

Mid Devon District Council Greenhouse Gas Inventory 2019/20

Company Information

Mid Devon District Council (MDDC)

Phoenix House, Phoenix Ln, Tiverton EX16 6PP

Reporting Period

1st April 2019 to 31st March 2020

Quantification and Reporting Methodology

The quantification of emissions has been undertaken in accordance with Chapter 3 of *HM Government 2019, Environmental Reporting Guidelines: Including streamlined energy and carbon reporting guidance*¹.

The *2018 UK Government GHG Conversion Factors for Company Reporting (version 1.01)* were used in the calculations².

Organisational Boundary

The financial control approach has been used.

Operational Scopes

Scopes 1, 2 and certain Scope 3 emissions (as described in the detailed inventory) have been measured in metric tonnes of carbon dioxide equivalent (tCO₂e).

Summary Inventory

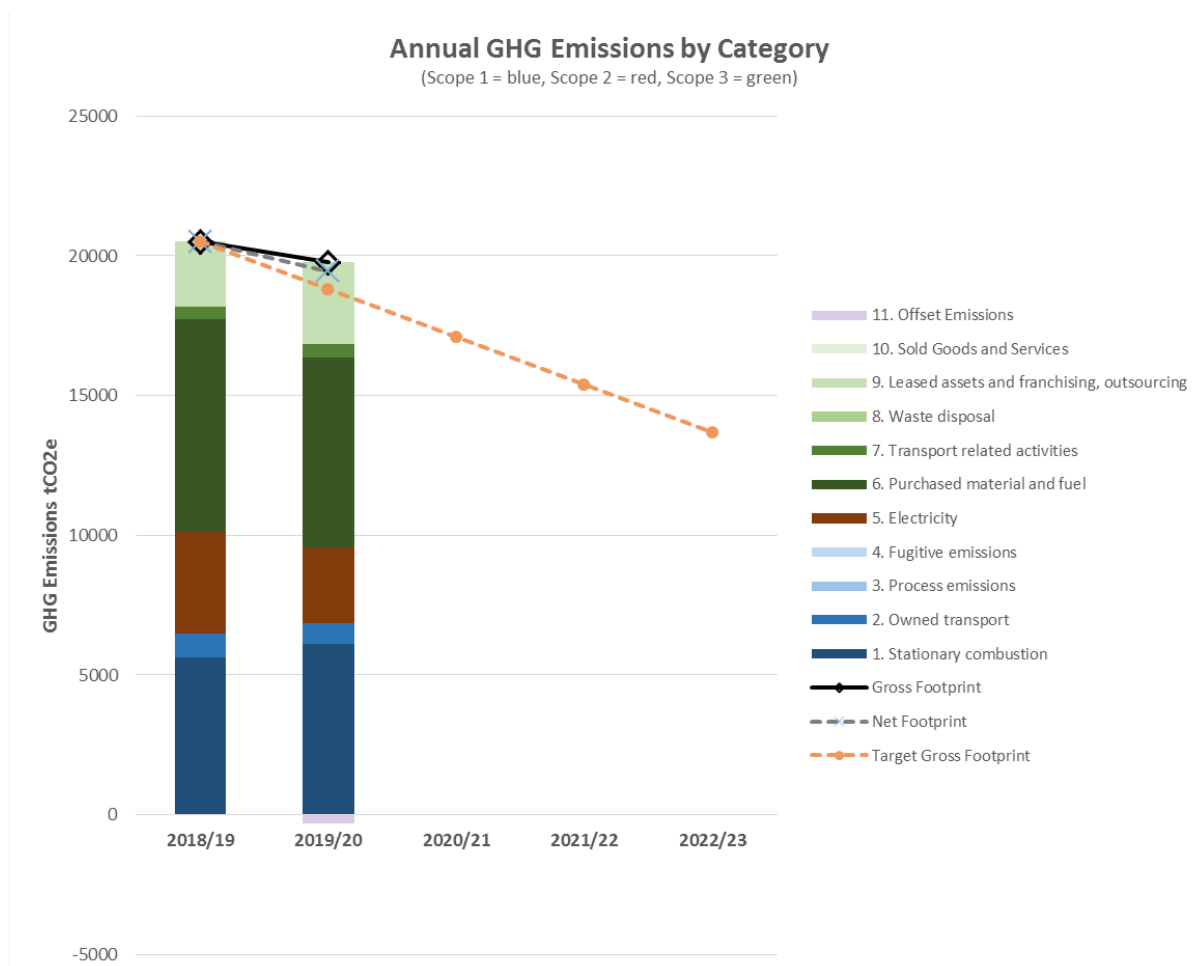
Emissions by scope measured in tCO₂e are shown in the inventory and graph below.

