing fuels) are consumed directly by the user. For example, diesel or petrol fuel in a vehicle, or gas and oil to power a heating system. Some other emissions also arise not from burning fuel but by releasing certain gases, such as gases escaping from a fridge or air-conditioning unit. Scope 1 is referred to as 'direct emissions', because you are directly causing the emissions to occur at the point of consumption.
- **Scope 2** emissions are normally associated with electricity use. Electricity is referred to as an 'indirect emission' because the process of using electricity doesn't directly cause emissions to occur at the location the electricity is being used. For example, turning a kettle on does not result in greenhouse gas emissions from your kettle, but greenhouse gases can be released somewhere else in the country depending on how that electricity was generated (e.g. a gas fired power station).
- **Scope 3** emissions are also indirect emissions and are complex to calculate. They generally arise from goods and services bought, but don't result in emissions directly from using them. However, they do have emissions arising from the manufacturing and distribution of such items. For example, if you want to build a new house and purchase a crate of bricks to do so, those bricks do not have any direct emissions when in use as a built wall. However, the manufacturing of those bricks, and distributing them to where you wanted them, will have resulted in considerable emissions. As the user of those bricks, it should be yourself that reports, or accounts for, those emissions. However, it is extremely hard to find out, never mind add up, all the emissions arising from everything that someone (or a business) buys and uses. Scope 3 emissions, therefore, generally go unreported. In local government, it is estimated that

perhaps 80% of an average local council's emissions are unreported scope 3 emissions.

1.5. Our baseline emissions were established for the year 2018/19, as follows, though it should be cautioned that we significantly under-reported scope 3 emissions at that time, due to the difficulties in calculating such emissions:

ECDC emissions from own operations, 2018/19

Emission Type	Emissions in tonnes of CO_2e
Scope 1: Direct Emissions	839
Scope 2: Indirect Emissions (electricity)	164
Scope 3: Other Indirect Emissions (where calculated)	314
Total	1,317

Source: ECDC Climate and Nature Action Plan and Monitoring Report, June 2025

1.6. Each year since, we have reported our latest emissions (or 'carbon footprint') data, as summarised below, though again regularly under-reporting scope 3 emissions:

ECDC emissions from own operations, 2018/19 to 2024/25, in tonnes of CO_2e

Emission Type	18/19	19/20	20/21	21/22	22/23	23/24	24/25
Scope 1: Direct Emissions	839	871	892	843	886	896	350
Scope 2: Indirect Emissions	164	120	95	95	87	81	90
Scope 3: Other Indirect Emissions (where calculated / excl pensions)	314	325	254	266	308	279	1,163
Scope 3: Other Indirect Emissions (pension investments)	N/R	N/R	N/R	N/R	N/R	N/R	1,578
Total	1,317	1,315	1,241	1,204	1,282	1,256	3,182

Source: ECDC Climate and Nature Action Plan and Monitoring Report, June 2025
N/R = Not reported or calculated

1.7. As can be seen from the above, our total emissions struggled to fall significantly in the first six-year period, and then jumped significantly in the seventh (and latest) year.

1.8. However, this increase in the last year needs to be explained carefully.

- On a like-for-like basis, our emissions dropped significantly in 2024/25 compared with previous years, due to the heavy fall in Scope 1 emissions (the fall being due to our switch from diesel fuel to HVO fuel in most of our refuse collection vehicles).
- The reason our total reported emission figure increased in 2024/25 was due to the considerably more accurate reporting of our scope 3 emissions. In previous years, we only collected limited scope 3 data, which meant a substantial under-reporting of our true emissions. For the last reporting year, we made considerably more efforts to calculate our emissions accurately, and (for the first time) took into account emissions arising from the purchase of a much wider

range of goods (such as new vehicles, equipment and the purchase of 42,000 new bins for the new waste collection service) and emissions arising from our pension investments.

- Whilst still not perfect, we are much more confident in the robustness of our reporting for 2024/25, because we are now making reasonable efforts to report as best we can on our scope 3 emissions. We intend to further improve our scope 3 emission data collection, so as to be as accurate as possible, including calculating emissions from new construction projects (such as the embodied energy content of the new Lakeside Bereavement Centre being constructed in 2025/26).

The wider context

1.9. Globally, the vast majority of countries, including the UK, have committed to the United Nations ambitions to reduce emissions by 45% by 2030, compared with 2019 levels, and to net zero by 2050.

1.10. Countries with the highest emissions, including the UK, have the scope to make considerably higher emission cuts than those that already have low emissions. The world's top 20 economies are responsible for about 77% of global greenhouse gas emissions. By contrast, the 45 least developed countries account for only 3% (source: UN Emissions Gap Report 2024)

1.11. The UK has a legally binding target in the Climate Change Act to reduce emissions by 100% by 2050. It also has targets to reduce emissions by 68% (2030) and 77% (2035) compared with the baseline year of 1990.

The opportunity

1.12. Reducing our emissions, as well as attempting to achieve net zero ambitions, is often reported in the press in terms of the costs and inconveniences of doing so. Whilst it is true that the transition to a net zero economy will have some costs and some changes to how things are done, there is also considerable opportunity, including:

- High skilled, well-paid jobs
- Healthy, warm homes, which are cheaper to run and with reduced fuel poverty
- Improved air quality, saving lives and boosting wellbeing
- Natural environment gains, through habitat creation and protection of trees
- National security, by avoiding reliance on unreliable gas and oil imports from Russia and the Middle East and shifting to homegrown, renewable energy.

1.13. The general public also recognise the positive potential on the UK economy. According to the latest public attitudes published by the Dept for Energy Security and Net Zero (DESNZ), July 2025, 49% of people expect the impacts of Net Zero on the UK economy to be positive in the long term (10+ years), whilst only 22% expect the impacts to be negative.

1.14. It is also worth remembering that 'doing nothing' or taking only limited action now does not mean that climate change won't happen or that climate change related costs won't arise. In fact, the opposite. Strong evidence suggests that the cost on our future

generations of too little action now will far outweigh the cost of managing a transition to net zero now.

2. Pathway to Reducing our Direct Emissions (Scope 1 emissions)

Source of our direct (scope 1) emissions

2.1. The vast majority of the Council's scope 1 emissions arise from two operations:

- Fuel used in our ***fleet vehicles***
- Gas consumption to heat our ***buildings***

2.2. Other scope 1 emissions are comparably very small and have historically comprised heating oil and refrigerant gases.

2.3. By ***fleet vehicles***, we mean:

- Large refuse collection vehicles ('bin lorries'), which collect domestic waste from all East Cambridgeshire residents
- Smaller vans or similar, used primarily by the parks and open spaces team or the street cleaning service
- Stray dog collecting van
- Any other vehicle owned by the council which is used to conduct council business

2.4. Fleet vehicles do not include council staff's own cars, even if those cars are used for council business. Those emissions are categorised separately (see scope 3).

