

Key Decision; N

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Report Title: Carbon Neutral Programme – Progress Report

Portfolio Holder: Cllr Nick Mannion, Environment and Regeneration

Senior Officer: Frank Jordan, Executive Director Place

1. Report Summary

- 1.1. In May 2019 Cheshire East Council approved its Carbon Action Plan which included the aim of becoming carbon neutral by 2025. It also included the aim of influencing Carbon reduction across the Borough.
- 1.2. The Carbon Action Plan provides a blended solution of reducing energy use and moving to cleaner forms of energy, whilst offsetting residual emissions by creating carbon capture projects within the Borough.
- 1.3. The primary focus is on reducing the impact of our energy use, reducing waste and water usage. This is alongside capturing carbon through tree planting and other nature-based *insetting*, developing renewable energy system and securing green energy supply.
- 1.4. During the last year the Council has made significant progress in delivering the Carbon Action Plan and laid the groundwork for continued carbon reduction through to 2025. Highlights include 5.8 hectares of tree planting, securing a £2.4million grant to improve our buildings and development of the first hydrogen refuelling station in the North West to power two refuse collection vehicles with hydrogen.
- 1.5. To date the council has projects in the development stage to reduce 5,217.16 tonnes of the carbon used by the authority for its own operations. This represents 34% of the 2020 baseline against the 46% reduction that will be needed to meet the 2025 target. Additionally the council has carbon insetting projects in development to inset 6,254.6 tonnes of Carbon, 40% of the 60%

target. This report recommends future decisions that will be needed to complete the reductions to meet the 2025 target.

2. Recommendations

2.1. That Cabinet:

- 2.1.1. Note the progress made to date on the agreed Carbon Action Plan.
- 2.1.2. Note a supplementary estimate decision may be necessary to accept up to £3,000,000 of additional funding from the Public Sector Decarbonisation Fund. And that this may be decided under urgency provisions due to the timescales associated with this funding.
- 2.1.3. Invite the appropriate Committees to consider further decisions required to achieve the carbon neutral by 2025 target. Especially:
 - 2.1.3.1. The inclusion of carbon budgeting and accounting in the Council's business planning process and Medium-Term Financial Strategy
 - 2.1.3.2. The results of the building decarbonisation plan to further decarbonise the heating of Council buildings.
 - 2.1.3.3. Future business proposals for the implementation of council vehicle charging infrastructure to complement the planned electrification of the council's vehicle fleet.
 - 2.1.3.4. Consideration of the future land assessment report and the allocation of sufficient land to complete the council's nature based and sustainable energy inset projects necessary to achieve carbon neutrality.
 - 2.1.3.5. Consideration of investment opportunities in association with heat network and green energy proposals forming a green investment programme as projects come forwards.
 - 2.1.3.6. The adoption of a Cheshire East low carbon standard for new build and refurbished buildings in addition to the reductions planned as part of the council's estates transformation project.

3. Reasons for Recommendations

- 3.1. The above recommendations will all lead to the embedding of carbon reduction as a goal throughout the authority.
- 3.2. The decarbonisation of fleet and heat are recognised as the most challenging areas. Work has commenced to develop decarbonisation strategies that will assess these areas of challenge and look for viable alternatives to ensure the ambition of the council is to be achieved

