



Lowestoft Town Council Greenhouse Gas Report 2019

Report produced on behalf of Lowestoft Town Council, March 2022 by:
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Table of Contents

| | |
|--|----|
| Disclaimer..... | 2 |
| 1. Background to this Report..... | 3 |
| 2. Methodology and Scope of Reporting..... | 4 |
| 3. GHG Emissions Statement..... | 5 |
| 4. Intensity Measurement..... | 6 |
| 5. Breakdown of GHG Emissions..... | 7 |
| 6. Electricity Generated from On-site Solar PV..... | 8 |
| 7. Energy use in Buildings..... | 8 |
| 8. Transport Related Emissions..... | 9 |
| 9. Water Emissions..... | 9 |
| 10. Waste Emissions..... | 9 |
| 11. Scope 3 Emissions..... | 10 |
| 12. Actions for Town Councils..... | 11 |
| Appendix 1: Lowestoft Town Council Site Emissions Considered in this Report..... | 12 |
| Appendix 2: Lowestoft Town Council Site Emissions Excluded from this Report..... | 13 |

Disclaimer

Data and information used in the production of this report has been provided to Groundwork Norfolk (part of Groundwork East) by Lowestoft Town Council representatives. Groundwork and its advisors have made every effort to ensure the content of this report is appropriate and accurate based on the information and data provided to them. Where assumptions have been made these are clearly set out. No verification of data and information sources has been undertaken. This report has been produced, checked and approved for issue under Groundwork's own quality management system. Groundwork cannot accept responsibility for errors and/or omissions within this document or loss occasioned to persons acting or refraining from action as a result of the material in this document.



1. Background to this Report

Local authorities in England have been requested by Government to measure and report annually upon the greenhouse gas (GHG) emissions arising from their own activities.¹ This Annual Greenhouse Gas Report follows HM Government *Environmental Reporting Guidelines* with emissions broken down into three scopes and reported in Carbon Dioxide Equivalent (CO₂e), calculated using the UK Government's 2019 carbon conversion factors.^{2,3}

Lowestoft Town Council is the 13th largest local council in England, and the small team manages a large portfolio of property. The team is understood to be currently located at Hamilton House, Battery Green Road, Lowestoft NR32 1DE.

The production of this Annual Greenhouse Gas Report represents Groundwork Norfolk's proposal to provide support for the council to achieve net zero carbon emissions. This report is the baseline carbon footprint for the year 2019/20. It is understood that this and future annual footprint reports will be written and published on the council website. These reports show emissions in a particular year for the council's estate. The production of these reports does not include site visits or make detailed recommendations of actions that would reduce emissions.

The next stage could be a detailed decarbonisation plan that would look at the buildings in depth and make quantified recommendations for emissions reductions.

¹ Via a letter to Local Authorities <https://www.gov.uk/guidance/sharing-information-on-greenhouse-gas-emissions-from-local-authority-own-estate-and-operations-previously-ni-185>

² H.M. Government Environmental Reporting Guidelines
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/791529/Env-reporting-guidance_inc_SECR_31March.pdf

³ Greenhouse gas reporting: conversion factors 2019
<https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2019>



2. Methodology and Scope of Reporting

This Greenhouse Gas Report covers emissions from Lowestoft Town Council's own estate and operations looking at electricity, gas, water and business travel.

Energy, water use and fuel consumption data has been provided by Lowestoft Town Council with GHG emissions calculations and analysis carried out by Groundwork Norfolk. In line with the *Environmental Reporting Guidelines* carbon emissions are broken down into direct and indirect emissions. These are categorised into Scope 1, Scope 2 and Scope 3 emissions according to which activity and fuel or energy use they arise from.

Scope 1: These are Direct Emissions which arise from the activities of an organisation and include fuel combustion on site such as gas boilers and fleet vehicles.

Scope 2: These are Indirect Emissions from electricity purchased and used by the organisation. Emissions are created during the production of the energy which is eventually used by the organisation.

Scope 3: These are all other Indirect Emissions from activities of the organisation, occurring from sources that they do not own or control. In this GHG report these cover emissions associated with business travel by employees and also those associated with the 'Transmission and Distribution' (T&D) and Well to Tank of electricity and natural gas purchased by the organisation. Scope 3 can include a wide range of indirect emission sources such as supply and demand chains and staff commuting emissions although at present the data is not available for this.

