

Borough Council of
**King's Lynn &
West Norfolk**



Base Year Carbon Audit:
2009/2010

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1. Summary

In accordance with National Indicator 185 guidance the Borough Council of King's Lynn & West Norfolk (BCKLWN) developed and published greenhouse gas reports, which continued until 2014/2015. This audit makes up our base year and has been updated to report in the same way that our current audits are calculated and presented, due to slight methodological changes since 2009/2010.

This 2009/2010 audit highlights that the BCKLWN emitted 7,366.1 tonnes of carbon dioxide equivalent (tCO_{2e}).

The BCKLWN's carbon audits are developed in accordance with the 'Environmental Reporting Guidelines' set by The Department of Business, Energy and Industrial Strategy (BEIS) and HM Government. The Greenhouse Gas Protocol 'Corporate Accounting and Reporting Standard' and the Carbon Trust 'Carbon Footprinting Guide' have also been used to inform our reporting procedure. Official BEIS greenhouse gas reporting conversion factors are used to calculate the BCKLWN's emissions.

2. Scope emissions

Scope 1: Gas consumption, oil consumption and vehicle fleet.

Scope 2: Electricity consumption.

Scope 3: Transmission and distribution losses, water supply, water treatment, business travel and contractor travel.

<i>BCKLWN CO_{2e} Emissions</i>	
<i>Year</i>	<i>2009/2010</i>
Scope 1	2,109.2
Scope 2	3,235.4
Scope 3	2,021.5
Total gross emissions	7,366.1
Carbon offsets	n/a
Green tariffs	n/a
Total net emissions	7,366.1

3. Emissions breakdown

Emissions Sources	Consumption		Emissions Data	
	Activity Data	Unit	t CO ₂ e	kg CO ₂ e
Scope 1				
Gas Consumption	8,736,695.0	<i>kWh</i>	1,618.3	1,618,298.0
LPG Consumption	-	<i>tonnes</i>	-	-
Oil Consumption	187,704.0	<i>kWh</i>	51.7	51,681.0
Council Vehicle Fleet	-	-	-	-
Petrol Vehicle	4,351.0	<i>litres</i>	10.1	10,103.0
Diesel Vehicle	136,158.0	<i>litres</i>	363.8	363,814.0
Red Diesel	22,015.7	<i>litres</i>	65.3	65,292.4
Total Scope 1	-	-	2,109.2	2,109,188.4
Scope 2				
Electricity Consumption	6,528,599.0	<i>kWh</i>	3,235.4	3,235,405.6
Total Scope 2	-	-	3,235.4	3,235,405.6
Scope 3				
Transmission & Distribution Losses	6,528,599.0	<i>kWh</i>	255.3	255,268.2
Water Supply	64,347.0	<i>m³</i>	22.1	22,141.8
Water Treatment	55,878.6	<i>m³</i>	39.6	39,590.0
Business Travel	-	-	-	-
Small Petrol Car	244,322.0	<i>km</i>	42.5	42,539.0
Medium Petrol Car	374,922.0	<i>km</i>	81.0	80,983.0
Large Petrol Car	32,721.0	<i>km</i>	9.8	9,833.0
Small Diesel Car	101,912.0	<i>km</i>	15.0	14,970.0
Medium Diesel Car	73,386.0	<i>km</i>	13.4	13,406.0
Large Diesel Car	81,258.0	<i>km</i>	20.1	20,085.0
Bus	152.0	<i>passenger km</i>	0.0	24.0
Taxi	392.0	<i>passenger km</i>	0.1	60.0
Rail	17,040.0	<i>passenger km</i>	1.0	963.0
Ferry	-	<i>passenger km</i>	-	-
Plane	1,335.0	<i>passenger km</i>	1.9	1,863.0
Contractor Travel	-	-	-	-
Refuse Collection Vehicles	566,474.0	<i>litres</i>	1,519.7	1,519,734.0
Total Scope 3	-	-	2,021.5	2,021,460.0
BCKLWN Net Emissions Total	-	-	7,366.1	7,366,054.0

4. Company information

The Borough Council of King's Lynn & West Norfolk is a Norfolk local authority in the East of England.

5. Reporting period

This reporting period is from 01/04/2009 to 31/03/2010.

6. Emissions Overview

6.1. Scope 1

Scope 1 emissions totalled at 2,109.2 tCO₂e in 2009/2010.

Gas consumption contributed 1,618.3 tCO₂e, the BCKLWN vehicle fleet contributed 439.2 tCO₂e. Red diesel (gas oil) is included within fleet emissions, and was calculated using averages of available data, due to no available data for the reporting period. The emissions factor used was the earliest available one. Oil consumption was recorded at 51.7 tCO₂e for the audit reporting period.

Scope 1 was identified as the second largest contributor to BCKLWN emissions with 29% of total emissions.

6.2. Scope 2

Scope 2 emissions totalled at 3,235.4 tCO₂e. emissions.

Scope 2 was identified as contributing 44% to BCKLWN overall emissions. This makes electricity consumption the largest contributor to BCKLWN emissions.

6.3. Scope 3

Scope 3 emissions totalled at 2,021.5 tCO₂e.

Transmission and distribution (T&D) losses were not a calculated in 2009/2010. We can calculated the equivalent losses using the earliest available emissions factor. T&D losses contributed 255.3 tCO₂e. Water supply and treatment data was not available for this year; therefore, we calculated their emissions using averages from available data. Water supply contributed 22.1 tCO₂e and water treatment contributed 39.6 tCO₂e. Business travel contributed 184.73 tCO₂e. Finally, contractor travel contributed 1,519.7 tCO₂e.