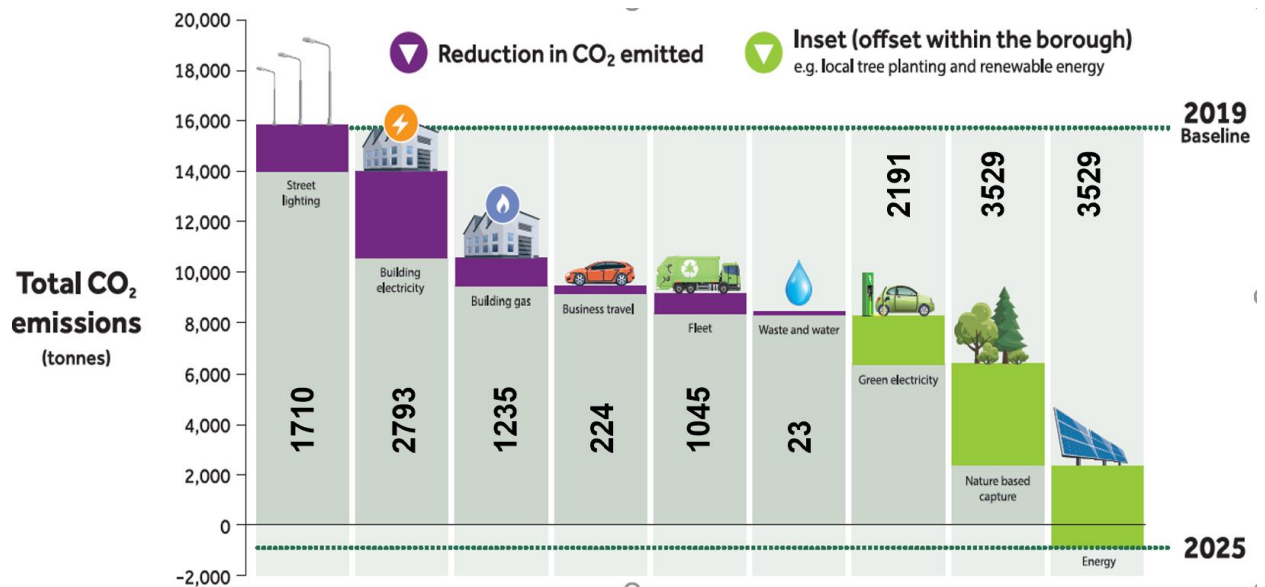
- 3.3. As part of our approach to carbon neutrality, the Council has approved the use of inseting locally through additional energy generation and carbon storage, primarily through tree planting. In order to facilitate this, the Council could utilise its own land holdings to maximise the benefits locally, so an assessment of the use of these land holdings has commenced to establish whether there are any appropriate options.
- 3.4. Cabinet approved the adoption of a standard equivalent to BREEAM (Building Research Establishment, Environmental Assessment Method) for new and refurbished council building projects. Since then new guidance has been received which outlines that standards like BREEAM are not always appropriate for the types of projects undertaken by the public sector. As a result, equivalent standards have been developed by various public sector bodies including Manchester City Council and the Government Property Agency, and it is the intention of the authority to replicate these to produce a bespoke standard that builds on best practice elsewhere
- 3.5. It has come to our attention that additional funding is likely to be made available to support the council relating to our carbon neutral objectives through the Public Sector Decarbonisation Scheme in 2021/22 therefore a decision will be sought to accept this should an acceptable offer be received.

4. Other Options Considered

- 4.1. There is an option to do nothing however this would severely curtail the council's ability to meet its declared target of being carbon neutral for its own operations by 2025.
- 4.2. There is an option to adopt externally created policies, this is not recommended as these policies may not be suitable for use in a Cheshire East context.
- 4.3. The Council has the option to purchase registered carbon offsets. This is not recommended as the offsets would be outside of the borough leading to the value being lost and also the loss of the extensive co-benefits of carbon reduction to the residents of Cheshire East.

5. Background

- 5.1. The carbon neutral action plan set carbon budgets against different areas of the council's operations, illustrated below. These were intended to outline the scale of the reduction required against each area and would be reviewed annually depending upon progress and as and when new opportunities or technologies emerge. Where targets were not being met it is intended that other areas may be able to compensate through additional action.



5.2. An assessment of progress against each area is summarised below and then shown in more detail. This takes into account the impact of projects and policies which have either been put in place and funded to date, or are at a high level of development which provides confidence that the carbon reductions identified will be delivered by 2025/26.

5.3. Projects at concept stage only are shown in the summary table and included on the related graph but are not shown in the individual package tables to give clarity over the level of certainty of the estimated carbon savings in each area. This does not mean that areas which have identified lower carbon savings are not able to achieve the proposed carbon targets, simply that those projects are at a less developed stage.