Inclusions

Buildings that are owned and operated by the council have been included where the council pays the energy bills. The Hamilton House property has not been included. There is understood to be no council owned vehicle fleet, and waste has not been included as it was deemed to be insignificant and difficult to measure. A range of properties leased to third parties has been excluded. Appendix 1 details the properties included within this report

GHG emissions are expressed as tonnes of CO₂ equivalents (tCO₂e). This is a unit of measurement used to indicate the global warming potential of a greenhouse gas, expressed in terms of the global warming potential of one unit of carbon dioxide. The UK Government's 2019 Carbon Conversion Factors have been applied to the units of energy and fuel consumption to calculate the associated emissions.⁴

⁴ Greenhouse gas reporting: conversion factors 2019

<https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2019>



3. GHG Emissions Statement

Lowestoft Town Council's total gross greenhouse gas emission statement for the year 2019/20 has been calculated to be 23.2 tCO₂e, as shown in Table 1.

Table 1: Emissions Statement (Estate and Operations) 2019/20

| 2018-19 | | GHG Emissions (tCO ₂ e) |
|---------|-----------------------------------|------------------------------------|
| Scope 1 | Natural Gas | 0.1 |
| Scope 2 | Electricity | 16.5 |
| Scope 3 | Water supply and treatment | 7.1 |
| | Non-Council Owned Vehicle Mileage | 0.2 |
| | Electricity T&D | 1.4 |
| | Fuel and Energy - Electricity WTT | 2.5 |
| | Fuel and Energy - Natural gas WTT | 0.02 |
| | | 27.9 |

Electricity T&D (Transmission and Distribution) losses refers to the emissions associated with electricity which is lost from the system used for delivering the purchased electricity. These emissions are calculated by using a 'T&D loss' emission factor which is included in the Carbon Conversion Factors. WTT refers to Well to Tank emissions associated with the production of the fuels and electricity consumed on site.



4. Intensity Measurement

Lowestoft Town Council serves a population of 49,453.⁵ An intensity ratio of 'kilogrammes of CO₂e per resident' has been calculated to be 0.56 kgCO₂e per resident for this period.

Previously local authorities were required to complete an annual greenhouse gas report. Since this requirement has ended not all local authorities have continued to report emissions.

Authorities differ significantly in size, geography and responsibilities so comparisons may be misleading, however, Table 2 below provides a snapshot of Lowestoft Town Council's carbon footprint in comparison to other local authorities.

Table 2: GHG Emissions Comparison with Other Published Authorities.

| Local Authority | GHG Emissions | Population | kgCO ₂ e/resident/year |
|--|---------------|---------------|-----------------------------------|
| Lowestoft Town Council | 24.8 | 49,453 | 0.56 |
| Unnamed Suffolk Town Council | 74.5 | 20,000 | 3.73 |
| Norwich City Council (inc business and contractor travel , and contractor operated buildings but not housing stock) | 4,297 | 141,137 | 30.44 |
| Kings Lynn (inc Transmission and distribution losses, water supply, water treatment, business travel and contractor travel) | 4,632 | 151,811 | 30.51 |
| Ipswich Borough Council (excluding housing stock) | 4,757 | 136,913 | 34.74 |
| Breckland (include contracted vehicle fleets, commuting, procured goods and services , and expensed travel) | 5,084 | 139,968 | 36.32 |
| Eastleigh Borough Council (includes staff travel) | 7,727 | 129,966 | 59.45 |
| Bradford Metropolitan District Council (excludes staff travel but includes schools and street lighting) | 37,662 | 500,000 | 75.32 |

The exact composition of services, scopes and ranges of emissions included in each report also vary so comparisons can be misleading, the unnamed Suffolk town has been previously audited and is known to include lighting at several local amenities such as a cemetery and church, and also includes some street scene vehicles.

⁵ Lowestoft Town Council supplied figure for parish boundary.