2.5. By ***buildings***, we mean:

- Our staff head office, The Grange, Ely
- The Depot, near Littleport (which is primarily our base for the waste collection service)
- All public toilets that we own and manage (six in total)
- E-Space North (Littleport) and E-Space South (Ely)
- Market Place, Ely (not a building as such, but is connected to utilities)
- Wentworth and Earith Travellers site (the council own the sites, and is responsible for water and/or electricity usage)

2.6. We do **not** presently include the following buildings in our calculations (with reasons why set out in brackets):

- The Hive leisure centre

  (*The building is managed and operated by Better UK, therefore any emissions arising from the building should be accounted for by Better UK, not the council*)

- Lake View Bereavement Centre, Mepal

  (*Building not yet operational. Once operational, it will be added to the list of buildings in paragraph 2.5, and any emissions arising will be included in the council's carbon footprint calculations*)

- Palace Green Homes related buildings

  (*Palace Green Homes is a housebuilding company wholly owned by the Council, but managed independent of the Council. Any properties owned, leased or built by Palace Green Homes are not counted in the council's emissions*)

- Other Buildings we own

  (*The Council owns a small portfolio of commercial buildings, but are leased out on a long term basis and the users of such buildings are responsible for consumption of gas, electricity, water and any other utilities*)

2.7. Our latest monitoring report, for the period 2024/25, identifies a total of 352 tonnes of CO_2e arising as direct (scope 1) emissions. This is significant drop from the typical figure of between 800-900 tonnes of CO_2e we reported in the previous six years (and 839 tonnes of CO_2e in our baseline year of 2018/19). The reduction is almost entirely down to switching from standard diesel fuel to hydrotreated vegetable oil (HVO) fuel in our refuse collection vehicles, which we started to do in early 2025.

2.8. We have, therefore, successfully completed the first of our medium-term targets, which was *"By 2025/2026 reduce our direct emissions by 50% (compared with our baseline year of 2018/2019)"*. We presently stand at a 58% reduction.

Summary of how we can further reduce, then eliminate, our Scope 1 direct emissions

2.9. Our pathway to reducing our direct emissions is as follows:

- **We will shift the vast majority of our fleet vehicles to HVO fuel during 2024/25.** This action was largely completed in stages over 2024 and through 2025. By 2025/26 it should reduce the emissions arising from our fleet vehicles by about 80%. It is acknowledged, however, that HVO fuel is not a long-term solution, due to its limited global availability, the risks associated with the supply chain and the risks associated with land use changes from the source materials. The price of HVO fuel can also be volatile, and subject to global pricing issues. From time to time, we may temporarily revert to standard diesel fuel if the cost or availability of HVO fuel is prohibitive.

- Over time, and only at 'end of life' for our fleet vehicles, **we will move our fleet to electric vehicles if such vehicles are available and fit for purpose**. Whilst smaller electric vehicles, such as a maintenance vans, are already readily available on the market (albeit usually with an increased price tag), large vehicles such as refuse collection vehicles are much more limited in availability, and do not presently have the scope to service rural locations such as East Cambridgeshire.

- **By 2030, all our smaller fleet vehicles will be electric but only if such vehicles are available and fit for purpose**. It is possible larger electric vehicles will also be available (and viable) at this time, but this will need monitoring over the period 2025-2030.

- **By 2035, all our fleet vehicles will be electric unless an alternative zero carbon fuel (or near to zero fuel) is commercially available, such as hydrogen, if such vehicles are available and fit for purpose.** We presently think hydrogen is unlikely to be in widespread use in vehicles by 2035, and

therefore for the majority of this report we are assuming predominantly electric vehicles. However, under scope 2 part of this report, we do comment further on the possible option of hydrogen.

- For gas use in our buildings, **we will explore alternatives before investing in any new major gas boiler upgrades with immediate effect**. However, in the short term, we will continue to maintain and undertake repairs of the current gas boilers and heating systems. Replacing working gas boilers before end of reasonable life is counter-productive, because of the relatively high embodied energy cost of replacing such units. In 2024/25, gas use for heating is around 20% of our total direct (scope 1) emissions.
- **We ended all use of heating oil during 2024/25, and we will not return to such a fuel.** Historically, this had comprised approximately 2% of our direct (scope 1) emissions.
- **We accept that if The Hive leisure centre is returned to ECDC to operate** (*it is presently operated by Better, so consequently all emissions arising are currently accounted for by the operator*), **then our gas-based (scope 1) emissions will see a very significant increase**, possibly around 220 tonnes CO_2e per annum, and we acknowledge the high degree of difficulty to reduce that figure without substantial investment.

2.10. **By around 2030/31, we are aiming to have eliminated the considerable majority of our Scope 1 emissions** (our target is at least an 80% reduction compared with 2018/19), with the remaining scope 1 emission being:

- Emissions arising from the use of HVO fuel (Note: HVO fuel is not a 100% carbon neutral fuel and results in some greenhouse gas emissions. However, such emissions are considerably less than diesel or petrol provided the source of the HVO fuel is not virgin plant material and instead is produced from genuinely waste products such as used cooking oils)
- Emissions arising from limited equipment use that requires diesel or petrol to function (e.g. some limited grounds maintenance operations may not be fully electric by around 2030)

2.11. **By 2036, any remaining scope 1 emissions should be negligible, and our target is that they will be offset by direct carbon capture from our own estate**. As such, by 2036, our target for direct (scope 1) emissions is to be net zero.

Risks to not achieving our Scope 1 reduction ambitions

2.12. The following sets out the identified risk for not achieving our direct emission (scope 1) reduction targets:

Risk 1: HVO fuel becomes too expensive, unreliable to source or fails to demonstrate genuine sustainability credentials, meaning we revert back to standard diesel.

Risk 2: Electric vehicles are too expensive, unreliable to source, or unable to function as required, in the timeframe we have set ourselves.

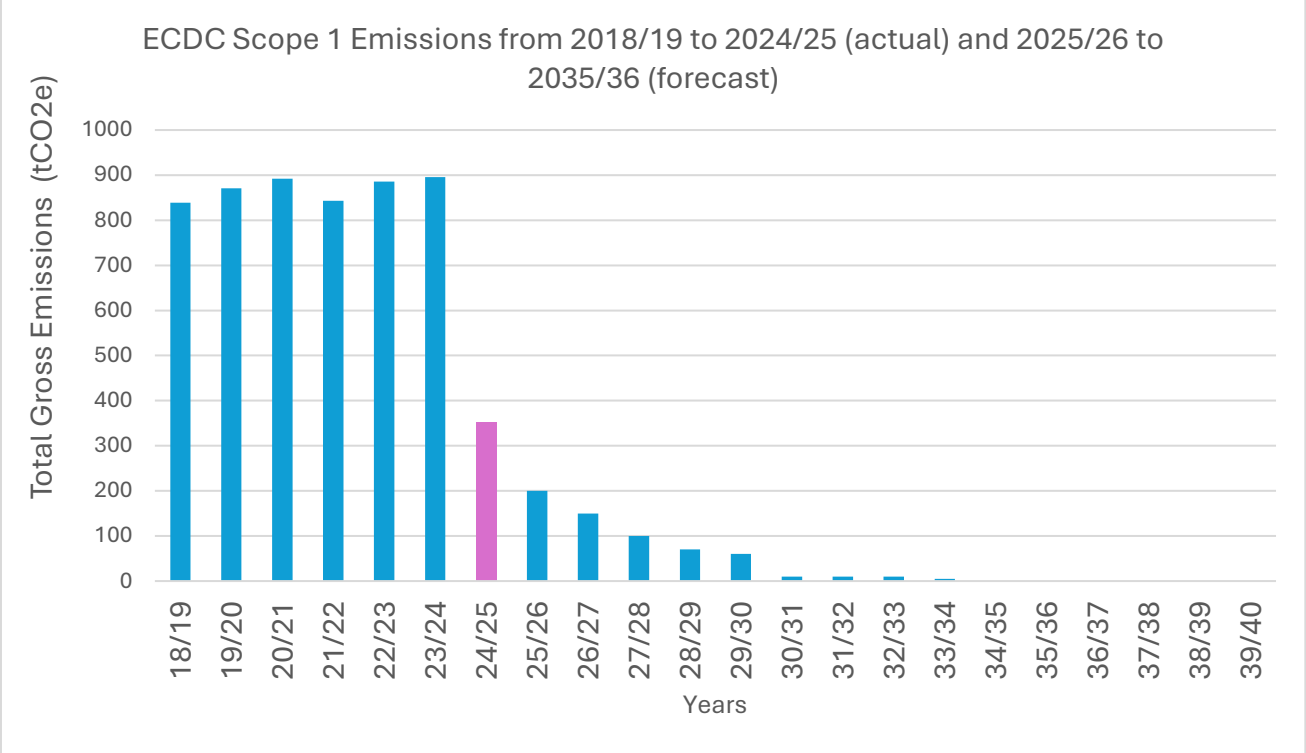
Risk 3: We significantly invest in new gas facilities for heating purposes, thereby 'locking' the council into longer term gas use

