

MITIGATION BASELINE

A photograph of industrial smokestacks emitting large plumes of white smoke against a dramatic, orange and blue sky at sunset or sunrise. The smokestacks are dark silhouettes against the bright, glowing sky. The smoke plumes are thick and billowing, with a mix of white and orange tones. The sky is a deep blue with a gradient of orange and red near the horizon, suggesting a sunset or sunrise. The overall mood is industrial and atmospheric.



DÚN LAOGHAIRE-RATHDOWN COUNTY COUNCIL'S ENERGY USE & EMISSIONS

Dún Laoghaire-Rathdown County Council (DLRCC) is responsible for the energy use and emissions from its buildings and facilities, its public lighting, and also from its vehicle fleet. The information from the Sustainable Energy Authority of Ireland's (SEAI's) Monitoring and Reporting (M&R) database shows that DLRCC consumed a total of 50.57 gigawatt hours (GWh) of primary energy in 2017. The energy database also shows that DLRCC improved its energy performance by 28.2% between the baseline year (2009) and 2017. This highlights a gap-to-target of 4.8%, meaning that DLRCC must improve its energy performance by a further 4.8% between now and 2020, in order to meet its 33% energy reduction target.

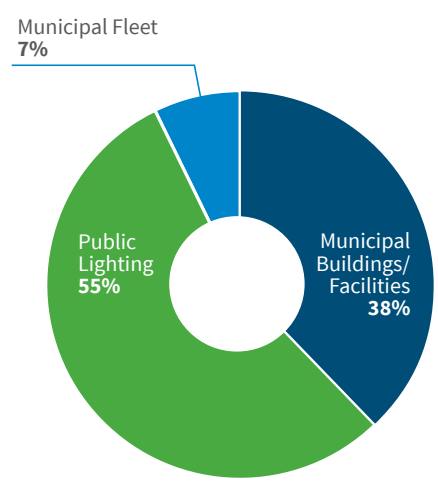


Figure 18 Primary Energy Consumption Sectors

The Council's public lighting was the highest energy consumer, accounting for 55% of the Council's overall energy consumption. Buildings and facilities were the second highest energy consumers, accounting for 38% of the total energy consumption, while the municipal fleet accounted for 7% of the total energy use.

As a signatory to the Covenant of Mayors for Climate and Energy, DLRCC is committed to reducing its own emissions by 40% by 2030, compared to the baseline year.

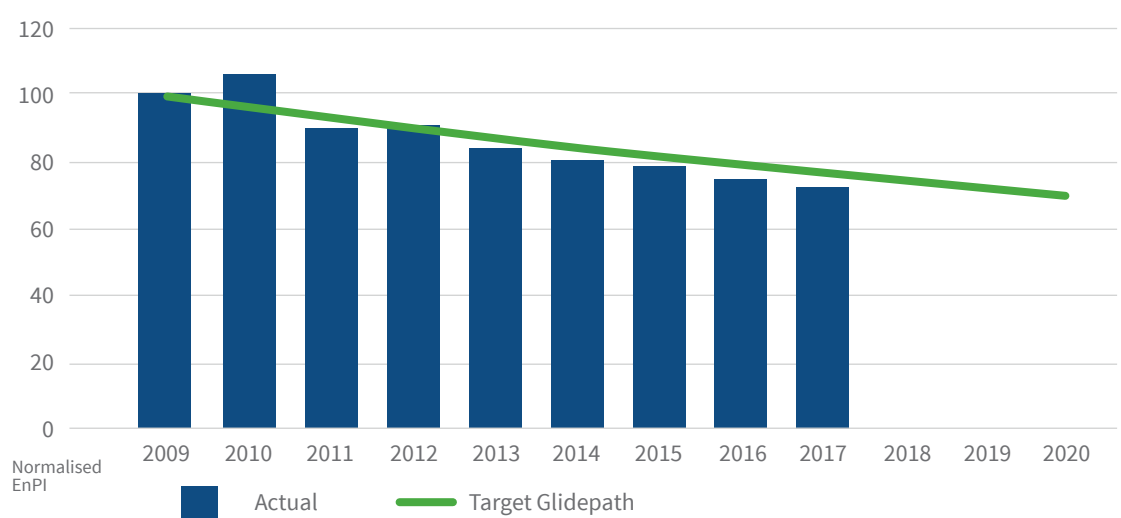
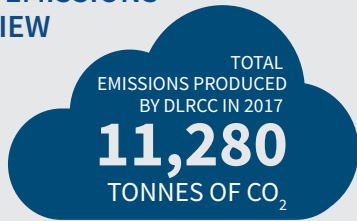
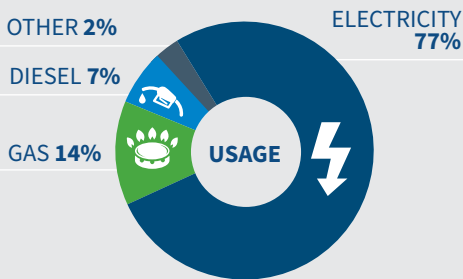