5.4. Summary Table

	Figures in tonnes of CO ₂	All percentages relate to baseline figure.
2019 Baseline CO₂	15,446.66	100%
2025 Reduction Target	7,030	46%
Estimated carbon reduction (developed projects)	5,217.16	34%
Estimated carbon reduction (including concepts)	5,550.24	36%
Carbon reductions to be developed	1479.76	10%
2025 Insetting Target	9,249	60%
Estimated Insetting (developed projects)	6,254.6	40%
Estimated Insetting (including concepts)	9,172.81	59%
Insetting to be developed	76.19	0.5%

- 5.5. As can be seen above there is a sufficient scope of projects to give us a high degree of confidence that Cheshire East Council will be able to achieve its ambition to be carbon neutral by 2025, however the speed of project development will need to be maintained, and our assumptions over changes to service delivery and policies will need to be delivered.
- 5.6. In the following sections we have taken the elements of the waterfall diagram shown above and broken them down to show where progress has been made and where there are gaps on which we need to focus.
- 5.7. It should be noted the authority is now using a green sustainably produced electricity tariff. In line with established good practice however it is still necessary to first look to reduce electricity usage and to decarbonise through schemes such as solar before the remainder is then off set by the green electricity tariff.

5.8. **Street Lighting**

2019 Baseline (tCO2)	2555.911	100%
2025 Target (tCO2)	845.911	33%
Cumulative Change (tCO2)	1710	Reduction of 67%
Estimated reduction – developed projects (tCO2)	1509	59%
To be developed (tCO2)	201	8%

- 5.8.1. An LED conversion programme has been ongoing for some time and has already transitioned the majority of street lighting columns within the borough.
- 5.8.2. A further scheme is currently within the approvals process to continue this work by transitioning other street furniture e.g. lit signs. This project will produce both cost and carbon savings and is expected to begin delivery within this financial year.
- 5.8.3. Coupled with the reduction of the energy used for streetlighting the council has engaged a supplier to provide green electricity backed by the Renewable Energy Guarantees of Origin (REGO) scheme.
- 5.8.4. In addition to this work street lighting will benefit from the national decarbonisation of the electricity network.

5.9. **Building electricity**

2019 Baseline (tCO2)	3910.714	100%
2025 Target (tCO2)	1117.714	29%
Cumulative Change (tCO2)	2793	Reduction of 71%
Estimated reduction – developed projects (tCO2)	1964	50%
To be developed (tCO2)	829	21%

- 5.9.1. To build upon this, funding has been secured from the Public Sector Decarbonisation Scheme to reduce electricity demand and increase renewable energy supply in buildings with a high demand, including an estimated 1 megawatts of additional solar panels on an anticipated 14 Council buildings including the Environmental Hub, leisure centres, and Highways depots. This is the equivalent of around 300 houses. We are also carrying out a full LED retrofit programme with smart lighting controls and upgrading building management systems.
- 5.9.2. We note that the demands on electricity within our estate will increase as we move away from gas for heating and as more of our fleet becomes electrified and requires charging, however this is somewhat balanced by the national drive to decarbonise the electricity grid.
- 5.9.3. Electricity is currently priced in excess of gas reinforcing the need to reduce the amount of energy used not simply transition to a cleaner fuel.

5.10. Building Gas

2019 Baseline (tCO2)	4409.757	100%
2025 Target (tCO2)	3174.757	72%
Cumulative Change (tCO2)	1235	Reduction of 28%
Estimated reduction – developed projects (tCO2)	606.41	13.8%
To be developed (tCO2)	628.59	14.2%

- 5.10.1. To reduce the gas consumption of our buildings will be a challenge, as it will be nationally, given the UK's historic reliance on natural gas for space and water heating. There will be the potential to purchase Green gas where the use cannot be reduced to zero.
- 5.10.2. As an initial step there is a developed project to improve the efficiency of both the boilers themselves and the buildings being heated. This includes planning for alternative fuel sources where possible and reviewing building insulation.
- 5.10.3. Where it is economically possible to do so we will be investigating the potential for district heat networks to provide a more efficient and reduced carbon solution for heating public buildings. A network has been designed and planned for Crewe town centre with the potential to provide a decarbonised heat solution for the Lifestyle Centre, Municipal Buildings, Lyceum Theatre and the proposed Cheshire Archives.

5.10.4. Funding has been approved through the Public Sector Decarbonisation Scheme to provide the authority's first air source heat pump, proposed to be sited at a library to decarbonise the buildings heating.