Risk 4: Our portfolio of assets expands from the current baseline, with such assets being heavy users of gas or oil, and with no 'quick fix' to move away from gas or oil (for example, The Hive swimming pool returns to council direct operation).

Risk 5: Cold winter(s) result in increased use of gas for heating purposes

Direct emissions (scope 1) forecast reductions

2.13. The graph below illustrates what our scope 1 emissions have been to date, and our forecast (based on the above actions) of how such emissions will fall to net zero by around 2036.



3. Pathway to Reducing our Indirect (Scope 2) Emissions i.e. electricity

Source of our indirect (scope 2) emissions

3.1. Our scope 2 emissions are derived from two sources:

- Electricity used in (or associated with) our ***buildings***
- Electricity used in ***carparks and a limited number of housing streets*** that we are responsible for (mostly street lighting in both cases). Please note that the majority of streetlights are the responsibility of Cambridgeshire County Council, and therefore excluded from this report

3.2. By ***buildings***, we mean those buildings as defined in paragraph 2.5-2.6.

3.3. We do not currently have any electric vehicles. When we do so, the electricity used to charge such vehicles will be included in our scope 2 emissions.

3.4. We do have some solar panels installed. However, the output from these panels are virtually entirely used by our buildings directly (thereby reducing our electricity use from the national grid), with minimal exporting. If we start to export any meaningful amount of electricity from renewable energy sources, we will calculate this as part of our carbon footprint reporting in accordance with the latest internationally agreed protocols.

3.5. We also have some electric vehicle charge points in our three of our public carparks. However, we do not manage or operate those charge points. They are independently operated, with the electricity consumed paid for directly by the operator (and the operator then charging the customer). The charge points are therefore out of scope for this report.

Summary of how we can reduce, then eliminate, our indirect scope 2 emissions

3.6. Counter-intuitive as it may seem, in the medium term we would like to see an increase in electricity use and associated emissions if, by doing so, there is a greater consequential saving to be made in our scope 1 emissions.

3.7. For example, if a vehicle currently consumes standard diesel fuel but is replaced by an electric vehicle, then the council's diesel consumption (scope 1 emissions) would fall but our electricity consumption (scope 2 emissions) would increase. On an emissions net basis, this swapping of the fuel type would have a net reduction in emissions arising overall, because an electric vehicle results in much lower emissions per mile travelled than a diesel vehicle. Over time, as the national grid decarbonises, that ratio improves further, with the hope that electricity will be entirely, or very close to, net zero in the 2030s.

3.8. It is also worth noting that, at the present time, a vehicle consuming HVO fuel has similar, but probably slightly lower, emissions of that arising from an electric vehicle, albeit that is likely to reverse in a few years' time in favour of electric vehicles as the national grid continues to decarbonise.

3.9. The same scenario applies to heating a building. Moving away from gas heating, and replacing it with an efficient electricity-based heating system, will see electricity

consumption (scope 2 emissions) rise but gas usage (scope 1 emissions) decline, with a net decrease in emissions overall.

3.10. In summary, our pathway to reducing our indirect Scope 2 emissions is as follows:

- In the short term (next five years), **we will reduce electricity consumption where prudent to do so** (such as by using energy efficient appliances), and continue to investigate opportunities for self-generated electricity (primarily solar panels on roof tops or above public car parks)
- **We accept the likely increase in scope 2 emissions in the latter stages of the 2020s, and probably into the early 2030s**, especially due to
  - (i) the Lake View Bereavement Centre opening in 2026 (this being a 100% electricity-based crematorium centre). The Centre is likely to increase our scope 2 carbon footprint by around 30 tonnes CO_2e per annum, but there is low confidence in this figure and it depends on the scale of use of the building and the degree of decarbonisation of the national grid in the coming years. The figure of 30 tonnes is based upon the assumption of c2-3 electric cremations a day Monday-Friday, plus general electricity use of the buildings, and based on 2025 national grid conversion factors. The figure of 30 tonnes excludes any electricity consumption from the proposed electric vehicle charge points on site (as demand and use is unknown, and arguably consumption is for off-site use in any event) and also presently assumes no significant solar panel deployment on site (though we are targeting such installation, subject to grant funding).
  - (ii) the Council's fleet vehicles becoming increasingly electric-based (and consequently need charging up).
- **We accept that if The Hive leisure centre is returned to ECDC to operate** (*it is presently operated by Better, so consequently all emissions arising are currently accounted for by the operator*), **then our electricity-based (scope 2) emissions would see a very significant increase**, possibly around 80 tonnes CO_2e per annum, despite the Council recently installing (2025) solar panels on The Hive roof (figure based on recent electricity used by The Hive and using current national grid carbon intensity rations).
- **We will, if transitioning to electric-based fleet vehicles, ensure energy efficient vehicles are purchased to limit electricity demand**. In addition, **we will put in place measures to ensure the charging of such vehicles is done as efficiently as possible**, avoiding peak national grid demand periods, and utilising smart technology.
- **We will continue to investigate the potential for battery storage installation on the council's estate**. Battery storage can take advantage of cheap high volume renewable energy (whether self-created or via the national gird), reducing our net emissions and potentially significantly reducing electricity costs.

3.11. By 2030 or shortly after, it is extremely likely that our scope 2 emissions will have risen considerably, both in total and as a proportion of overall emissions, because of our desire to move away from direct fossil fuel consumption (scope 1) and rapidly increase consumption of electricity (scope 2).

3.12. During the period 2030-2036, electricity consumption will reach new peaks, and probably substantially so, as move entirely away from Scope 1 direct emissions. However, the national grid should continue to decarbonise up to 2030 and beyond, with the current Government targeting a net-zero grid by 2030 (though some consider that overly ambitious, and a mid to late 2030s considered by some to be more realistic). Once fully, or a virtually fully, decarbonised national grid is in place, it means that emissions arising from our electricity use will be close to or at net zero.

3.13. The overall pathway for the council, therefore, for reducing its scope 2 emissions is a somewhat complex one, which is likely to see an increase to start with, probably peaking in the early 2030s (primarily at the point the council shifts substantially to electric vehicles), until sufficient progress is made on decarbonising the grid to offset our significant increase in electricity consumption.

3.14. As a working assumption, it is reasonable to assume the national grid will be decarbonised by 2036, thereby supporting our position of being an overall net zero council for scope 1 and 2 by that date.

