



# Heat Decarbonisation Plan



# Executive Summary

Knowsley Metropolitan Borough Council declared a Climate Emergency at a cabinet meeting in January 2020 and committed to the Council's Estates and Services becoming Net Carbon Zero by 2040 in addition to committing to work with partnership organisations to reduce boroughwide emissions. In November 2020, the Council's Climate Emergency Action Plan (CEAP) was approved which identified ten key themes where actions can be taken to reduce the Council's carbon emissions.

One of the key themes is to reduce energy use in Council buildings, and another is to look at sustainable energy generation systems; the decarbonisation of buildings addresses both key themes as a majority of Council emissions comes from gas and electricity usage in Council building, Leisure Centres and Schools.

Actions to decarbonise Council buildings have already taken place with the introduction of LED lighting and Solar Panels at the River Alt Resource Centre as well as Air Source Heat Pumps at Court Hey Park and Huyton Library funded through the Public Sector Decarbonisation Scheme, but more buildings will need to be retrofitted to meet the ambitious Net Carbon Zero 2040 target.

The Council submitted a successful bid to the Public Sector Decarbonisation Scheme's Low Carbon Skills Fund to create a Heat Decarbonisation Plan that focused on 19 Council Buildings which represented a large proportion of gas and electricity, and therefore generated the most carbon emissions.

The Heat Decarbonisation Plan will identify opportunities to decarbonise these buildings on a site-by-site basis, analysing the low carbon technologies that are most suitable for that building type, taking into account its intended use and energy efficiency measures that are already in place such as double glazing and insulation. Potential carbon savings have also been calculated which identifies where the biggest carbon reductions can be made.



# Foreword

A photograph of a field of flowers, primarily purple and yellow, with a soft, blurred background. The flowers are in various stages of bloom, and the overall scene is bright and natural.

I am delighted to be able to present Knowsley Council's Heat Decarbonisation Plan which is an important step on our journey to Net Carbon Zero by 2040. The declaration of a Climate Emergency in January 2020 demonstrated that the Council recognises the impacts that climate change is having both locally and across the world and that urgent action is needed. Since the approval of the Climate Emergency Action Plan, a variety of ambitious projects to reduce carbon emissions have been undertaken from extensive tree planting schemes, woodland creation and flood mitigation works and installing sustainable energy generation systems.

Cabinet Member for Communities and Neighbourhoods  
Councillor Shelley Powell

Through action taken by the Council, the decarbonisation of buildings has been identified as a key area where significant carbon savings can be made. Ensuring council buildings and assets are as low carbon and energy efficient as possible will be a key step in achieving Net Carbon Zero 2040. The Heat Decarbonisation Plan is an essential tool for the Council to continue to decarbonise its highest carbon emitting buildings and offers a clear pathway to both reducing electricity and gas usage and generating sustainable energy.

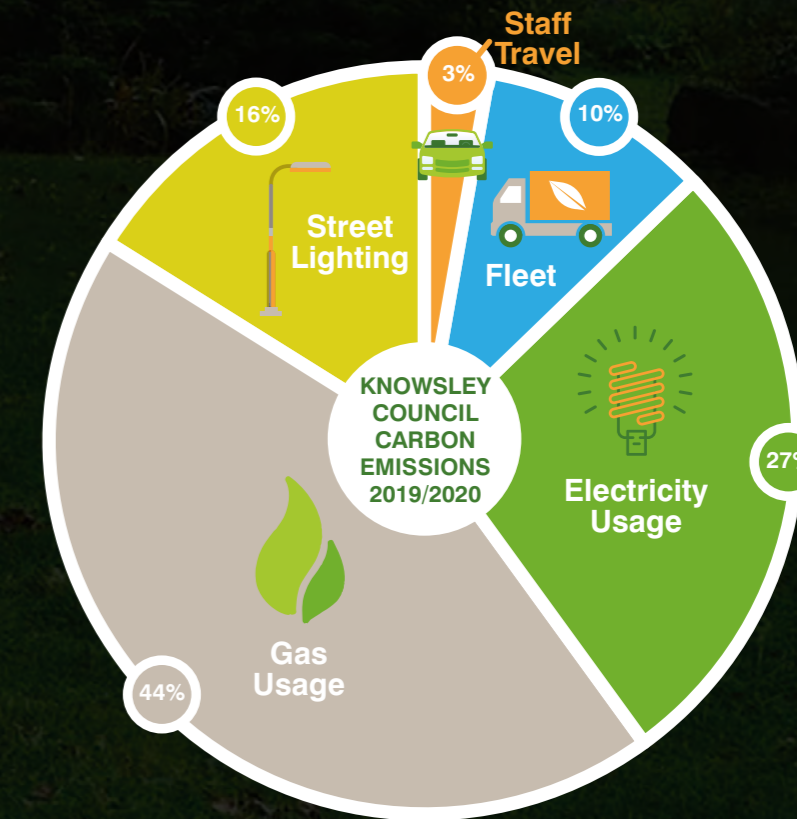


# The Journey so far...

In 2019/2020, the carbon emissions from the Council's estates and services totalled 10,607 CO<sub>2</sub>e tonnes, compared to 2009/2010 this represents a 63.9% reduction in carbon emissions.

