Borough Council of
King's Lynn &
West Norfolk



Carbon Audit
2024/2025

Table of Contents

1. Summary 3
2. Scope emissions 3
3. Emissions Breakdown 5
4. Changes to emissions 6
   4.1 The trend 6
   4.2 Scope 1 6
   4.3 Scope 2 6
   4.4 Scope 3 7
5. Electricity generation 8
6. Reducing our emissions 8

Appendix 1: Detailed Emissions 10

Appendix 2: Emission Changes from Base Year 2009/10 11

1. Summary

1.1 The following report sets out the carbon footprint relating to the estate emissions of the Borough Council of King's Lynn and West Norfolk (BCKLWN). This is reported annually to set out the direction of travel against the council's commitment to be Net Zero on its estate emissions profile by no later than 2035.

1.2 This 2024/2025 carbon audit highlights that total net emissions increased by 2.9% from 2023/2024 levels, emitting 2,611.4 tCO_2e.

It still continues to represent a 64% reduction from the original baseline year 2009/2010.

1.3 The carbon audit has been carried out in accordance with The Department for Energy Security and Net Zero (DESNZ) guidelines. Official DESNZ greenhouse gas reporting conversion factors have been used to convert the BCKLWN's usage data into standardised figures for estimated tonnes of carbon dioxide.

2. Scope emissions

2.1 The table below sets out what is captured in each scope.

Scope	***Activity***	***Description***	***Data Source***
Scope 1	Gas Consumption	Used to heat our buildings and sites.	Data obtained from council utility bills
	Oil Consumption	Used to heat our buildings and sites.	Data obtained from council utility bills
	Vehicle Fleet	The council's operational vehicle fleet.	Data obtained from council fuel invoices
Scope 2	Purchased electricity	Electricity purchased from the national grid to power the council's buildings and sites.	Data obtained from council utility bills
Scope 3	Transmission and Distribution Losses	These are indirect emissions from the transmission and distribution of our purchased electricity. It is considered best practise to include these in Scope 3 emissions.	Data obtained from council utility bills

	Water Supply	The supply of water to our buildings and sites.	Data obtained from council utility bills
	Water Treatment	The water we return to the system (90% return to sewer rate).	Data obtained from council utility bills
	Business Travel	Staff and member travel in their own vehicles on business grounds.	Obtained using employee mileage claims
	Contractor Travel	Travel by contractors to carry out work commissioned by the council, e.g., waste collection.	Obtained through contractor fuel records

2.2 The table below sets out the related emissions for each of the scopes for previous years.

BCKLWN tCO_2e Emissions						
Year	**2009/2010**	**2020/2021**	**2021/2022**	**2022/2023**	**2023/2024**	**2024/2025**
Scope 1	2,109.2	1,595.0	1,685.00	1449.0	1,436.9	**1,529.80**
Scope 2	3,235.4	829.5	843.50	885.1	965.2	**962.49**
Scope 2 renewable tariffs	-	-671.3	-843.50	-885.1	-965.2	**-962.49**
Scope 3	2021.5	1,243.8	1,146.41	1,239.4	1,184.0	**1,166.67**
Scope 3 Transmission Losses renewable tariff	-	-	-6.95	-80.9	-83.5	**-85.07**
Total gross emissions	7,366.1	3,668.3	3,674.91	3,573.6	3,586.0	**3,658.96**
Total net emissions	7,366.1	2,997.0	2,824.45	2,607.5	2,537.4	**2,611.40**