3.15. There is the potential for an alternative scenario than the one set out in this chapter, and that is a scenario whereby electricity does not become the dominant low/zero carbon fuel for vehicles and buildings, but instead an alternative fuel is used such as hydrogen. For the purpose of this report, we are largely assuming hydrogen will not dominate (and electricity will). If hydrogen does become the dominant fuel, then our scope 2 emissions would not likely rise so much in the early 2030s, or might not rise at all and be considerably less than they are today. However, our scope 1 emissions might be higher (depending on the carbon intensity of using hydrogen).

Risks to not achieving our Scope 2 reduction ambitions

3.16. The following sets out the identified risk for not achieving our indirect emission (scope 2) reduction targets:

Risk 1: Our estate consumes considerably more electricity than forecast. This will most likely occur if our estate is expanded, and such new estate consumes a high amount of electricity. For example:

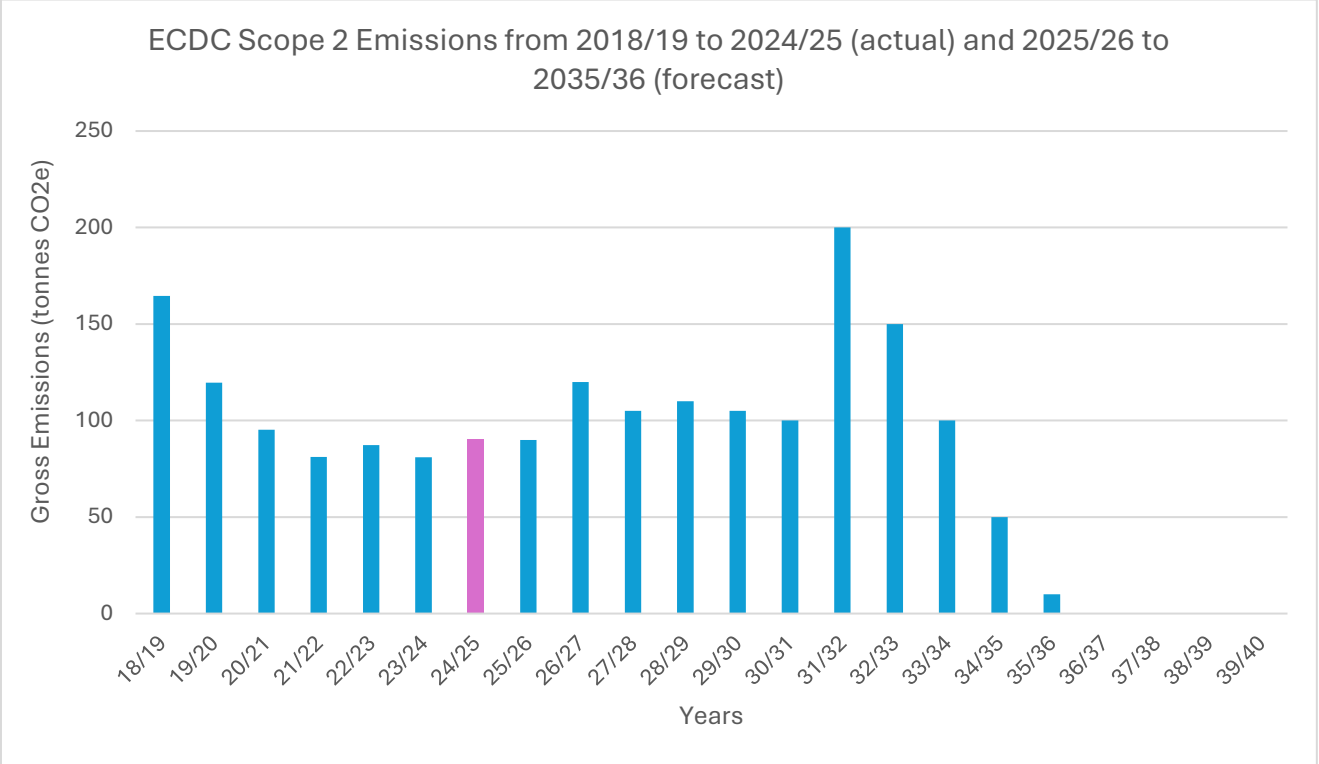
- the Lake View Bereavement Centre results in more than the forecast 30 tonnes CO_2e per annum
- The Hive returns to direct council management
- The council buys or builds new estate

Risk 2: Electric vehicles do not come on stream when forecast and/or consume more electricity than we forecast.

Risk 3: The national grid does not decarbonise as forecast

Indirect emissions (scope 2) forecast reductions

3.17. The graph below illustrates what our scope 2 emissions have been to date, and our forecast (based on the above actions) of how such emissions will fall to net zero by around 2036.


ECDC Scope 2 Emissions from 2018/19 to 2024/25 (actual) and 2025/26 to 2035/36 (forecast)
Gross Emissions (tonnes CO2e)
250
200
150
100
50
0
18/19
19/20
20/21
21/22
22/23
23/24
24/25
25/26
26/27
27/28
28/29
29/30
30/31
31/32
32/33
33/34
34/35
35/36
36/37
37/38
38/39
39/40
Years

4. Pathway to Reducing our Other Indirect Emissions (Scope 3 emissions) (excluding investments)

Source of our other indirect (scope 3) emissions

4.1. Scope 3 emissions are all the indirect greenhouse gas emissions that occur in a council's (or any company's) value chain, both upstream and downstream, excluding those from purchased energy (Scope 2). These "value chain emissions" typically make up the majority of a company's carbon footprint and include emissions from sources not directly owned or controlled by the company, such as purchased goods and services, business travel, employee commuting, and the use and disposal of its products.

4.2. Scope 3 emissions cover a wide range of activities, broken down by the internationally agreed Greenhouse Gas Protocol into 15 categories. Examples include:

- Purchased goods and services: Emissions from the extraction, production, and transportation of the goods and services a company buys.
- Employee commuting: Emissions from employees traveling to and from work.
- Business travel: Emissions from flights, trains, and other travel for business purposes.
- End-of-life treatment of products: Emissions from the disposal or recycling of products.
- Investments: Emissions associated with a company's investments and pension schemes.

4.3. Our scope 3 emissions are, historically, largely unrecorded by the council. Very few of the goods and services that we have bought have had their emissions calculated and recorded. Consequently, the council's overall emissions have been under-reported, including in our baseline year of 2018/19. This is not unusual and is the case for almost all other council's who report their emissions.

4.4. However, in 2025, we started to address this situation and have made considerable progress to calculate our true scope 3 emissions, starting with the reporting year of 2024/25.

4.5. For 2024/25, Scope 3 emissions we have attempted to calculate are:

- Staff Business Travel
- Staff Commuting
- Water
- Material Goods (purchased items, such as paper, bins, vehicles, IT equipment, etc)
- Transmission & Distribution Losses (i.e. the 'lost' electricity in the national grid from the distribution of our electricity from source to our buildings)
- Well-To-Tank (emissions arising from the extraction and distribution of fuel such as diesel and petrol, before it is added to the fuel tank of a vehicle)

4.6. We have also started to make progress on calculating our emissions associated with our investments, specifically our pension investments. Whilst this is officially also a 'scope 3' activity and therefore could fall under this chapter, we are addressing this issue as a separate scope 3 activity in chapter 5.