Over the years, multiple projects have contributed to this reduction including Solar PV fitted to the Huyton Municipal Annex, various energy efficiency projects in buildings as well as LED lighting in Huyton Multi-storey car park and a street light replacement programme. A fleet fuel management plan and a Staff Travel Plan have also been developed in addition to staff behaviour change programmes such as the 'Turn It Off' campaign.

In 2019/20, gas usage in Council buildings accounted for 44% of carbon emissions, and electricity usage 27%. This outlines the importance of decarbonising buildings, particularly the heating element of buildings to meet the Net Carbon Zero 2040 Target. Due to this, one of the key actions within the Climate Emergency Action Plan is to decarbonise Council buildings within its estates.



The Heat Decarbonisation Plan is part of the Council's wider Net Carbon Zero ambition but acts as a valuable tool for the Council to both apply for external funding grants and to create business cases for low carbon upgrades.



# THE KIRKBY CENTRE

# The Heat Decarbonisation Plan

The project includes a variety of Council buildings consisting of a mixture of Leisure Centres, Council buildings and public buildings such as Adult Respite Centres and Disability Resource Centres. The list of sites included in the Heat Decarbonisation Plan are:

1. Knowsley Leisure & Culture Park
2. Kirkby Leisure Centre
3. Halewood Leisure Centre
4. Stockbridge Village Leisure Centre
5. Nutgrove Villa
6. Knowsley Central School
7. Bewley Drive Resource Centre
8. Kirkby Respite Unit
9. Prescot Registry Office
10. Huyton Municipal Computer Centre
11. Huyton Resource Centre for Older People
12. Stockbridge Disability Resource Centre
13. Kirkby Resource Centre for Older People
14. The Kirkby Centre
15. Halewood Country Park Environment Centre
16. Stadt Moers Park Visitors Centre
17. Alt Bridge School
18. Huyton Adult Respite Centre

Opportunities for the sites have been focused on the decarbonisation of the heat within the building. Individual site assessments have been carried out for each of the sites taking a whole building approach on energy generation and energy consumption.

Each individual report looks at the existing fabric of the building, the current energy systems installed and the subsequent carbon emissions of the building in its current state. Proposals are then made on how to improve the efficiency of the building with upgrades such as double glazing and insulation and the most suitable and effective low carbon technology for that site.

The new carbon emissions, based on the improvement works and the low carbon technologies put forwards have also been calculated as well as thorough costings for each site.



# The Heat Decarbonisation Findings

The study recommended the following:

Building Name	External Wall Insulation	Roof Insulation	Window Upgrades	No. of ASHP	Solar PV	LED Lighting	Total Building GHG Saving in kg CO2 per annum
Knowsley Leisure & Culture Park				33	YES	YES	434,462
Kirkby Leisure Centre				25	YES	YES	418,232
Halewood Leisure Centre				23	YES		240,635
Stockbridge Village Leisure Centre				19	YES		123,709
Nutgrove Villa				10	YES		51,821
Knowsley Central School			YES	6	YES		47,766
Bewley Drive Resource Centre		YES	YES	4	YES		13,521
Kirkby Respite Unit		YES	YES	1	YES	YES	8,855
Prescot Registry Office				6	YES	YES	17,356
Huyton Municipal Computer Centre				4			8,238
Huyton Resource Centre for Older People		YES	YES	5	YES	YES	23,276
Stockbridge Disability Resource Centre	YES	YES		5	YES	YES	24,163
Kirkby Resource Centre for Older People		YES	YES	5	YES	YES	23,656
The Kirkby Centre				3	YES		18,265
Halewood Country Park Environment Centre				2		YES	4,357
Stadt Moers Park Visitors Centre				1		YES	2,695
Alt Bridge School				13	YES		63,353
Huyton Adult Respite Centre		YES	YES	1	YES	YES	8,776



# Conclusion

The Council is committed to tackling climate change and has identified the need to decarbonise its buildings stock as a key action to reduce carbon emissions to meet its Net Zero Carbon 2040 target.

Decarbonisation projects have already been undertaken with LED lighting and Solar PV installed in the River Alt Resource Centre as well as Air Source Heat Pumps in Court Hey Park and Huyton Library which are already delivering carbon savings.

Knowsley's Heat Decarbonisation Plan has identified opportunities to drive forward its decarbonisation agenda and can serve as a tool to apply for further funding opportunities to install low carbon technologies.

The Heat Decarbonisation plan is part of a wider plan and cannot be delivered in isolation which is something the Council recognises. The Climate Emergency Action Plan will continue to be implemented and a Boroughwide Low Carbon Framework is also in development to reduce boroughwide emissions.

You can view the Council's Climate Emergency Action Plan [here](#).





*Knowsley Council*