5. Breakdown of GHG Emissions

Of the 27.9tCO₂e emissions for the period 2019/20, 73% has been attributed to electricity (and its associated T&D and WTT) consumption, followed by water supply and treatment at 25%. Natural gas and business mileage accounts for approximately 1% each (Figure 1).

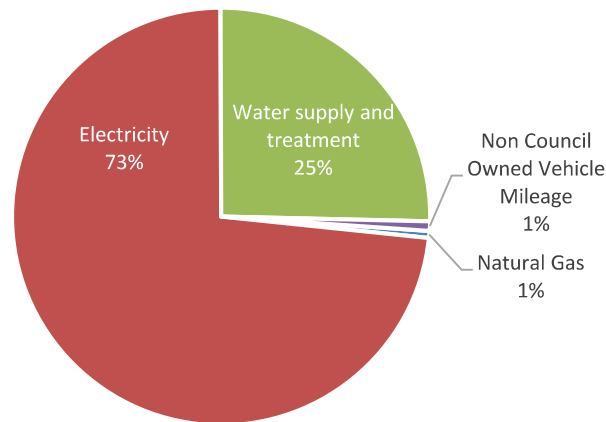


Figure 1: Breakdown of GHG Emissions by Source.

Figure 2 shows the emissions from each building and the staff business mileage.

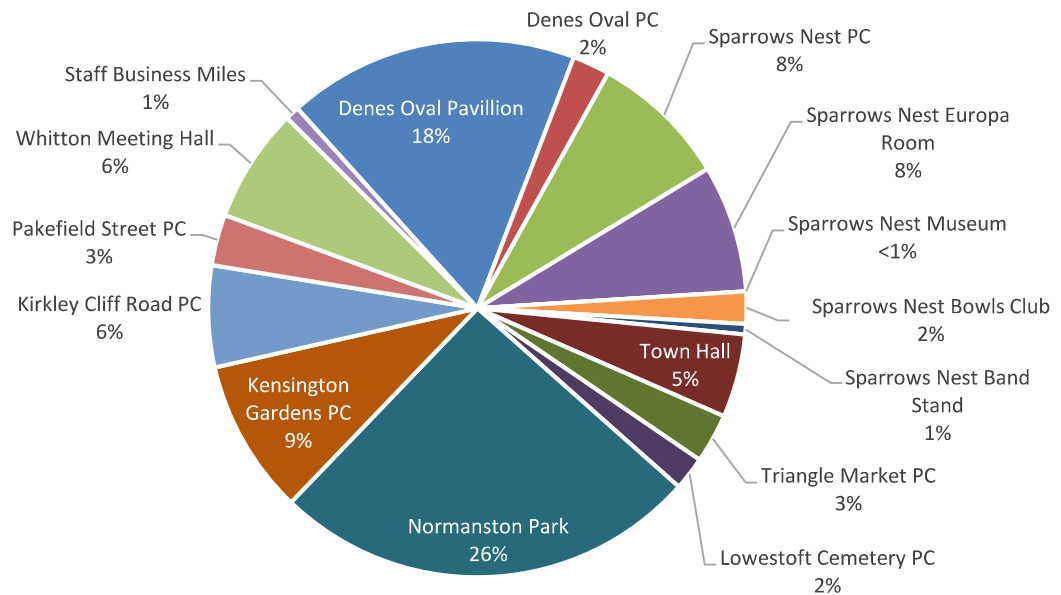


Figure 2: Breakdown of GHG Emissions by Location/Source.

6. Electricity Generated from On-site Solar PV

The council does not currently benefit from any renewable electricity generation.

7. Energy use in Buildings

Electricity and gas consumption data was provided from meter readings and estimates where meter readings were unavailable (Figure 3).