Figure 19 DLRC's Annual Energy Performance Compared to the 33% Glidepath

DLRCC EMISSIONS OVERVIEW



DLRCC'S EMISSIONS PER FUEL TYPE



DLRCC'S EMISSIONS PER CATEGORY

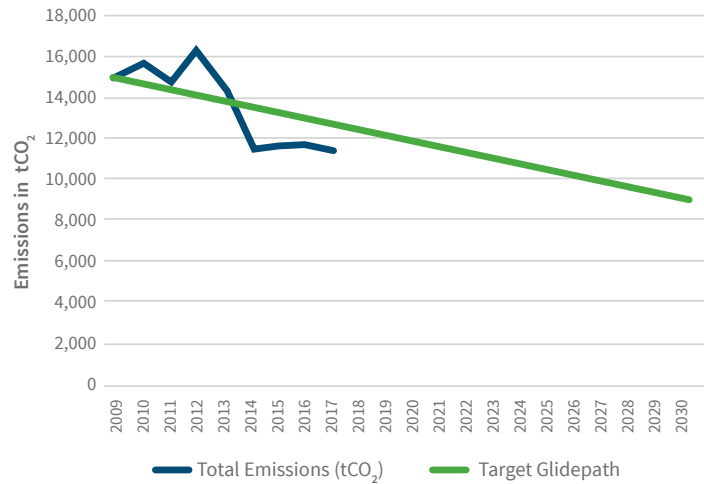
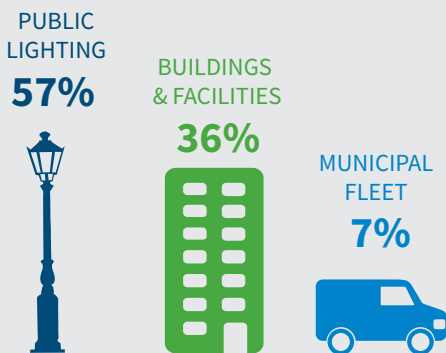


Figure 20 DLRCC's Emissions 2009-2017, with Projected Glide Path to the 40% Reduction Target by 2030

Figure 20 shows that DLRCC's emissions decreased from 14,920 tonnes of CO₂ in 2009 to 11,280 tonnes of CO₂ in 2017. This means that DLRCC is now 2,330 tonnes of CO₂ (16%) away from the 2030 target of a 40% emissions reduction from its baseline year.

In 2017, the Council's total emissions amounted to 11,280 tonnes of CO₂. Public lighting was the highest contributor, accounting for 57% of total emissions. This was followed by buildings and facilities, and the municipal fleet, each contributing 36% and 7% to the Council's emissions, respectively.

In 2017, 77% of the Council's emissions came from electricity; this was mainly due to the large amount of electricity used in public lighting and in the Council's buildings and facilities. Natural gas was the second highest contributor of emissions at 14%. The majority of this gas was used for space heating in Council buildings and facilities. Diesel, which made up the majority of the energy used for the vehicle fleet, contributed 7% to the total emissions.

DÚN LAOGHAIRE-RATHDOWN COUNTY COUNCIL'S SOCIAL HOUSING

DLRCC is responsible for the allocation, maintenance and refurbishment of its social housing stock, but not the day-to-day energy use of its tenants. However, the Council can take steps to reduce these emissions, through energy efficiency upgrades.

The most recently-available information for the Council's social housing is based on DLRCC's social housing data for 2016 and SEAI's Building Energy Rating (BER) Research Tool. A BER is a certificate of energy efficiency of a property. Properties that achieve an 'A1' rating are the most energy efficient, while properties with a 'G' rating are the least efficient. Figure 21 below shows the estimated building energy ratings for all the total social housing stock in Dún Laoghaire-Rathdown. It can be seen that the most common rating was C2, which makes up 21% of the total social housing stock in the area; this is higher than the county-wide average D rating. 59% of the housing stock is rated C3 or better, which reflects the retrofitting work already carried out by the Council to upgrade the less efficient social housing stock.

The majority of the higher A and B ratings are made up of apartments, as many of these have been recently built. Most of the social housing stock in Dún Laoghaire-Rathdown was built prior to the 2011 domestic building regulations, which are more stringent on energy efficiency, and as a result, newly built or refurbished dwellings generally perform better. There were no A1 or A2 ratings in the social housing sector in Dún Laoghaire-Rathdown in 2016 and data gathered from SEAI's BER Research Tool for the same year did not contain any A1 or A2 dwellings, so these are not reflected in the charts. It should be noted that since then, DLRCC has provided new social housing (i.e. such as Rochestown House) that is up to Passive House standard. Only 5% of the buildings were found to be F and G-rated.