5.11. Business Travel

2019 Baseline (tCO2)	883.831	100%
2025 Target (tCO2)	659.831	75%
Cumulative Change (tCO2)	224	Reduction of 25%
Estimated reduction – developed projects (tCO2)	422.07	48%
To be developed (tCO2)	0	Well developed

5.11.1. Business travel has strong potential for reduction in two ways, firstly by reducing the miles travelled and then by reducing the carbon impact of each mile.

5.11.2. In terms of reducing miles travelled we are investigating new ways of working and amendments to policies, in particular the increased use of IT to reduce the need to travel.

5.11.3. To reduce the per mile carbon impact of each journey a project is in the approval process to implement a pool car strategy incorporating electric vehicles and a review of re-introducing a car loan scheme to facilitate the ability of staff to own an ultra-low emission vehicle.

5.11.4. Underpinning all of these actions is a need to hold appropriate and complete data of the vehicles being used and the mileage they are driving. We are also seeking to adapt our reporting of business mileage to add the detail needed to understand the use of private vehicles for business mileage and the carbon impact of these journeys. This need has been highlighted during a review by the Energy Savings Trust of our fleet usage as an authority.

5.11.5. Both business travel and fleet carbon reductions are underpinned by the need to electrify our driving and will therefore require an improvement to our local charging infrastructure. The Council is developing an electric vehicle charging strategy to ensure that the provision of this infrastructure keeps pace with the move to electric vehicles.

5.12. Fleet

2019 Baseline (tCO2)	3542.708	100%
2025 Target (tCO2)	2497.708	70%
Cumulative Change (tCO2)	1045	Reduction of 30%
Estimated reduction – developed projects (tCO2)	703.68	20%
To be developed (tCO2)	341.32	10%

- 5.12.1. The Council has a robust approach to fleet management and has commissioned a review by the Energy Saving Trust to assist with the development of portfolio of projects to reduce mileage and use low carbon solutions.
- 5.12.2. We are at the forefront of adopting hydrogen for our larger fleet, with Project Vanguard delivering the first hydrogen refuelling station in North West England to power two converted refuse collection vehicles (RCVs) with green hydrogen.
- 5.12.3. In addition, our waste company Ansa are trialling RCVs with electric bin lifts and replacing E5 standard vehicles with E6, this upgrade will provide a significant carbon reduction across the council's largest fleet of vehicles. Ansa are also exploring the viability for electric RCVs.
- 5.12.4. We are also rolling out electric vehicles and charging points for service delivery, including their use by the Highways service and the Community Wardens.

5.13. Waste and Water

2019 Baseline (tCO2)	143.739	100%
2025 Target (tCO2)	120.739	84%
Cumulative Change (tCO2)	23	Reduction of 16%
Estimated reduction – developed projects (tCO2)	12	8.3%
To be developed (tCO2)	11	7.7%

- 5.13.1. Water metering is being implemented across the estate to drive efficiencies.
- 5.13.2. The approach to reducing waste across the estate is to raise awareness amongst all staff, this will remain a continuous approach moving forwards.

5.14. Green Electricity

2025 Target (tCO2)	2191	100%
Estimated reduction – developed projects (tCO2)	Due to the purchase of green electricity this figure will equal the residual electricity use once all other measures are considered.	100%
To be developed (tCO2)	N/A	N/A

5.14.1. All council buildings are now being supplied with green electricity backed by the Renewable Energy Guarantees of Origin (REGO) scheme which offsets a significant proportion of the emissions meaning all assets at CEC under our financial control consume 100 % green electricity. This includes Leisure centres and Streetlighting. Since 2019, Schools under CEC energy framework benefit also from 100% green electricity.

5.14.2. It is recognised that the purchase of green electricity, while important, should not negate the need to reduce consumption.

5.15. Nature Based Capture

2025 Target (tCO2)	3529	100%
Estimated reduction – developed projects (tCO2)	191.2	5%
To be developed (tCO2)	3337.8	95%

5.15.1. Nature based capture is currently focusing on projects that include planting trees or hedgerows and restoring peat moss.

5.15.2. Working with representatives of The Mersey Forest, Cheshire Wildlife Trust and Ansa many projects have been assessed and are being progressed as part of the plan for 2021/22. Planting has been planned in existing parks and natural areas such as Tatton Park but also to deliver additional planting to complement new infrastructure projects such as Congleton Link Road. In addition an area of moss land is being restored and a pipeline of future projects is being developed.