4.7. There are still a number of activities that we do not presently attempt to calculate their scope 3 emissions. Significant examples include:

- Staff and councillor subsistence – Food, drink and hotel stay
- Staff working from home (i.e. emissions arising from a staff member's home, whilst they are working from home)
- Consultants (i.e. any emissions arising from any consultant commissioned to do work for us)
- Council vehicle maintenance and repairs (e.g. replacement tyres)
- Any material goods we have purchased which cost less than £1,000

Summary of how we can reduce, then eliminate, our indirect (scope 3) other emissions

4.8. Our pathway to reducing our indirect (scope 3) emissions is as follows:

- **We will continue to develop further our data collection for our scope 3 emissions**, thereby making as accurate as possible what those emissions are. This will inevitably mean our reported scope 3 emissions will rise in the short term, because more scope 3 emissions will be being collected and reported.
- We will maintain value for money as the fundamental basis of our procurement policies, with value for money defined in our current procurement policy as "the most appropriate balance of cost and quality". **However, to assist the assessment of 'quality' in that balancing exercise, we will strengthen our procurement policies and processes** to:

  (a) ask contractors tendering for work from the council to set out their commitments to the environment and reducing emissions;

  (b) ask contractors, where it is feasible, to set out the emissions that will arise from the services or goods we are seeking to purchase (such as the embodied carbon content of the products to be supplied); and

  (c) ensure officers take into account the results arising from (a) and (b) when making a judgement on the most appropriate balance of cost and quality.

- **We will encourage employees to adopt sustainable practices**, such as:

  (a) reducing travel, using public transport, or, where travel is necessary, use as low carbon means as is practical;

  (b) seek to purchase goods and services only when needed, use such goods and services efficiently, and take all reasonable measures to reuse, repair, and recycle goods.

- **We will actively monitor our water use, targeting water reductions as much as is practicable and reasonable to achieve** (and which could also have the

benefit of reducing our scope 1 and 2 emissions especially where the water reduction measures relate to hot water usage).

Risks to not achieving our Scope 3 reduction ambitions

4.9. The following sets out the identified risks for not achieving our indirect emission (scope 3) reduction targets:

Risk 1: Suppliers do not engage with our updated sustainable procurement and/or employees fail to reasonably take into account emissions when choosing a contractor.

Risk 2: Employees are unable or unwilling to adjust their travel patterns, meaning our emission levels remain high from matters such as staff commuting.

Risk 3: Repeated exceptional items are procured of a high carbon content, such as construction of new buildings (like the bereavement centre), purchase of a high number of new vehicles, or purchase of a large volume of other goods (such as waste bins)

Indirect emissions (scope 3) forecast reductions

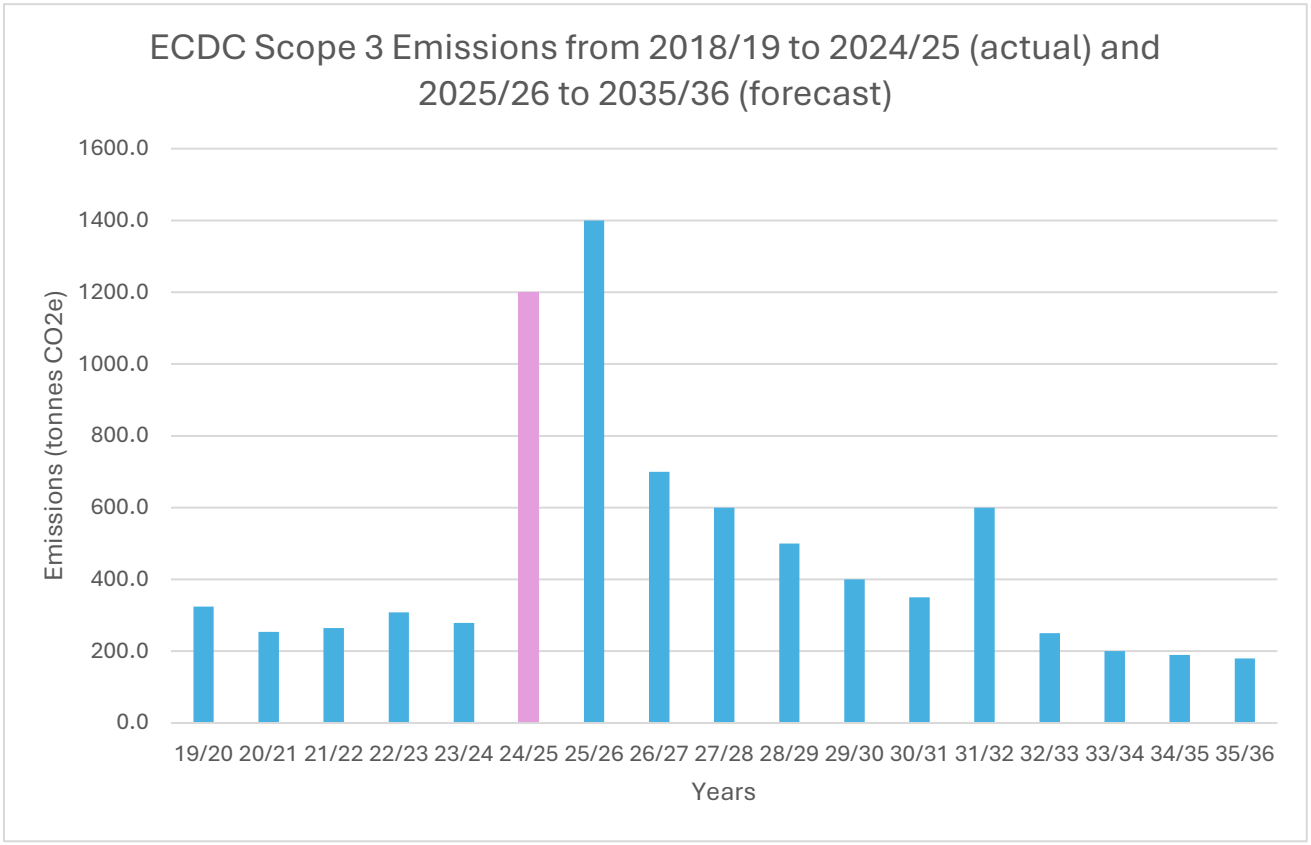
4.10. The graph below illustrates what our scope 3 emissions have been to date, and our forecast (based on the above actions) of how such emissions will fall towards net zero by around 2036.

4.11. It can be noted that the latest year (year 2024/25) identifies a considerable spike in scope 3 emissions. As explained earlier, this is partly due to the council now identifying its emissions much better. Put another way, the figures reported in the earlier years from 2019/20 are a considerable under-reporting due to a lack of data collection. The big jump was also partly due to the substantial one-off exceptional item purchase of c40,000 waste bins, with the resultant high embodied energy content of such bins.

4.12. It can be further noted that the scope 3 emissions are expected to go even higher next year (2025/26). This is primarily due to the estimated embodied carbon content of the construction materials for the new bereavement centre (which is being constructed over 2025/26), though we presently have low confidence in what that actual figure will be. We are attempting to determine the figure as accurate as reasonably possible.

4.13. Thereafter, the forecast is for a downward trend (though note risks earlier), albeit with an estimated higher figure forecast for 2031/32. This is somewhat speculative, but relates to an estimate when the council might be in a position for significant purchase of fleet vehicles, especially replacement refuse collection vehicles. The purchase of such vehicles will have a high embodied energy content.