3. Emissions Breakdown

BCKLWN Carbon Audit: 2024/2025				
Emissions Sources	**Consumption**		**Emissions Data**	
Scope 1	**Activity Data**	**Unit**	**t CO_2e**	**kg CO_2e**
Gas Consumption	6,542,953.00	*kWh*	1,196.71	1,196,706.104
LPG Consumption	1.00	*tonnes*	2.94	2,939.361
Oil Consumption	-	*litres*	-	-
Council Vehicle Fleet	-	-		
Petrol Vehicle	15,406.52	*litres*	32.11	32,113.350
Diesel Vehicle	118,609.90	*litres*	298.04	298,041.771
Red Diesel	-	*litres*	-	-
Total Scope 1	**-**	**-**	**1,529.80**	**1,529,800.586**
Scope 2	**Activity Data**	**Unit**	**t CO_2e**	**kg CO_2e**
Electricty Consumption	4,648,611.00	*kWh*	962.49	962,494.908
Total Scope 2	**-**	**-**	**962.49**	**962,494.908**
Scope 3	**Activity Data**	**Unit**	**t CO_2e**	**kg CO_2e**
Transmission & Distribution Losses	4,648,611.00	*kWh*	85.07	85,069.581
T&D: EV & Plug-in Hybrid	13,168.10	*miles*	0.92	923.742
Water Supply	73,708.00	m^3	11.29	11,285.432
Water Treatment	49,638.83	m^3	9.22	9,219.916
Business Travel	-	-		
Electric Car	13,168.10	*miles*	0.92	923.742
Small Petrol Car	44,704.78	*miles*	10.34	10,338.427
Medium Petrol Car	23,376.66	*miles*	6.67	6,668.426
Large Petrol Car	6,998.04	*miles*	3.03	3,027.842
Small Diesel Car	45,003.11	*miles*	10.14	10,135.600
Medium Diesel Car	54,136.41	*miles*	14.64	14,643.899
Large Diesel Car	11,722.30	*miles*	3.91	3,910.794
Bus	1,662.29	*passenger km*	0.18	180.292
Taxi	313.50	*passenger km*	0.05	46.589
Underground	23.97	*passenger km*	0.00	0.666
Rail	44,242.37	*passenger km*	1.57	1,568.834
Ferry	-	*passenger km*	-	-
Plane	-	*passenger km*	-	-
Contractor Travel	-	-		
Refuse Collection Vehicles	401,436.02	*litres*	1,008.72	1,008,724.417
Total Scope 3	**-**	**-**	**1,166.67**	**1,166,668.201**
BCKLWN Gross Emissions Total	**-**	**-**	**3,658.96**	**3,658,963.694**
Carbon Offsets / Renewable Tariffs	**Activity Data**	**Unit**	**t CO_2e**	**kg CO_2e**
Renewable Electricity Tariff	- 4,648,611.00	*kWh*	- 962.49	- 962,494.908
Transmission & Distribution Losses	- 4,648,611.00	*kWh*	- 85.07	- 85,069.581
Total	-	-	**- 1,047.56**	**- 1,047,564.489**
BCKLWN Net Emissions Total	-	-	**2,611.40**	**2,611,399.205**

4. Changes to emissions

4.1 The trend

There has been a 2.9% increase in the council's net emissions compared to the 2023/2024 audit. Overall CO_2e emissions increased from 2,537.40 tCO_2e in 2023/2024 to 2,611.40 tCO_2e this is an increase of 74.0 tCO_2e.

4.2 Scope 1

Scope 1 emissions account for 57% of the organisation's total emission profile and totalled 1,529.80 tCO_2e, compared to 55% and 1436.95 tCO_2e in 2023/2024. This is an increase of 92.85 tCO_2e.

Variances are explained below.

4.2.1 Gas consumption

Gas usage across the council's estate contributed to 1,196.71 tCO_2e to the 2024/2025 emissions profile. This is an increase of 73.65 tCO_2e of gas usage in comparison to 2023/2024 when it was responsible for 1123.06 tCO_2e.

4.2.2 In the reporting period we saw reductions at King's Court, Mintlyn Crematorium, South Lynn Visitor Centre and the Custom House. Increases in gas usage were from buildings such as the leisure centres.

4.2.3 Council Fleet Fuel consumption

The council has seen a reduction of 7,619.9 litres in its petrol consumption related emissions. This can be attributed to new efficient petrol hybrid vehicles in the fleet and potentially more journeys by diesel vehicles.
The council have an increase of 16,503.78 litres of diesel compared to 2023/2024 figures. This increase may be partly attributed to timings of fuel purchases.

In January 2025, the council commissioned a decarbonisation review of its fleet. At that time, the council had four electric small vans.