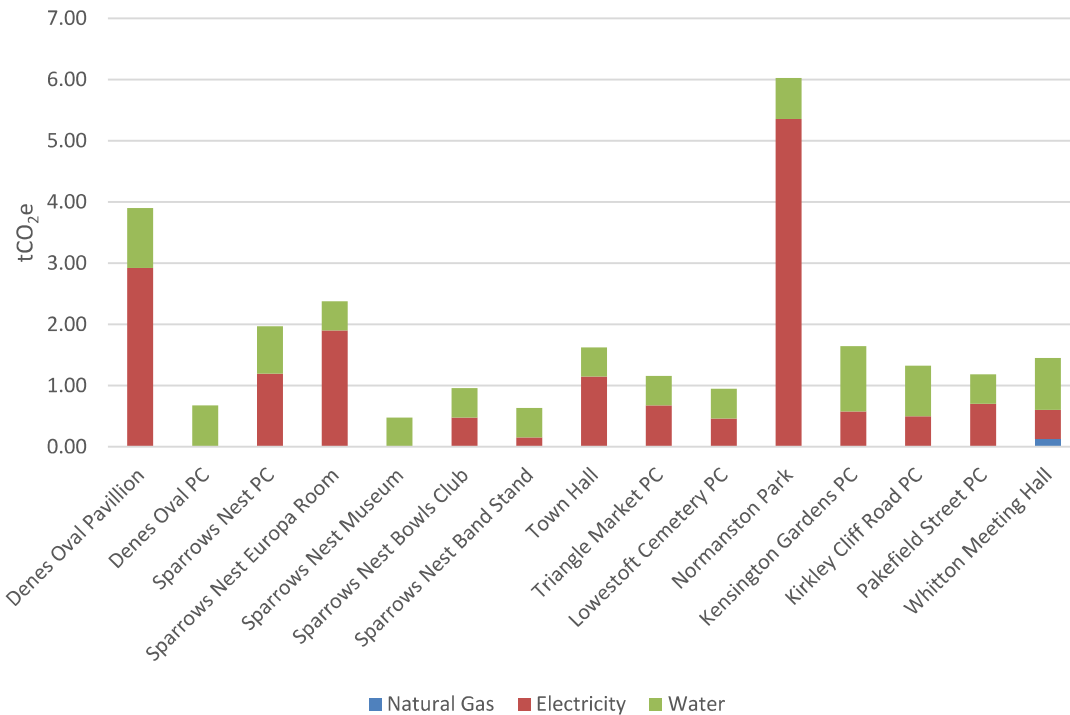



Figure 3: GHG Emissions Associated with Heat, Light and Power Consumption.

The Town Hall is understood to be currently unused.

The heat, light, and power emissions associated with Normanston Park accounts for 26% of the total council's emissions with a very high electricity consumption. This is understood to include two changing rooms.





No electricity consumption data was available for Denes Oval public conveniences or Sparrow's Nest Museum.

Whitton Hall, electricity consumption has been estimated and is the only building understood to be consuming natural gas.

8. Transport Related Emissions

The council owns no vehicles and staff business mileage emissions in their own vehicles has been estimated based on the mileage data supplied, this was not available by fuel type in the recorded data so has been based on an average unknown car emissions factor.

This mileage accounts for 0.2tCO₂e, 1% of the entire council's emissions.

9. Water Emissions

The town council has responsibility for a large number of facilities using water such as public conveniences and changing rooms. Some water meter data was available and what has been recorded represents a fairly significant portion of the overall carbon emissions at 25%. In view of this and bearing in mind the wider environmental impacts of water consumption and waste water disposal the council may wish to considered more regular monitoring to identify issues such as leaks or misuse and an audit of the facilities to identify potential water reduction improvements.

10. Waste Emissions

The office waste has been deemed to be insignificant and is currently unmeasured so has been excluded. It is recommended that this be monitored in future to guide waste reduction measures and ensure waste is recycled where appropriate.



11. Scope 3 Emissions

The Greenhouse Gas Protocol is the world's most widely used greenhouse gas accounting standard and recommends considering a total of 15 Scope 3 categories; eight of which fall into upstream indirect emissions, i.e. products and services purchased by the reporting organisation, and 7 into downstream indirect emissions, which relate to sold goods and services (Figure 4).