4.14. Finally, it can be noted that, by 2035/36, we still forecast some scope 3 emissions (i.e. not at net zero). This aligns with our target to be truly net zero (including scope 3) by 2040, recognising that achieving net zero for scope 3 is going to be much more difficult than for scopes 1 and 2 (where we are forecasting net zero by no later than 2035/36)


ECDC Scope 3 Emissions from 2018/19 to 2024/25 (actual) and 2025/26 to 2035/36 (forecast)
Emissions (tonnes CO2e)
1600.0
1400.0
1200.0
1000.0
800.0
600.0
400.0
200.0
0.0
19/20 20/21 21/22 22/23 23/24 24/25 25/26 26/27 27/28 28/29 29/30 30/31 31/32 32/33 33/34 34/35 35/36
Years

5. Pathway to Reducing our Pension Investments Indirect Emissions (part of Scope 3 emissions)

Source of our pension investments indirect (scope 3) emissions

5.1. Whilst pensions are typically viewed as a mysterious and elusive pot of money, at £3trillion they are a major part of the UK financial system. Such funds are usually used to invest in a wide range of companies, some of which are fuelling the climate crisis, whilst others are actively trying to find solutions to the crisis.

5.2. The Council pension scheme for its employees forms part of a wider Cambridgeshire pension fund which itself is managed by West Northamptonshire Council. The Cambridgeshire fund has assets worth around £5billion.

5.3. Of the Cambridgeshire fund, East Cambridgeshire District Council's share of it is small, at about 1%, reflecting the relatively small size of the council and its employees and former employees (compared with much bigger employing councils, such as Cambridgeshire County Council). Nevertheless, even 1% is a huge sum when the total pot runs into the £billions.

5.4. Pension fund managers are increasingly attempting to report on the emissions arising from the investments they make, albeit acknowledging the extremely difficult challenge to accurately do so. Typically, scope 3 emissions from their investment decisions are ignored completely by fund managers (and are so in our Cambridgeshire case), but scope 1 and 2 are attempted in many cases, or at least as much as they are presently able to do (and are so in our Cambridgeshire case).

5.5. This council's pension investments emissions are therefore derived from the scope 1 and 2 emissions from our share of the listed equities and corporate bonds within the Cambridgeshire Pension Fund. These assets account for 57% of the pension fund's assets, with the other 42% (which is currently unaccounted for) including infrastructure, property, private equity and government bonds.

5.6. For that 57%, it is currently estimated that, for the last reporting year (2024/25) the best-guess is around 1,578.4 tonnes CO2e. This is therefore a major component of the council's overall emissions. It should be noted that the figure of 1,578.4 tonnes CO2e is a considerable under-reporting of the true figure, because it excludes 42% of the fund's investment portfolio, and excludes 100% of the fund's scope 3 emissions. The true scale of emissions is therefore likely to many times greater than the reportable 1,578.4 tonnes CO2e.

5.7. Presently, the fund managers have stated that they intend to they intend decarbonising the fund portfolio at the same rate as the European Policy Curve (EPC). This means the fund's decarbonisation pathway would meet the goal to reach net zero by 2050 or, ideally, earlier.

5.8. The target date of 2050 is not compatible with East Cambridgeshire District Council's target of being truly net zero organisation by 2040.

Summary of how we can reduce our pension investments indirect (scope 3) emissions

5.9. Reducing our emissions from our pension investments is a very challenging area, primarily because we have very limited, if any, control over how investments are made on our behalf.

5.10. Nevertheless, our pathway to reducing our pension investments indirect (scope 3) emissions is as follows:

- **We will engage with the fund managers to seek material improvements to data provision.** Whilst it is noted that progress has been made in recent years to improve published data relating to emissions, it is not always fully transparent, comprehensive or clear.
- **We will engage with the fund managers to establish targets** for reducing emissions from remaining scope 1 and 2 (property, infrastructure and private equity portfolios) and the currently unreported scope 3
- **We will ask the Cambridgeshire fund managers to provide greater transparency and awareness raising**, in an easy to digest format, of the emissions arising from the pensions that staff currently subscribe to.
- **We will encourage fund managers to continue to diversify away from investments in fossil fuel companies, and instead invest in sectors that contribute to a low-carbon economy.**

Risks to not achieving our pension investments indirect (scope 3) emissions reduction ambitions

5.11. The following sets out the identified risk for not achieving our pension investments indirect (scope 3) emissions reduction targets:

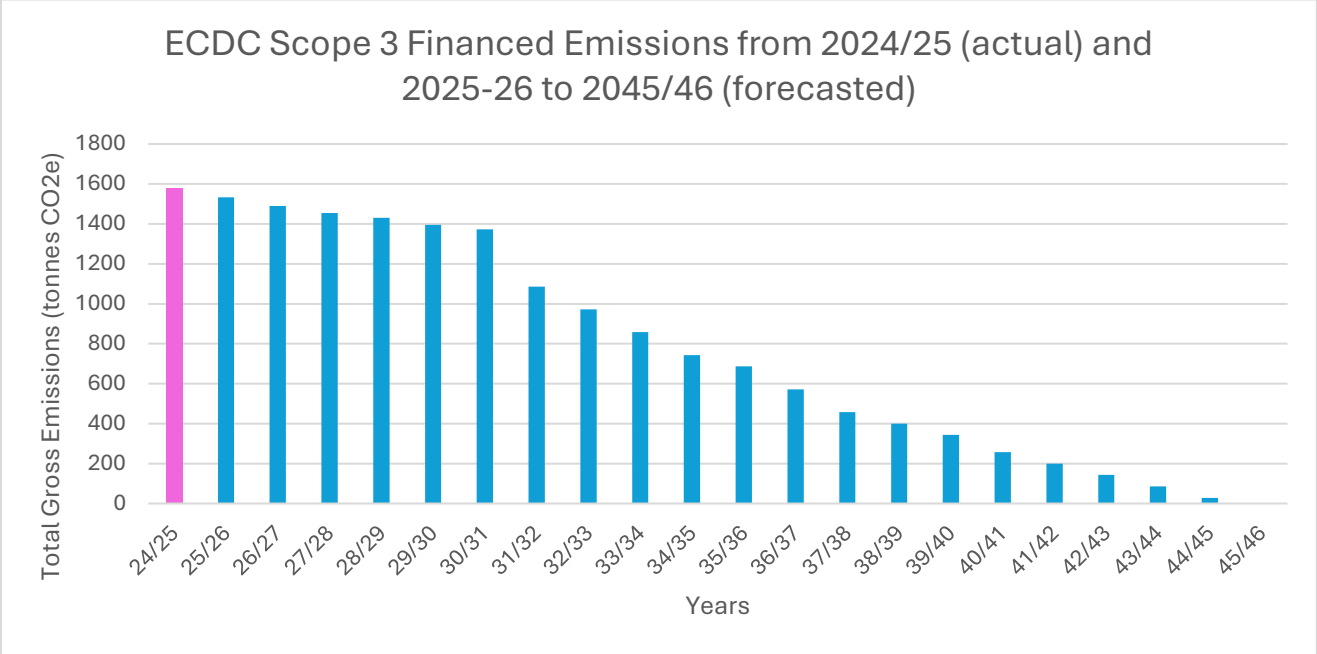
Risk 1: The pension fund struggles to measure all their scope 1, 2 and 3 emissions from all their assets, either due to a lack of resource themselves or due to the lack of engagement from the wider supply chain.