Total gross emissions in 2019/20 were 19,754 tCO₂e and the net emissions were 19,439 tCO₂e.

¹ <https://www.gov.uk/government/publications/environmental-reporting-guidelines-including-mandatory-greenhouse-gas-emissions-reporting-guidance>

² <https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting>

| No. | Category | 2018/19 | 2019/20 |
|--|--|----------------|----------------|
| SCOPE 1: Direct GHG emissions and removals | | 6499.0 | 6851.4 |
| 1. | Stationary combustion | 5633.0 | 6095.4 |
| 2. | Owned transport | 866.0 | 755.9 |
| 3. | Process emissions | 0.0 | 0.0 |
| 4. | Fugitive emissions | 0.0 | 0.0 |
| SCOPE 2: Energy GHG indirect emissions | | 3627.8 | 2697.7 |
| 5. | Electricity | 3627.8 | 2697.7 |
| SCOPE 3: Other indirect GHG emissions | | 10372.7 | 10208.8 |
| 6. | Purchased material and fuel | 7590.8 | 6819.5 |
| 7. | Transport related activities | 443.7 | 459.5 |
| 8. | Waste disposal | 2.1 | 2.1 |
| 9. | Leased assets and franchising, outsourcing | 2336.1 | 2927.7 |
| 10. | Sold Goods and Services | 0.0 | 0.0 |
| TOTAL GROSS FOOTPRINT (SCOPES 1, 2 and 3) | | 20499.5 | 19757.9 |
| 11. | Offset Emissions | 0.0 | -318.7 |
| TOTAL NET FOOTPRINT (SCOPES 1, 2 and 3 and Offsets) | | 20499.5 | 19439.2 |



Base Year

The base year is taken as this year, namely 2018/19. Subsequent years will report progress against the base year.

Reasons for Change in Emissions

Overall gross emissions fell by 3.6% compared to last year and by 5.2% for the net footprint. The main reasons for the changes as seen in the tables below are as follows:

- Emissions from council houses were calculated based on more detailed information this year which saw an increase in emissions from gas and a reduction from electricity.
- Overall, emissions from electricity fell predominantly due to a drop in the carbon intensity of the national grid.
- There was a 13% reduction in fuel consumed by the council's own vehicles, though as the data was only available as a single aggregated volume of fuel it was not possible to determine the cause of the reduction.
- Procurement spend increased from £16.8 million to £17.7 million (a 5.3% increase). As emissions from procurement are calculated based on amount spend, combined emissions from goods and services went up, though only by 0.7% likely due to different categorisation of spend into either goods or services (with goods having higher emissions per £ spent). It is noted that this calculation approach is very approximate and it would be preferable to work towards a position where suppliers provide more accurate emission data.
- This year includes some offset from exported energy from renewable energy (PV) on council owned dwellings and the corporate estate compared to last year where the information was not available (it is noted that this year the data was not fully available for the corporate estate so the actual offset is likely to be greater than stated).
- Other parts of the footprint are comparatively small, and did not change my significant amounts.

Targets

Mid Devon District Council has committed to achieving net zero emissions by 2030.

Intensity Measurement

Emissions have been quoted in absolute terms only.

External Assurance Standard

The inventory has been compiled by the Centre for Energy and the Environment at the University of Exeter.

