

13 January 2022

Report of	Assistant Director of Place and Client Services	Author	Ben Plummer
Title	Pathway to net zero by 2030		☎ 508965
Wards affected	Not applicable		

1. Executive Summary

1.1 This report sets out a summary of the Council's most recent work with the Carbon Trust which involved:

- Updating our pathway to net zero emissions by 2030 based on new data and new projects that have emerged since previous analysis was carried out.
- Exploring options for decarbonising several sheltered housing buildings between now and 2030.
- An introduction to offsetting with Council staff, considering different offsetting principles, methods of offsetting and the co-benefits that can be delivered from different offsetting methods.

1.2 Some summary points from the report are:

- Integration of consideration of energy efficiency opportunities into the Building Maintenance Programme to maximise carbon reduction from corporate estate is recommended.
- Based on modelled projects, the Council's residual emissions are projected to be 2,617 tonnes of CO₂ equivalent (tCO₂e) in 2030. This demonstrates that further projects for decarbonisation will need to be identified, particularly at Leisure World which is a significant contributor to the Council's emissions.
- Opportunities for locally based offsetting were considered a priority by Council officers but there are several considerations such as resources and geographic scale that will need to be kept in mind if the Council develops any local offsetting opportunities. The benefits that can be derived from local offsetting, including building community engagement and retention of delivery of co-benefits such as habitat creation, support such an approach.

2. Recommended Decision

2.1 The panel note the contents of the report and provide guidance and feedback regarding the Council's approach to becoming carbon neutral by 2030.

3. Reason for Recommended Decision

3.1 The report is for information only.

4. Alternative Options

4.1 Not applicable

5. Background Information

5.1 During 2020, the Council worked with the Carbon Trust to map out its emissions to 2030, based on current and proposed Council projects to reduce emissions, alongside wider changes in the political and energy landscape (e.g. the 'greening' of the electricity grid). This analysis projected that the Council would be producing 2,788 tonnes of CO₂e in 2030, compared with its target for reaching net zero emissions by 2030 (figure 1).

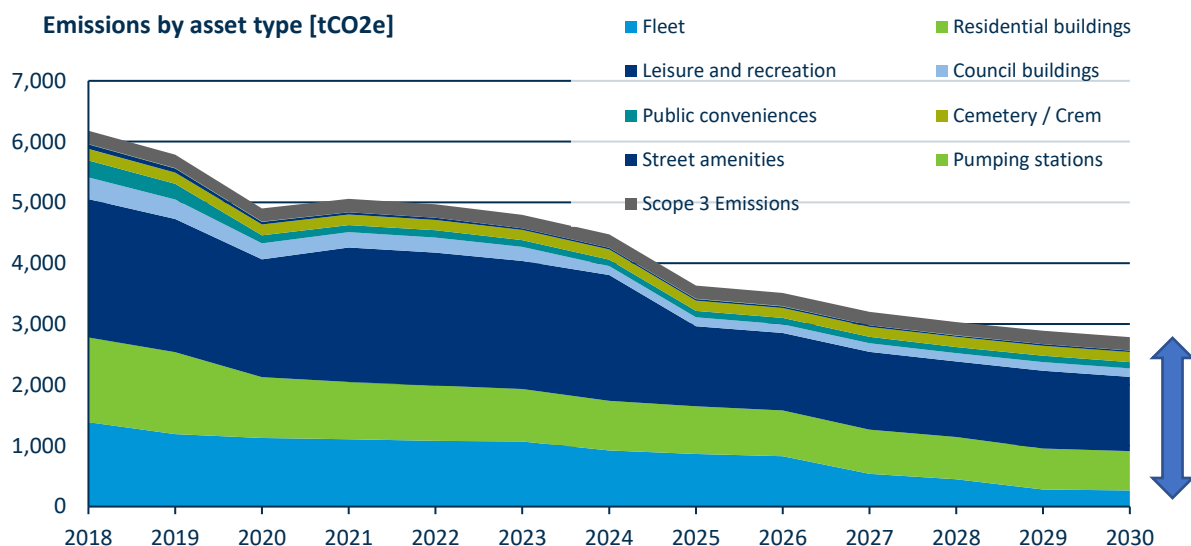


Figure 1: Pathway analysis of the Council's emissions to 2030. The arrow indicates the gap between the Council's projected emissions in 2030 based on several key carbon reduction projects being carried out and zero emissions (the 'gap to target').