Risk 2: The pension fund does not meet their own decarbonisation milestones

Risk 3: The pension fund struggles to maintain a healthy financial position, thereby risking investment decisions incompatible with their emission reduction targets

Pension investments indirect (scope 3) emissions forecast reductions.

5.12. The graph below illustrates what our pension (scope 3) emissions were in 2024/25, and our forecast (based on the published actions of the fund managers) of how such emissions will fall to close to net zero by around 2045 (and targeting net zero by 2050). This analysis is based on the fund's own decarbonisation predictions and does not take into consideration how increasing scope of data will impact these predictions.


ECDC Scope 3 Financed Emissions from 2024/25 (actual) and 2025-26 to 2045/46 (forecasted)
Total Gross Emissions (tonnes CO2e)
1800
1600
1400
1200
1000
800
600
400
200
0
24/25
25/26
26/27
27/28
28/29
29/30
30/31
31/32
32/33
33/34
34/35
35/36
36/37
37/38
38/39
39/40
40/41
41/42
42/43
43/44
44/45
45/46
Years

6. Offsetting any remaining emissions – our approach

Introduction

6.1. It is recognised that nearly all people, organisations and countries cannot achieve pure 'zero emissions'. There will always be some activities which result in some greenhouse gas emissions. Consequently, the goal is to become 'net zero emissions', which means any remaining emissions are cancelled out by measures which capture carbon from the atmosphere.

6.2. The Council is no exception to the above rule, and accepts that to achieve net zero emissions, it will need to offset any remaining emissions that cannot be easily stopped.

6.3. It is generally accepted that well thought-out carbon offsetting can contribute to net zero strategies, particularly in hard-to-decarbonise sectors. However, if not done well, offsetting can result in 'greenwashing' and create unintended negative impacts for both people and the environment.

The approach we will follow

6.4. Our approach to offsetting emissions will be as follows:

1. **Our focus is to reduce emissions first and as much as possible, and only then turn to offsetting as a last resort**.
2. **We will report our scope 2 electricity emissions using the *location-based reporting* method**. This means emissions arising from the electricity we use is based on the average emissions intensity of the national grid. We will not use the *market-based method*, which is based on the energy tariff purchased. The *market-based method* is sometimes used by organisations and councils to consequently report zero emissions from their electricity consumed, based on a 'renewable energy' tariff they purchase. Whilst we do use a renewable energy tariff for the vast majority of the electricity we purchase, we think the *market-based method* provides a false representation of the emissions arising from the electricity consumed, and the method is discouraged from being used by the UK government and other reporting bodies. However, it is worth noting that when the national grid is entirely, or virtually entirely, decarbonised, the two methods will produce the same results.
3. **Where we do turn to offsetting our remaining emissions**, the specific offsetting measures will be sought based on their ability to deliver:
    - durability (i.e. low risk of reversal of the carbon captured re-entering the atmosphere)
    - any wider co-benefits (for example, for nature or communities)
    - local benefits (local first, global last)
    - value for money
4. **We will not consider purchasing offsetting credits for at the foreseeable future.** However, in the short term, we will continue to seek unquantified measures to offset our emissions through nature-based solutions on our own estate, such as **through appropriate tree planting and woodland management**.

7. Alternative Pathways to Net Zero

Introduction

7.1. This report has attempts to set out what is considered the most plausible pathway to net zero for East Cambridgeshire District Council. However, there are considerable uncertainties, particularly around technology advancements, regulations, financial costs (and gains) and political/public appetite for taking one path over another.

7.2. Below, we attempt to set out some alternative pathways to net zero which have a realistic prospect of being implemented (accepting there will inevitably be other currently unknown pathways which may also emerge).

Hydrogen becomes a dominant fuel use

7.3. Hydrogen has the potential to be the fuel of the future, particularly for heavy industry and long-distance transport, but its viability depends on scaling up the production of 'green hydrogen' (i.e. hydrogen produced from renewable electricity, when there is excess renewable energy available) and developing the necessary infrastructure for its storage and distribution. Hydrogen offers a clean energy carrier and a way to decarbonise sectors that are hard to electrify.

7.4. If hydrogen does become relatively mainstream and is produced via renewable energy (and therefore have a very low carbon content), then it could be used in the council's fleet vehicles and (probably less likely) its buildings.

7.5. Consuming pure hydrogen produces only water as a waste product (i.e. no greenhouse gases), therefore its use would result in zero emissions under scope 1 and scope 2. However, the creation of hydrogen in the first place requires huge amounts of electricity. Depending on how that electricity was created, the greenhouse gas emissions arising would vary considerably, and potentially be extremely high. Thus, whatever those emissions are, it would be classed as a scope 3 emission.

7.6. Overall, therefore, under a hydrogen-based scenario, the council's scope 1 and 2 emissions would be lower (because we would be using less direct fossil fuels, HVO and/or direct electricity), but our scope 3 emissions would be higher. The degree of increase in scope 3 emissions would be entirely dependent on how low carbon (renewable energy) the hydrogen was manufactured.

Heat Networks

7.7. The previous and current national government has placed considerable emphasis on the potential of 'heat networks' within our urban areas.

7.8. The simple concept is for a centralised 'boiler' which distributes heat via pipes under the ground and into homes and businesses, meaning each separate building does not have its own 'boiler'. The concept has been around for centuries, and is more common across Europe than the UK. However, typically they have been powered by fossil fuels, so little to gain from their use from an emissions perspective. Nevertheless, if the 'boiler' was powered by low or zero carbon means (for example a air-source, ground-source or water-source heat pump), then an individual building's heating system which draws from that heat network would be close to net zero. The other added advantage is that buildings would no longer require space to host its own boiler (whether gas or air source heat pump, for example) and would have no maintenance/purchase costs when

such boilers need replacing (saving money and scope 3 emissions).The property owner would, of course, have to pay for the heating system and a contribution to the ongoing maintenance of the heat network.

7.9. In 2022, a heat network for Swaffham Prior capable of supplying heat to around 300 homes, started operating, enabling residents to move off oil-based heating. That network provides an example of how heat networks could operate in the future, albeit government's intention is that heat networks could be considerably largely in scale. For more details on the Swaffham Prior heat network, please visit:

https://www.cambridgeshire.gov.uk/residents/climate-change-energy-and-environment/climate-change-action/low-carbon-energy/community-heating/swaffham-prior-heat-network)

7.10. National Government describes heat networks as "vital to making net zero a reality in the UK" (source https://www.gov.uk/government/collections/heat-networks accessed 24 September 2025), and the expectations is for heat network zones to be published in the very near future, within which certain properties would be compulsory required to join the network. There is a possibility (perhaps likelihood) that Ely city centre will fall under such a zone, and public buildings such as The Grange compulsorily required to join it in the future.

7.11. Under that scenario, The Grange would no longer be heated via gas or direct electricity, and would no longer install (for example) air source heat pumps itself. Instead, it would join the centralised heat network.

7.12. It is assumed the powering of the heat network will be predominantly (if not entirely) electricity based. Consequently, under this scenario the council's scope 1 emissions might be lower (but only if such a heat network was in place by 2030, which seems highly unlikely), whilst its scope 2 emissions might be higher or lower, depending on the efficiency of the heat network. Its scope 3 emissions might have higher or lower one off increases, depending on the scale of embodied carbon from the installation (and maintenance) of the heat network.