Carbon Offsets

No carbon credits have been purchased.

Detailed Inventory

Emissions by type and in detail measured in tCO₂e are shown in the inventory below.

Scope 1

Scope 1 includes four emission categories. The assumptions made for each of these were as follows:

1. Stationary Combustion: Emissions associated with combustion of fuels in stationary equipment (typically boilers in buildings). This includes all owned buildings including leased out buildings as these are on an Operating Lease. Calculations were undertaken following an information hierarchy with consumption or metered data (in some cases extrapolated to give 12 months of data) being used first, or if this was unknown to use area based benchmark data. Emissions from Council Owned housing has been taken to be a Scope 1/2 emission as it is assumed they are let on an "operating lease" as per Appendix F of the Greenhouse Gas Protocol. Emissions were calculated based on main heating fuel together with national average energy consumption per dwelling.
2. Owned Transport: Emissions associated with mobile equipment, typically transport equipment. The calculation is based on provided fuel consumption (litres of diesel) for a range of departments, and also for pool cars (based on amount spent on fuel and average annual fuel prices) taken as being owned transport.
3. Process Emissions: Waste collection is part of the Council's obligations - those emissions are included within transport based emissions (2. Owned Transport). Waste processing is a function of upper tier authorities and so are out of scope for second tier authorities. There are no other process emissions.
4. Fugitive Emissions: Emissions associated with refrigerant leaks from cooling equipment. MDDC state that this is minimal, and so has been taken as zero in the footprint.

The results are shown in the Table below.

| No. | Category | 2018/19 | 2019/20 |
|---|---|---------------|---------------|
| SCOPE 1: Direct GHG emissions and removals | | 6499.0 | 6851.4 |
| 1. Stationary combustion | | 5633.0 | 6095.4 |
| 1 | Letting Units | 10.6 | 10.6 |
| 1 | HRA shops (letted out) | 0.0 | 0.0 |
| 1 | Residential lettings | 4.1 | 4.1 |
| 1 | Miscellaneous (letted out) | 18.5 | 18.5 |
| 1 | Sports and Leisure Centres | 453.4 | 453.1 |
| 1 | Industrial Units (letted out) | 44.6 | 44.6 |
| 1 | Public Conveniences | 0.0 | 0.0 |
| 1 | Council Offices/Buildings | 91.0 | 90.9 |
| 1 | Cemeterys/Chapels | 3.2 | 3.2 |
| 1 | Council Houses 2018/19 | 5007.5 | 5470.3 |
| 2. Owned transport | | 866.0 | 755.9 |
| 2 | District Officer | 8.8 | 0.0 |
| 2 | Grounds Maintenance | 62.8 | 0.0 |
| 2 | Property Services | 10.3 | 0.0 |
| 2 | Recycling | 210.2 | 0.0 |
| 2 | Refuse | 454.0 | 0.0 |
| 2 | Street | 70.4 | 0.0 |
| 2 | Trade Waste | 46.1 | 0.0 |
| 2 | From fuel use unallocated to department | 3.5 | 755.9 |
| 3. Process emissions | | 0.0 | 0.0 |
| 3 | Not applicable | 0.0 | 0.0 |
| 4. Fugitive emissions | | 0.0 | 0.0 |
| 4 | Not applicable | 0.0 | 0.0 |

Scope 2

Scope 2 includes one emission category. The assumptions made were as follows:

5. Electricity: Emissions associated with purchased electricity. This includes all owned buildings including leased out buildings as these are on an Operating Lease. Calculations undertaken using the same principles as for 1. Stationary Combustion.