SOCIAL HOUSING EMISSIONS OVERVIEW

TOTAL EMISSIONS FROM SOCIAL HOUSING SECTOR IN 2016 WERE

14,050 tCO₂

59%

59% OF SOCIAL HOUSING STOCK WAS RATED **C3 OR BETTER**



74%
OF EMISSIONS CAME FROM NATURAL GAS

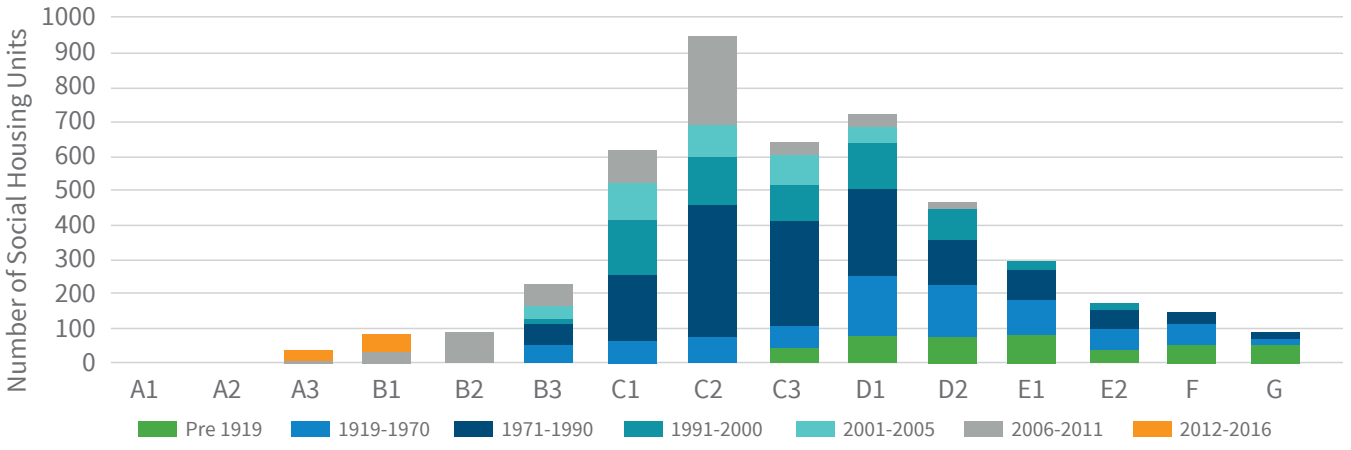


Figure 21 DLRCC's Social Housing Units by Construction Period and BER Rating, as in 2016

TOTAL EMISSIONS OF DÚN LAOGHAIRE-RATHDOWN AREA

The most recently-available information for the total emissions in the entire Dún Laoghaire-Rathdown area is based on Census 2016 data. Using this data, Codema was able to calculate that the total emissions for the Dún Laoghaire-Rathdown area amounted to 1,139,570 tonnes of CO₂eq in 2016. The sectors that produced the most emissions were the residential, transport and commercial sectors, accounting for 43.5%, 33.1% and 18.5% of the total emissions, respectively. The emissions attributed to Dún Laoghaire-Rathdown County Council amounted to only 1% of the total County emissions, with social housing contributing another 1.2%. This highlights the need for collaboration and action from all stakeholders to tackle the remaining 97.8% of emissions from public and private sector sources in the County.

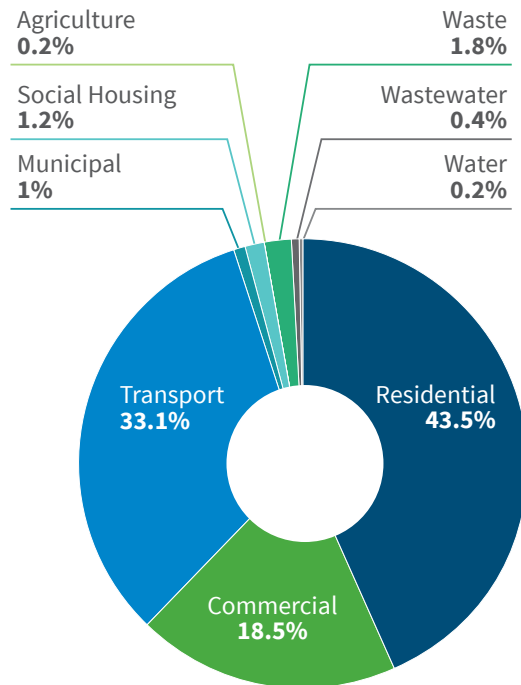


Figure 22 Total GHG Emissions for Dún Laoghaire-Rathdown Area per Sector



Photo Source: Fáilte Ireland



Further information

For further information and a more detailed analysis of the GHG emissions of Dún Laoghaire-Rathdown County Council and the DLR area, please refer to Appendix I of this document, or read Codema's *Dún Laoghaire-Rathdown Baseline Emissions Report 2016* at www.codema.ie/publications