5.15.3. Planting is also being explored around natural assets such as the River Bollin, Crewe Valley Brook and potentially using former land fill sites. Additional bio-diversity net gain will also be located close to new energy projects, the proposed solar array at Leighton Grange will encompass approximately 7ha of this nature-based scheme.

5.15.4. Nature-based projects are an area that the community is able to help with and support, enabling community, school and volunteer led projects to form a key part of nature-based projects in Cheshire East going forward.

5.15.5. However, much of the natural based capture is still to be identified and it should be noted that the Council will need to allocate a significant parcel of Council land for tree planting and nature based inset to achieve the target. To assist in this decision a land assessment has been

commissioned to take a broader view of the land assets owned by Cheshire East Council and to understand which are the most appropriate to use to meet our carbon objectives. Many areas will continue with their current use, but it is anticipated that some landholdings, or parts of them, may be suitable for nature-based sequestration projects and some for energy projects. If this does not deliver sufficient suitable land, the case for land acquisition may need to be considered in relevant circumstances. There may also be opportunities for investment in other nature based carbon capture projects with in the Borough.

5.16. Energy

2025 Target (tCO2)	3529	100%
Estimated reduction – developed projects (tCO2)	2282.4	65%
To be developed (tCO2)	1246.6	35%

- 5.16.1. Energy projects can deliver a substantial amount of the insetting required, but they also have significant development risks and require substantial capital investment to proceed.
- 5.16.2. The Council has approved the development of a significant solar project at Leighton Grange which, subject to connections and approvals, would generate the equivalent energy for 1,000 homes. We are also looking for further sites where solar would be appropriate.
- 5.16.3. We are progressing the development of a potential district heating scheme to heat the homes of the North Cheshire Garden Village at Handforth and working to decarbonise the heat network at Alderley Park which is partially owned by the Council. (Crewe heat network is also under development but contributes directly to Council building gas reduction, referred to in section 5.7above).

5.17. Behaviour Change

- 5.17.1. It is understood that a main aspect of reducing the carbon footprint of any organisation is educating the members of that organisation.
- 5.17.2. A new e-learning module has been created to provide guidance to all members of Cheshire East staff to understand the Council Climate change commitment and to think about how they can reduce carbon in their area of work for the Council.

- 5.17.3. Several officers and members have been certified as Carbon Literate following training in December 2020, more such training is anticipated.
- 5.17.4. Low carbon champions have also been briefed and a toolkit is being developed to allow them to feed out information to their teams.
- 5.17.5. A carbon assessment process is being developed to work in tandem with the current business planning cycle to ensure that all proposed projects take account of their carbon impact alongside their financial impact.

5.18. **Wider Borough**

- 5.18.1. A strong part of the ambition for low carbon is the council using its influence to reduce the carbon footprint of the borough as a whole.
- 5.18.2. Cheshire East Council have developed a toolkit for town and parish councils and provided this to allow each area to take ownership of its own carbon future.
- 5.18.3. A Communications strategy has been developed to engage with schools and local groups around the borough. This will complement existing environmental communication campaigns to reduce waste and improve air quality. For example, a new Air Quality campaign was launched on Clean Air Day in 2020 – *Show the Air You Care* - to inspire people to reduce air pollution by walking, cycling or using public transport more often, reducing engine idling, and by going electric. These actions will help reduce carbon emissions from private vehicles.
- 5.18.4. The council is also working with key partners such as Mersey Forest and Cheshire Wildlife Trust to identify other areas where they can support our wider Environment Strategy, including bio-diversity net gain and habitat improvement.
- 5.18.5. Through our responsibility as the Local Planning Authority, the Council is able to influence the carbon footprint of new development. Two recent applications which form part of the strategic allocation for delivery of over 1200 homes and associated infrastructure in North West Crewe includes conditions for electric vehicle charging points, ultra-low emission boilers and also a positive net gain on site for biodiversity. Additional tree planting and design codes will form part of the future detailed schemes.
- 5.18.6. Part 2 of the Council's Local Plan, the Site Allocations and Development Policies Document, will strengthen our influence as it includes detailed policies on climate change mitigation and adaptation, energy efficiency, and renewable and low carbon energy sources. The plan is due to be examined by the Secretary of State this year and if approved will be adopted in early 2022.