4.2.4 Please note that this section does not refer to the council's outsourced waste contract as their emissions are counted in the scope 3 emissions profile.

4.3 Scope 2

The council's Scope 2 emissions profile is reported at zero. This is due to the council's electricity contract with EDF being provided from confirmed and certified zero carbon sources. However, there was a decrease of 2.66 tCO_2e compared to 2023/2024 figures. This is due to a decrease of usage to 4,648,611 kWh compared to 4,660,919 kWh as well as emission factor changes.

It is worth noting that if the council did not receive its electricity from this tariff it would have a further 962.49 tCO_2e on its Scope 2 emissions profile and additional emissions relating to transmission and distribution through the power grid (see Section 4.4 for further details).

Moving forward, due to the electrification of more heating systems throughout the estate and the further uptake of electric vehicles it is anticipated that electricity consumption will further increase. Future investments in rooftop solar generation on council buildings is being planned to offset additional consumption.

Energy efficient LED lighting has been installed at several sites and further installations and efficiency measures are also being explored.

4.4 Scope 3

Scope 3 emissions totalled at 1,166.67 tCO_2e compared to 1,184.01 tCO_2e in 2023/2024. This is a decrease of 17.34 tCO_2e which equates to a 1.5% decrease in Scope 3 emissions compared to the previous year.

Business travel emissions are included in Scope 3. Across all modes, there was a total of 228,010.73 business miles undertaken for the year 2024/2025. This is an increase of 44% as staff business miles undertaken for the 2023/2024 year was 158,050.25 miles.

Only 28,705 of these miles were from public transport, this is 13% of staff business travel. The remaining 87% is made up of private vehicle journeys. Electric miles totalled 13,168.1 miles in 2024/2025, (7% of vehicle journeys) which, compared to 5,889.44 miles in 2023/2024, (4% of private journeys). Electric miles increased by 124% from 2023/2024 to 2024/2025.

Variances are explained below.

4.4.1 Business Travel

The council has seen a significant increase related to business travel in cars. The 2024/2025 figures show that business travel in cars was responsible for 49.65 tCO_2e compared to 34.83 tCO_2e in 2023/2024. This can be attributed to a return to more face-to-face business meetings. Due to the rural nature of the borough there are limitations related to public transport access.

There has been an increase in the use of fully electric vehicles being used for business related travel. The increase of electric miles is due to electric vehicles now being owned by members of staff and used for business travel.

4.4.2 Waste contract

The council's outsourced waste contract has seen an emissions decrease compared to the previous year. Refuse fuel consumption has decreased to 401,436.02 litres from 410,199.40 in 2023/2024.

This decrease of 8,763.38 litres may be attributed to route optimisation work which is undertaken to seek efficiencies.

4.4.3 Water supply and treatment

The amount of water used by, or sent to be treated, from council assets has decreased by 7,193 m^3 compared to 2023/2024. This 6% decrease is due to a reduction in usage at office facilities and leisure centres. The total water supply and treatment for 2024/2025 totalled 123,346.83m^3 whereas in 2023/2024 it totalled 130,540.00m^3.

4.4.4 Electric Transmission/Distribution Losses

Similar to everyone who receives their electricity supply through the national grid infrastructure, the council is subject to transmission/distribution losses of the electricity moving through the grid from where it is generated to the building where it is used. This means more electricity needs to be generated than is actually consumed by the end user. These transmission losses generate emissions and are reported under Scope 3.

As already highlighted due to the council purchasing zero carbon electricity, all electricity consumption related emissions are reported as zero. This can also be applied to the transmission/distribution losses so for the purpose of this audit they are reported as zero.

5. Electricity generation

The BCKLWN has solar photo voltaic (PV) arrays installed on a number of its assets. Over 2024/2025, these systems generated 48,827.7kWh of clean energy (data provided by BCKLWN Property Services). The decrease of 5,5849kWh can be explained by the weather and operational issues. The bulk of this energy will have been consumed on site, reducing the council's electricity consumption and potential costs with surplus generation exported to the grid.