5.2 Emissions currently included within the Council's direct emissions, and in scope for the target of reaching net zero emissions include:

- **Fleet** – Emissions from fuel consumption of the Council's fleet.
- **Council operated buildings** – Electricity and gas consumption used in these buildings. This includes operation of the Crematorium and Leisure and Recreation buildings. They are shown separately in the graph as they contribute more to emissions than other individual buildings.
- **Other Council operated assets** – Structures such as street lighting, bollards (referred to as street amenities and public conveniences in the graph) and pumping stations are included here.
- **Residential buildings** – This refers to emissions from the sheltered housing stock only. Emissions from the general needs stock is included within the Council's indirect (scope 3) emissions. However, the Council is still investing significantly in its general needs stock with £4m outlined for energy efficiency ('fabric first') improvements to the most inefficient properties. The target for the whole stock to achieve a minimum EPC C by 2030, is also 5 years ahead of the Government's target for this.
- **Emissions from waste, water, business travel and commuting** – These are all emissions that typically fall under and organisations indirect (scope 3) emissions. However, the Council has incorporated these within its carbon neutral target, demonstrating the influence it can have on these emissions as much of these are linked to staff behaviours.

- 5.3 This analysis indicated that further projects would have to be carried out to get the Council as close to carbon neutrality as possible, before then considering further action that could be taken to offset emissions.
- 5.4 The objective of the next piece of work with the Carbon Trust was to:
- Understand the costs and emissions savings associated with upgrading several of the sheltered housing buildings by 2030. This aligned with the work on the creation of a new Housing Asset Management Strategy.
 - Update the pathway projection based on more recent data the Council had in regard to some of its projects such as the fleet transition programme and plans for decarbonising Rowan House.
 - Improve the Council's understanding of the options available around offsetting, recognising it would be required to some extent to reach carbon neutrality by 2030. An officer workshop was conducted to explore this topic.
- 5.5 An analysis of each of these three sections is presented below:

Sheltered Housing Options Appraisal

- 5.6 It has been recognised that the sheltered housing stock contribute significantly to the Council's carbon footprint. The Council is already working to reduce emissions from these, with several buildings upgraded to be more efficient and low carbon such as the rebuilding of Elfreda House to Future Homes Standard.
- 5.7 Heating systems in several of the sheltered housing schemes are coming up for renewal in the coming decade, and it was considered important that the Council understands the options, costs and emission savings involved in retrofitting these.
- 5.8 Therefore the Carbon Trust conducted an options appraisal of four of the sheltered housing schemes. This considered the different costs and emissions savings of upgrading these buildings to varying levels of energy efficiency and installation of low carbon heating systems. A summary of the options for each sheltered housing scheme will be considered by the Council and Colchester Borough Homes as part of a wider review of plans for the sheltered housing stock.

Pathway projection to carbon neutrality

- 5.9 Several planned projects have progressed since the Council's previous pathway modelling with the Carbon Trust. These include the creation of the fleet transition programme, the planned decarbonisation of Rowan House, both of which have been incorporated into the new pathway model. Additionally, the retrofit of three of the sheltered schemes have been modelled.
- 5.10 This modelling outlined that the Council's residual emissions in 2030 would be 2,617 tCO₂e. The biggest percentage saving in emissions on the way to 2030 is outlined to be delivered by the fleet, with a 33% emission saving occurring. However, the pathway model does not include any works to make Leisure World more energy efficient or use a low carbon heating source and initial plans are being developed in this area. Despite this, emissions from Leisure and Recreation contribute to emission savings of 27% towards 2030, solely due to the decarbonisation of electricity in the grid that the building will use.