The results are shown in the Table below.

| No. | Category | 2018/19 | 2019/20 |
|---|-------------------------------|---------------|---------------|
| SCOPE 2: Energy GHG indirect emissions | | 3627.8 | 2697.7 |
| 5. Electricity | | 3627.8 | 2697.7 |
| 5 | Letting Units | 262.3 | 236.8 |
| 5 | HRA shops (letted out) | 27.4 | 24.7 |
| 5 | Residential lettings | 5.0 | 4.5 |
| 5 | Miscellaneous (letted out) | 100.2 | 81.4 |
| 5 | Sports and Leisure Centres | 255.8 | 230.9 |
| 5 | Industrial Units (letted out) | 45.8 | 41.3 |
| 5 | Public Conveniences | 12.6 | 11.4 |
| 5 | Council Offices/Buildings | 15.0 | 12.9 |
| 5 | Cemeterys/Chapels | 0.1 | 0.0 |
| 5 | Council Houses 2018/19 | 2903.6 | 2053.6 |

Scope 3

Scope 3 includes five emission categories. The assumptions made for each of these were as follows:

6. Purchased material and fuel: Embedded emissions of all purchased materials and fuels. Emissions from bought goods were estimated by examining total procurement spend by the council and allocating each line of spend to a sector within the economy (comprised mainly of goods and services). These were then multiplied by emission factors from Annex E of Environmental Reporting Guidelines. It should be noted that these factors are from 2009 and so result in a large area of uncertainty. Well to Tank (WTT) emissions from fuels and processes were calculated from all the other sections in the inventory with the exception of sections 3, 4, 8, 9 and 10.
7. Transport related activities: Emissions from grey fleet, business travel and commuting. Grey fleet emissions were calculated based on mileage claims with the assumption that journeys were in an average car with unknown fuel. Business travel (road/rail/air) emissions were estimated for rail journeys based on known spend on rail travel and a generic cost per km factor. Commuting emissions were estimated based on number of staff and national annual average commuting distances, with the assumption that journeys were in an average car with unknown fuel. Councillor mileage calculated based on mileage claims with the assumption that journeys were in an average car with unknown fuel.
8. Waste disposal: Emissions associated with disposal of the Council's own waste e.g. from its offices (as opposed to waste produced by constituents). Emissions have been calculated based on the known annual waste produced by the council at each of its sites.
9. Leased assets and franchising, outsourcing: Embedded emissions of all purchased services. These have been estimated in the same way as goods have in 6. Purchased material and fuel.

10. Sold goods and services: MDDC state that no additional sold goods or services have been identified.

The results are shown in the Table below.

| No. | Category | 2018/19 | 2019/20 |
|--|--|----------------|----------------|
| SCOPE 3: Other indirect GHG emissions | | 10372.7 | 10208.8 |
| 6. Purchased material and fuel | | 7590.8 | 6819.5 |
| 6 | Procured Goods | 5594.6 | 5054.9 |
| 6 | Well to Tank Emissions fuels | 1996.2 | 1764.7 |
| 7. Transport related activities | | 443.7 | 459.5 |
| 7 | Grey Fleet (business travel in own cars) | 45.7 | 54.8 |
| 7 | Business travel train | 0.9 | 1.1 |
| 7 | Commuting | 385.0 | 384.5 |
| 7 | Councillor Mileage | 9.5 | 8.2 |
| 7 | Pool Cars | 2.5 | 10.9 |
| 8. Waste disposal | | 2.1 | 2.1 |
| 8 | Recycled waste | 0.6 | 0.6 |
| 8 | Residual waste | 1.5 | 1.5 |
| 9. Leased assets and franchising, outsourcing | | 2336.1 | 2927.7 |
| 9 | Procured Services | 2336.1 | 2927.7 |
| 10. Sold Goods and Services | | 0.0 | 0.0 |
| 10 | Not applicable | 0.0 | 0.0 |

Net Footprint

As well as the headline gross footprint, the net footprint can be reported as a secondary output. This can include reductions in GHG emissions associated with the export of generated renewable energy, and the purchase of carbon offsets. It was assumed that 50% of generated electricity from council owned dwellings was exported. Whilst approximately 261 MWh of electricity was generated on the corporate estate from PV, export data was only available for the Exe Valley Leisure Centre (though not for the entire period) and so the proportion of generated electricity at the site exported (29%) was applied to that site only resulting in approximately 33 MWh of electricity exported.