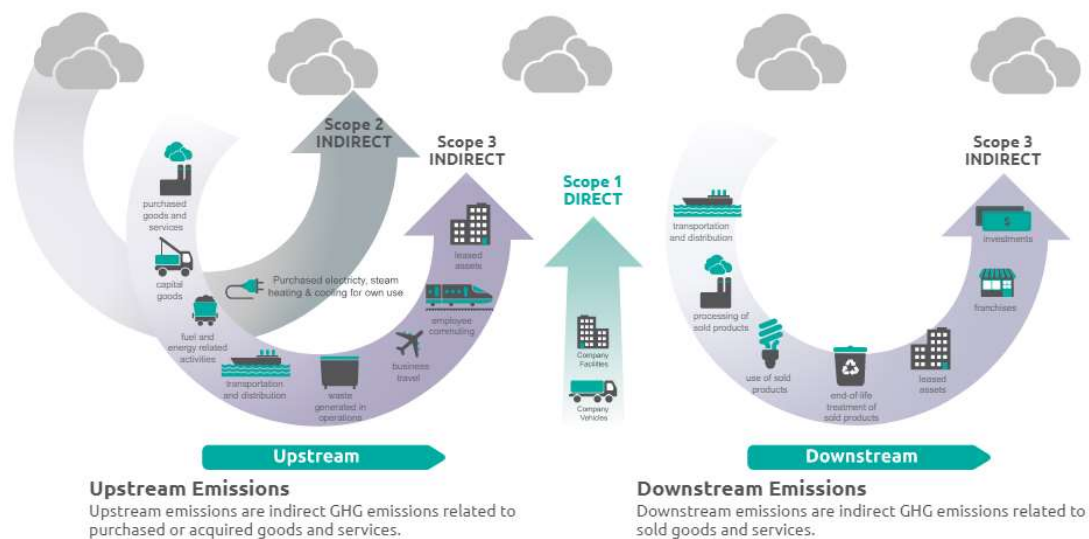
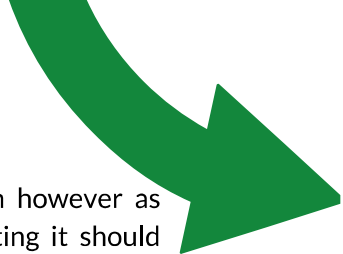


Figure 4: GHG Protocol Scope 1, 2 and 3 Emissions

The Scope 3 categories are as follows:

- Category 1: Purchased Goods & Services
- Category 2: Capital Goods
- Category 3: Fuel and Energy Related Activities (not incl. in Scope 1 or 2)
- Category 4: Transportation & Distribution (Upstream)
- Category 5: Waste – Generated in Operations
- Category 6: Business Travel
- Category 7: Employee Commuting
- Category 8: Leased Assets (Upstream)
- Category 9: Transportation & Distribution (Downstream)
- Category 10: Processing of sold Products
- Category 11: Use of sold products
- Category 12: End-of-Life treatment of sold products (Disposal)
- Category 13: Downstream leased assets
- Category 14: Franchises
- Category 15: Investments





Some categories may not be applicable to a particular reporting organisation however as Lowestoft Town Council develops its future greenhouse gas inventory reporting it should provide justification for each category excluded.

Lowestoft Town Council has included in this Scope 3 inventory;
Category 3: electricity T&D, fuel and energy WTT, and water
Category 6: business mileage in staff owned vehicles.

A further inventory is underway to report on Category 13: Downstream leased assets to include the property portfolio owned or controlled by the Town Council but which are leased to other parties.

This will include the Scope 1 and Scope 2 inventory of the tenant businesses; natural gas, heating oil, LPG, electricity for example but will not include the third party's Scope 3 emissions such as business travel, water or waste.

12. Actions for Town Councils

Friends of the Earth publish a guide identifying actions that parish and town councils can take to climate change and nature.

<https://policy.friendsoftheearth.uk/reports/20-actions-parish-and-town-councils-can-take-climate-and-nature-emergency>

Action on Climate in Teignbridge (ACT) also publish a resources pack for town and parish councils.