7.13. Overall, there is considerable doubt on the practicality or likelihood of a heat network for Ely, and whether The Grange would be compulsorily required to join it. National Government approach appears to lean towards that The Grange probably will, whereas our present working assumption is that the local practicalities mean that we won't or certainly not before 2036 (when we are targeting net zero for scope 1 and 2).

7.14. Nevertheless, heat networks is an area we will need to pay close attention to in the coming years, not only for ourselves as an organisation, but how it may provide opportunities for our business and residential communities.

Battery use and storage

7.15. It is plausible that further battery improvements lead to quicker and widespread deployment of batteries within both buildings and vehicles, including the potential of vehicles being directly connected to buildings as means of powering the building (not just powering the vehicle).

7.16. Under this scenario, our scope 2 emissions could increase temporarily (but this would disappear once the grid was fully decarbonised), whereas our scope 1 emissions might decrease quicker. Our scope 3 emissions might increase, through the one-off purchase of such batteries.

7.17. Overall, battery use is not considered likely to have a major impact on the trajectories for our pathway to net zero.

8. Out of Scope emissions

Introduction

8.1. A district council can be a complex organisation. For example, many councils now operate 'trading companies' which are 100% owned by the applicable council (or jointly between several councils), but are managed independent of that council.

8.2. In addition, many councils have their own estates which they do not directly manage themselves and instead lease it out to another party. This could include:

- land (for example, farmland leased to a farming tenant)
- business premises (each leased to individual tenants)
- business 'start up' premises (which are a single building, but different rooms within it being leased out to different tenants)
- shared use of office buildings (for example, parts of a council's main office headquarters is leased out to another tenant)
- leisure centres (whereby the building is owned by the council, but operated by a leisure company).

8.3. ECDC is no exception, as explained further below, including why they are presently considered 'out of scope' for monitoring emissions.

Palace Green Homes (PGH)

8.4. PGH is a housebuilding company established by the council in 2016, and wholly owned by council, with any profits it makes reinvested back into the council. However, day-to-day it is operated independently of the council.

8.5. The carbon emissions arising from PGH are not accounted for in the council's emissions reporting. Being in the construction industry, a housebuilding company such as PGH typically has very high scope 3 emissions, arising from the raw materials it uses (bricks, concrete, etc), as well as some scope 1 and scope 2 emissions.

8.6. It is understood that PGH does not presently calculate its scope 1, 2 or 3 emissions on an annual basis.

8.7. For the purpose of this 'Pathway to Net Zero' report, **PGH is excluded from all calculations and actions**. If PGH is brought under this 'Pathway to Net Zero' report, full details of its emissions would need to be calculated, and an action plan towards net zero devised. Alternative, PGH could establish its own independent pathway to net zero.

The Hive Leisure Centre

8.8. The Hive Leisure Centre opened in May 2018 and comprises an eight-lane 25m swimming pool, a learner pool with moveable floor, a 120-station gym floor, two activity studios and a four-court sports hall. Outside there is a 3G artificial grass pitch.

8.9. The building is owned by the council, but is leased to Better UK to manage the site.

8.10. Unsurprisingly, the leisure centre has a very high level of emissions, albeit being a relatively modern building means it is more energy efficient that some leisure centres. The pools are gas heated, whilst the rest of the building consumes a considerable

amount of electricity (for heating, cooling and lighting), albeit the installation of solar panels on its roof in 2025 will hopefully help reduce grid-based electricity consumption. The totality of the carbon emissions is not accounted for in the Council's emissions reporting.

8.11. For the purpose of this 'Pathway to Net Zero' report, **The Hive is presently excluded from all calculations and actions**. However, this would change should the operation of the building return to ECDC.

8.12. Alternatively, the council could decide to take 'ownership' of the emissions arising from The Hive on the basis that it owns the building and therefore has a considerable stake in its management, even if the building continues to be managed day-to-day by an external party. Under this scenario, this Pathway to Net Zero report would need updating accordingly, including actions to reduce its emissions to net zero. Reducing The Hive's emissions to net zero in the short-to-medium term (i.e. by 2030 or even 2036) could be extremely challenging because of the high use of gas consumption, and the limited financially viable options for alternative ways to heat water (for the swimming pool and other hot water use).

Waste arising

8.13. Any waste which the council directly creates (for example, in its office buildings) is already accounted for in its scope 3 emissions.

8.14. However, the council has a role in a much greater waste system, namely the collection of domestic waste from all its residents.

8.15. There are three elements to that waste, from a carbon emissions perspective.

8.16. First, is the purchasing, consumption and use of the product in the first place, by the household. The emissions arising from this stage is a matter for the household itself, therefore out of scope for this report.

8.17. The second element is the waste arising collected by the council and transported to a waste centre for disposal or recycling. This activity of collecting the waste results in emissions arising from the fuel used in the vehicles, the emissions arising from the manufacturing of the waste collection vehicles etc (i.e. the embodied carbon of those vehicles) and the maintenance of those vehicles. The emissions arising from this second 'waste collection' element is the responsibility of the council and should be accounted for in the council's emissions, albeit we have historically only calculated fuel consumption. For 2024/25, we have started to try to calculate wider emissions arising, such as some maintenance-related emissions (eg replacement tyres) and the embodied carbon emissions arising from new vehicle purchase, but these needs further work.

8.18. The third element is the waste disposal stage (whether recycled, composted, incinerated or landfilled). This stage also causes emissions to arise, but is the responsibility of the 'waste disposal authority' which in our case is Cambridgeshire County Council, and therefore out of scope for this report.

8.19. Thus, for the purpose of this Pathway to Net Zero report, the first and third stages described above are considered out of scope. The second stage is already, to the degree we are presently able, calculated and reported upon in our annual emissions report.

E-Space North and E-Space South

8.20. These two buildings are owned and managed by the council, but the primary occupiers of such buildings are a collection of start-up businesses who require the small units which the two buildings contain.

8.21. Utility use (gas, electricity and water) are already accounted for in the council's emissions reporting, on the basis that the council pays for such utility bills, and therefore 'controls' their consumption.

8.22. However, any wider emissions, such as business travel, commuting, other scope 3 emissions, etc, are not included in the Council's emissions reporting (i.e they are out of scope). This is because these emissions are controlled by the occupiers of the building (i.e. the start up businesses themselves).

Other leased out buildings

8.23. Whilst limited in volume, the council has a small portfolio of buildings which it leases out to tenants. All of those that on such leases whereby the occupiers are responsible for the management of the building and paying for items such as utility bills, are classed as out of scope for the purpose of this report.

8.24. Should any such building be brought back under the direct day to day control of the council, then the emissions arising from the operation of those buildings will be reported alongside all other emissions of the Council.

Parks and open spaces

8.25. The Council owns a wide variety of parks and open spaces, ranging from large scale areas (such as parts of Ely Country Park), local community play areas, and a wide variety of landscape areas and roadside verges.

8.26. Fuel used in vehicles and equipment to maintain such areas are already included in the council's emission reporting. We also have started to calculate wider scope 3 emissions from things such as purchase of new play equipment or new maintenance vehicles.

8.27. However, we presently make no attempt to calculate the degree of carbon capture from the trees and other vegetation that grow on our parks and open spaces, or from the new trees we plant (or emissions which are released when vegetation dies and composts). Likewise, we don't account for emissions arising from trees which are removed (and therefore no longer capturing carbon).

8.28. In the medium term, this might be an area we investigate further, especially as we consider our options for offsetting (see section 5) our last remaining emissions.

End of Report