- 5.18.7. The council also recognises the opportunities that are presented within this area. These include:
- 5.18.7.1. Government initiatives to assist with the retrofit of older houses and buildings.
 - 5.18.7.2. Being in a position to influence government policy through platforms such as the LEP Net Zero group, The Association of Directors of Environment, Economy, Planning & Transport (ADEPT) and the Cheshire Leaders Board.
 - 5.18.7.3. To work with partners in our farming communities to deliver environmental and carbon improvements through developments such as biodiversity net gain and potential initiatives such as the anaerobic digestion of cattle slurry.
 - 5.18.7.4. To build on local policies and the carbon reduction priorities, for example the waste strategy and the strategic sites and housing framework.

6. Implications of the Recommendations

6.1. Legal Implications

- 6.1.1. The Carbon Action Plan has been produced in response to parliamentary request as noted at the start of the plan. Whilst the Council works to evolve its approach to decarbonisation and further develops the plan; it should be born in mind that until the plan is finalised it is not possible to make any substantive comment on the legal implications of the same. As and when the decarbonisation policy is fully developed legal can consider the implications more fully and comment at that juncture on any specific initiatives that are identified.

6.2. Finance Implications

- 6.2.1. The Council's Medium Term Financial Strategy (MTFS) for 2021-25, as approved by the Council on 17th February 2021, includes an existing Environmental Strategy and Carbon Neutrality revenue budget. The MTFS also includes several carbon neutral related capital schemes within the Addendum to the Capital Programme, including the Multi Site PV Scheme and Carbon Offset Investment.
- 6.2.2. Future proposed budget changes relating to the Carbon Neutral programme will be fed into the Council's business planning process which are likely to involve an Electric Vehicle Charging scheme for Council fleet and further green investment opportunities associated with solar farms and heat networks.

6.3. Policy Implications

- 6.3.1. The recommendations within this report are reflective of the priorities within the council's approved Corporate Plan as adopted at Council in February 2021.

6.4. Equality Implications

- 6.4.1. An outline equality impact assessment has been undertaken as part of the Environment Strategy of which the Carbon Neutral Action Plan forms a key element.
- 6.4.2. The EIA is a live document and will be updated as individual project proposals are brought forwards.

6.5. Human Resources Implications

- 6.5.1. Policy changes may have HR implications and will be thoroughly consulted on before they are implemented.

6.6. Risk Management Implications

- 6.6.1. A programme risk register has been developed and is actively maintained.
- 6.6.2. Individual projects also maintain their own risk register and individual risks are managed or mitigated.

6.7. Rural Communities Implications

- 6.7.1. It is understood that requirements for land use may have an impact on rural communities. Part of the land assessment will be to review the competing priorities for different land parcels and give a rounded view.
- 6.7.2. Land use for bio-diversity net gain is also likely to be required however the net gains will provide other benefits in rural areas.
- 6.7.3. It is recognised that rural communities have different needs with regards to issues such as transport and will require particular solutions.

6.8. Implications for Children & Young People/Cared for Children

- 6.8.1. As part of the wider communications strategy, plans are in place to engage with children and young people through various channels.

6.9. Public Health Implications

- 6.9.1. It is expected that reductions in green house gasses and associated pollution will have a positive impact on public health.

6.10. Climate Change Implications

6.10.1. The matters within this report are concerned with reducing the council's carbon footprint.

7. Ward Members Affected

7.1. The measures within this report will affect all wards.

8. Consultation & Engagement

8.1. Consultation was carried out for the Environment Strategy from 29th November 2019, the results of which were presented to Cabinet in May 2020.

9. Access to Information

9.1. <https://www.cheshireeast.gov.uk/environment/carbon-neutral-council/environment-strategy.aspx>

9.2. <https://www.cheshireeast.gov.uk/environment/carbon-neutral-council/carbon-neutral-council.aspx>

10. Contact Information

10.1. Any questions relating to this report should be directed to the following officer:

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Job Title: Head of Environmental Services