The sites that have had solar PV arrays installed are the Oldmedow Road depot, the Lynnsport complex, Alive St James swimming pool, Downham Market Leisure Centre, Hunstanton Oasis Leisure Centre, South Lynn Community Centre and King's Court. Additional sites that may be suitable for solar PV arrays are being explored and include the Corn Exchange and King's Lynn Innovation Centre.

6. Reducing our emissions

6.1 The council is following a twin approach to reducing emissions and addressing climate change. Our primary approach focuses on corporate emissions reporting and reduction. The annual monitoring and reporting of the council's own emissions indicate the direction of travel against our baseline of 2009/10. Our second approach focuses on the reduction of our geographical borough's emissions through action by householders, community groups and businesses.

6.2 The BCKWLN adopted a corporate climate change policy in October 2020, setting out climate change commitments for the future. Further to this work a climate change strategy and action plan was adopted in September 2021. This details how the council will work towards net-zero by 2035, looking specifically at how each scope's emissions will be reduced. This strategy and action plan is split into the council's two work phases, focusing heavily on phase one, and reaching net-zero by 2035 for the council's corporate emissions. The strategy and action plan also covers geographical borough emissions and where the council is best placed to influence and lead emissions reductions. The council is working towards the national 2050 net-zero target for the geographical borough and reports annual data published by the Department for Net Zero and Energy Security.

6.3 In 2021/22, the council used a £3.8 million grant from the Government's Public Sector Decarbonisation Scheme for heat decarbonisation on 11 high-emitting council buildings. This forms our second refit project, having previously conducted a retrofit project in 2018/2019 to improve energy efficiency across the building portfolio. Further opportunities for decarbonisation are being explored.

6.4 The council is reducing the amount of energy that streetlights use by upgrading the streetlights to more energy-efficient LED units.

6.5 The council are undertaking a fleet review and will be seeking to replace petrol and diesel vehicles with models that use less carbon intensive fuel.

6.6 A staff travel survey has been completed. A number of council staff work in roles that allow for hybrid working thereby reducing the need to travel to work. When staff do need to travel, we encourage employees to choose sustainable travel options like walking, cycling or public transport. We currently provide employees with cycle parking, showers and changing facilities. We will be exploring and promoting further ways to encourage employees to choose sustainable travel such as a cycle to work salary sacrifice scheme to help save money on the cost of a new bike and accessories and access to ultra-low emission cars through a 'greener car' salary sacrifice scheme.

6.7 The council is open to suggestions relating to its reduction of emissions. If you have any suggestions, please feel free to email climatechange@west-norfolk.gov.uk