<https://actionclimateteignbridge.org/index.php/resources-pack-for-town-and-parish-councils/>

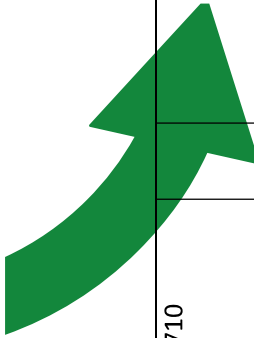


Appendix 1: Lowestoft Town Council Site Emissions Considered in this Report

| Sites Included in the Report | Street | Building | Electricity Use | Water Use m3 | Gas Use |
|------------------------------|----------------|---------------------|-----------------|--------------|------------------------------|
| Denes Oval | Whapload Road | Pavilion | 11424 | 1451 | 0 |
| Denes Oval | Whapload Road | Public Conveniences | none | 569 | |
| Sparrows Nest | Whapload Road | Public Conveniences | 4663.7 | 871.5757576 | |
| Sparrows Nest | Whapload Road | Europa Room | 7432.615385 | | |
| Sparrows Nest | Whapload Road | War Memorial Museum | 0 | | |
| Sparrows Nest | Whapload Road | Bowls Club | 1883.8 | | |
| Sparrows Nest | Whapload Road | Band Stand | 607.1 | | |
| Town Hall | Compass Street | Town Hall | 4485.967742 | | 0 unused awaiting renovation |
| Triangle Market | High Street | Public Conveniences | 2639.7705 | | estimate |
| Lowestoft Cemetery | Rotterdam Road | Public Conveniences | 1815.7 | | estimate |
| Normanston Park | Peto Way | Public Conveniences | 20961.6 | | all one block/meter |
| Normanston Park | Peto Way | Changing Rooms | | 553.030303 | all one block/meter |
| Normanston Park | Peto Way | Changing Rooms 2 | | | all one block/meter |



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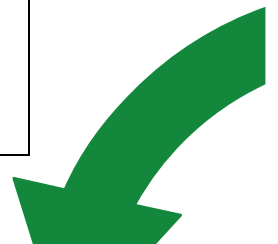
| | | | | | | | |
|----------------------|--------------------|-------|---------------------|--------|------|----------|------------------------------------|
| Kensington Gardens | Kirkley Cliff Road | Cliff | Public Conveniences | 2260.8 | 1710 | | |
| Kirkley Cliff Road | Kirkley Cliff Road | Cliff | Public Conveniences | 1961.2 | 992 | | |
| Pakefield Street PCs | Pakefield Street | | Public Conveniences | 2743.9 | | estimate | |
| Whitton Hall | Hawthorn Avenue | | Meeting Hall | 1840 | 1085 | 62.4 | recently taken over, estimate elec |

Appendix 2: Lowestoft Town Council Site Emissions Excluded from this Report

| Sites Excluded from the Report | Street | Building | Electricity Use | Water Use m3 | Gas Use |
|--------------------------------|--------------------|--------------------|-----------------|--------------|---------|
| Gunton Hall | Hollingsworth Road | Meeting Hall | | | Tenant |
| Tingdene | Whapload Road | Caravan Site | | | Tenant |
| Belle Vue Park | Yarmouth Road | Lodge | | | Tenant |
| Sparrows Nest | Whapload Road | Sparrows Nest | | | Tenant |
| Sparrows Nest | Whapload Road | New Studio Theatre | | | Tenant |
| Sparrows Nest | Whapload Road | Giardinos Bar | | | Tenant |
| Sparrows Nest | Whapload Road | Martello Café | | | Tenant |



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|--|--------------------|--------------------|-------------|--|--------|
| Sparrows Nest | Whapload Road | RNSPA Museum | | | Tenant |
| Sparrows Nest | Whapload Road | Maritime Museum | | | Tenant |
| Arnolds Bequest | Whapload Road | Lighthouse Café | | | Tenant |
| Marina Theatre | Marina | Marina Theatre | | | Tenant |
| Normanston Park | Peto Way | Jesters Café | | | Tenant |
| Kensington Gardens | Kirkley Cliff Road | Café | | | Tenant |
| Kensington Gardens | Kirkley Cliff Road | Boating Lake Kiosk | 128.3030303 | | Tenant |
| Kensington Gardens | Kirkley Cliff Road | Bowls Pavilion | | | Tenant |
| Kirkley Community Sports and Social Club | Walmer Road | Sports Club | | | Tenant |
| Uplands Centre | Ashburnham Road | Childrens Centre | | | Tenant |
| Uplands Centre | Ashburnham Road | Community Centre | | | Tenant |