Offsetting workshop

- 5.11 Sixteen officers from Colchester Borough Council, Colchester Borough Homes and Colchester Amphora Energy Limited attended the workshop co-ordinated by the Carbon Trust. The workshop focussed on looking at offsetting methods, offsetting and target setting, and local and global offsetting. A short analysis of the findings of each section is highlighted below and further findings can be found in the Carbon Trust report.
- 5.12 **Offsetting methods:** There are two main categorisations of offsetting methods. Methods that remove greenhouse gases from the atmosphere (such as tree planting or carbon, capture and storage) and methods that would lead to a reduction in greenhouse gases in operations that would otherwise not occur (e.g. creating a solar PV farm to provide electricity). These can be further categorised into either technological solutions or nature-based solutions.
- 5.13 Through polls and discussion in breakout rooms it was identified that officers saw both nature-based solutions and technological solutions playing a role in any offsetting the Council does. Additionally, there was no preference for greenhouse gas removal or reduction solutions.
- 5.14 **Offsetting and target setting:** The Carbon Trust made the Council aware that there are different requirements when it comes to offsetting, in regard to whether the Council wants to target reaching carbon neutral or net zero. The different definitions are highlighted in the report.
- 5.15 Up till the workshop the Council had used the terms 'net zero' and 'carbon neutral' interchangeably, unaware there was a significant difference between the two. This is common amongst other Councils as well, with there still being a lack of clarity around the difference.
- 5.16 The main difference between the two when it comes to offsetting, is that carbon neutrality allows for both greenhouse gas reduction and removal offsets to be used in the process of decarbonisation. Net zero allows for some use of greenhouse gas reduction offsets along the decarbonisation journey, however by the end target date offsets must be greenhouse gas removal offsets only, and these should only be used where it is unfeasible to reduce emissions from asset and operations first.
- 5.17 Through polls and discussions in breakout rooms, the difference between net zero and carbon neutral emerged. Whilst the Council has agreed to net zero emissions by 2030, we will need to assess the Carbon Trust's definitions of net zero and carbon neutral against the plan that is emerging to be clear on the standard the Council wants to achieve. However, the Council's approach will always prioritise reducing emissions from its existing assets where possible, before considering options for offsetting where residual emissions remain.
- 5.18 **Global and local offsetting:** In the workshop, the Carbon Trust outlined the various considerations around offsetting emissions on a local scale versus offsetting more globally. Considerations include time and resource required, co-benefits that can be derived, varying costs and more.
- 5.19 Throughout all breakout room discussions, it was clear that offsetting locally was preferred. Delivering co-benefits in the local area, and opportunities for community engagement were seen as clear positives for offsetting locally especially given that the Council is an organisation funded locally and should thus deliver benefits in the locality. However, offsetting on a global scale was not completely ruled out by staff and would be

considered as the market for this becomes more regulated and standards more developed.

- 5.18 Further information on all sections of work highlighted above, are covered in the full Carbon Trust report.

Next steps

- 5.19 The report has been useful for updating the Council's progress on the journey of reaching carbon neutrality by 2030. It has highlighted gaps where there will need to be a focus on reducing emission from several high emitting assets. The report has also provided insight and information on sheltered housing for colleagues in Colchester Borough Homes, as well as introducing the team to offsetting so this can be considered as part of the Council's approach to reaching carbon neutrality going forward.
- 5.20 Following on from this, the Council recognises that clear actions for reducing emissions from its high emitting assets is necessary and this will be addressed by starting the process of creating a Carbon Management Plan in early 2022 to identify tangible actions to reduce emissions from these assets, quantifying costs and emissions savings from doing these.
- 5.21 This work will sit alongside further development of the Council's Climate Emergency Action Plan, with actions in here that contribute to both emissions reduction and the delivery of positive environmental benefits as part of Council operations, as well as activities in the borough.

6. Equality, Diversity and Human Rights implications

- 6.1 There are no equality, diversity and human rights implications of the report.

7. Strategic Plan References

- 7.1 This report directly links to the Strategic Plan 2020-2023 theme of 'Tackling the Climate Challenge and Sustainability'.

8. Consultation

- 8.1 There are no consultation considerations.

9. Publicity Considerations

- 9.1 There are no publicity considerations.

10. Financial implications

- 10.1 There are no financial implications.

11. Community Safety Implications

- 11.1 There are no community safety implications.

12. Health and Safety Implications

- 12.1 There are no health and safety implications.

13. Risk Management Implications

13.1 There are no risk management implications.

14. Environmental and Sustainability Implications

14.1 The report highlights how the Council will need to continue to reduce emissions from its operations and assets, and the Council will be following up on this with the production of a Carbon Management Plan. This will identify detailed projects and actions the Council can take to reduce emissions from its operations and assets.