Appendix 1: Detailed Emissions

BCKLWN Carbon Audit: 2024/2025

Emissions Sources	Consumption		Emissions (tonnes)				Emissions (kilograms)			
Scope 1	**Activity Data**	**Unit**	**t CO_2e**	**t CO_2**	**t CH_4**	**t N_2O**	**kg CO_2e**	**kg CO_2**	**kg CH_4**	**kg N_2O**
Gas Consumption	6542953.00	*kWh*	1196.71	1194.29	1.83	0.59	1196706.10	1194285.21	1832.03	588.87
LPG Consumption	1.00	*tonnes*	2.94	2.94	0.00	0.00	2939.36	2935.18	2.55	1.63
Oil Consumption	0.00	*litres*	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Council Vehicle Fleet	-	-								
Petrol Vehicle	15406.52	*litres*	32.11	31.90	0.12	0.09	32113.35	31898.74	124.18	90.44
Diesel Vehicle	118609.90	*litres*	298.04	294.11	0.03	3.90	298041.77	294105.11	34.40	3902.27
Red Diesel	0.00	*litres*	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Scope 1	**-**	**-**	**1529.80**	**1523.22**	**1.99**	**4.58**	**1529800.59**	**1523224.24**	**1993.15**	**4583.20**
Scope 2	**Activity Data**	**Unit**	**t CO_2e**	**t CO_2**	**t CH_4**	**t N_2O**	**kg CO_2e**	**kg CO_2**	**kg CH_4**	**kg N_2O**
Electricty Consumption	4648611.00	*kWh*	962.49	952.64	4.18	5.67	962494.91	952639.85	4183.75	5671.31
Total Scope 2	**-**	**-**	**962.49**	**952.64**	**4.18**	**5.67**	**962494.91**	**952639.85**	**4183.75**	**5671.31**
Scope 3	**Activity Data**	**Unit**	**t CO_2e**	**t CO_2**	**t CH_4**	**t N_2O**	**kg CO_2e**	**kg CO_2**	**kg CH_4**	**kg N_2O**
Transmission & Distribution Losses	4648611.00	*kWh*	85.07	84.19	0.37	0.51	85069.58	84186.35	371.89	511.35
TD: Fully electric vehicle business travel	13168.10	*miles*	0.92	0.91	0.00	0.01	923.74	913.21	4.48	6.06
TD: Plug-in Hybrid business travel	0.00	*miles*	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Supply	73708.00	m^3	11.29	n/a	n/a	n/a	11285.43	n/a	n/a	n/a
Water Treatment	49638.83	m^3	9.22	n/a	n/a	n/a	9219.92	n/a	n/a	n/a
Business Travel	**-**	**-**								
Electric Car	13168.10	*miles*	0.92	0.91	0.00	0.01	923.74	913.21	4.48	6.06
Small Petrol Car	44704.78	*miles*	10.34	10.29	0.03	0.02	10338.43	10289.70	25.48	23.07
Medium Petrol Car	23376.66	*miles*	6.67	6.64	0.01	0.01	6668.43	6642.95	13.35	12.06
Large Petrol Car	6998.04	*miles*	3.03	3.02	0.00	0.00	3027.84	3020.21	4.00	3.61
Small Diesel Car	45003.11	*miles*	10.14	10.14	0.00	0.12	10135.60	10135.60	0.45	121.06
Medium Diesel Car	54136.41	*miles*	14.64	14.50	0.00	0.15	14643.90	14497.73	0.54	145.63
Large Diesel Car	11722.30	*miles*	3.91	3.88	0.00	0.03	3910.79	3879.14	0.12	31.53
Bus	1662.29	*passenger km*	0.18	0.18	0.00	0.00	180.29	179.06	0.02	1.21
Taxi	313.50	*passenger km*	0.05	0.05	0.00	0.00	46.59	46.22	0.00	0.37
Underground	23.97	*passenger km*	0.00	0.00	0.00	0.00	0.67	0.66	0.00	0.00
Rail	44242.37	*passenger km*	1.57	1.55	0.00	0.01	1568.83	1552.91	3.54	12.39
Ferry	0.00	*passenger km*	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Plane	0.00	*passenger km*	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Contractor Travel	**-**	**-**								
Refuse Collection Vehicles	401436.02	*litres*	1008.72	995.40	0.12	13.21	1008724.42	995400.76	116.42	13207.25
Total Scope 3	**-**	**-**	**1166.67**	**1131.66**	**0.54**	**14.08**	**1166668.20**	**1131657.69**	**544.75**	**14081.64**
BCKLWN Gross Emissions Total	**-**	**-**	**3658.96**	**3607.52**	**6.72**	**24.34**	**3658963.69**	**3607521.78**	**6721.66**	**24336.14**
Carbon Offsets / Renewable Tariffs	**Activity Data**	**Unit**	**t CO_2e**	**t CO_2**	**t CH_4**	**t N_2O**	**kg CO_2e**	**kg CO_2**	**kg CH_4**	**kg N_2O**
Renewable Electricity Tariff	-4648611.00	*kWh*	-962.49	-952.64	-4.18	-5.67	-962494.91	-952639.85	-4183.75	-5671.31
Transmission & Distribution Losses	-4648611.00	*kWh*	-85.07	-84.19	-0.37	-0.51	-85069.58	-84186.35	-371.89	-511.35
Total	-	-	**-1047.56**	**-1036.83**	**-4.56**	**-6.18**	**-1047564.49**	**-1036826.20**	**-4555.64**	**-6182.65**
BCKLWN Net Emissions Total	-	-	**2611.40**	**2570.70**	**2.17**	**18.15**	**2611399.21**	**2570695.59**	**2166.02**	**18153.49**

Appendix 2: Emission Changes from Base Year 2009/10