Scope 3's emissions contribution was 27% of overall BCKLWN emissions, making it the lowest contributor.

7. Measuring and reporting

Reporting take place annually, using the BEIS environment reporting guidelines. All information is calculated using up to date BEIS emissions conversion factors and is stored and processed using Microsoft Excel. The below scopes are measured for our audit.

8. Scope explanation

This table provides a description of what each activity includes from each scope.

<u>Scope</u>	<u>Activity</u>	<u>Description</u>	<u>Data Source</u>
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.

9. Organisational boundary

Our organisational boundary follows the data collection guidance from the previous National Indicator 185.

“The indicator is to include all CO₂ emissions from the delivery of local authority functions. In terms of the meaning of the word in legislation “function” covers both the duties and powers of an authority. It covers all an authority’s own operations and outsourced services” (DEFRA, 2008, p.3).

BEIS refers to this as an organisation that has financial and operational control. Therefore, we include functions that we as a local authority have the above control over.

10. Geographical breakdown

All the BCKLWN activities occur within King’s Lynn and West Norfolk, except for some staff and member business transport activities.

11. Base year

The council’s base year is: 01/04/2009 to 31/03/2010.

This 2009/2010 base year will be recalculated following any significant structural changes or methodological changes. If it is not possible to recalculate for the base year based on a lack of data, then the following year will be recalculated.

This base year has already been recalculated as of 2021/2022 to include transmission and distribution losses, water supply, water treatment, red diesel, and structural changes to BCKLWN from 2009 to 2021. These recalculated figures are highlighted in red text in section 3: emissions breakdown.

12. Recalculation

This 2020/2021 carbon audit has not been or needed recalculation.

13. Target

The BCKLWN has a net-zero target of 2035.

14. Intensity measurement

No intensity measurement has been carried out.

15. External assurance statement

No external assurance has been carried out; therefore, no external assurance statement is provided.

16. Carbon offsetting

No carbon offsetting has been carried out for the corresponding financial year.

17. Green tariffs

The BCKLWN was not on a green tariff for the corresponding financial year.

18. Electricity generation

No electricity was generated for the corresponding financial year.

19. Heat generation

There were no heat generation facilities used by the BCKLWN for the corresponding financial year.

20. Background documents

- Carbon Trust: Carbon Footprinting Guide.
- Greenhouse Gas Protocol: Corporate Accounting and Reporting Standard.
- HM Government: Environmental Reporting Guidelines.

21. References

- Department for Business Energy and Industrial Strategy (BEIS)., 2009. *UK Government GHG Conversion Factors for Company Reporting*. Available at: <https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2009>. Last accessed 07/09/2021.
- Department for Business Energy and Industrial Strategy (BEIS)., 2010. *UK Government GHG Conversion Factors for Company Reporting*. Available at: <https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2010>. Last accessed 07/09/2021.
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- Department for Business Energy and Industrial Strategy (BEIS)., 2016. *UK Government GHG Conversion Factors for Company Reporting*. Available at: <https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2016>. Last accessed 07/09/2021.
- Department for Environment, Food and Rural Affairs (DEFRA)., 2008. *Guidance to local authorities and Government Offices on National Indicator 185*. London, UK: DEFRA. pp. 3.

22. Appendix 1: Detailed emissions statement

Please see page 10 for our complete emissions statement, detailing carbon dioxide equivalent (CO_{2e}), carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O) emissions from scopes 1, 2 and 3 for the financial year 2009/2010. There is a lack of data for electricity consumption CH₄ and N₂O emissions.

Emissions Sources		Consumption		Emissions (tonnes)				Emissions (kilograms)			
Scope 1		Activity Data	Unit	t CO ₂ e	t CO ₂	t CH ₄	t N ₂ O	kg CO ₂ e	kg CO ₂	kg CH ₄	kg N ₂ O
Gas Consumption	8,736,695.0	kWh	1,618.3	1,615.0	2.4	1.0	1,618,298.0	1,614,978.0	2,359.0	961.0	
LPG Consumption	-	tonnes	-	-	-	-	-	-	-	-	
Oil Consumption	187,704.0	kWh	51.7	47.3	0.0	4.3	51,681.0	47,328.0	47.0	4,306.0	
Council Vehicle Fleet	-	-	-	-	-	-	-	-	-	-	
Petrol Vehicle	4,351.0	litres	10.1	10.0	0.0	0.1	10,103.0	10,015.0	20.0	68.0	
Diesel Vehicle	136,158.0	litres	363.8	359.6	0.2	4.0	363,814.0	359,634.0	204.0	3,976.0	
Red Diesel	22,015.7	litres	65.3	59.9	0.1	5.3	65,292.4	59,923.3	67.0	5,302.1	
Total Scope 1	-	-	2,109.2	2,091.9	2.7	14.6	2,109,188.4	2,091,878.3	2,697.0	14,613.1	
Scope 2		Activity Data	Unit	t CO₂e	t CO₂	t CH₄	t N₂O	kg CO₂e	kg CO₂	kg CH₄	kg N₂O
Electricity Consumption	6,528,599.0	kWh	3,235.4	3,202.5	-	-	3,235,405.6	3,202,539.0	-	-	
Total Scope 2	-	-	3,235.4	3,202.5	-	-	3,235,405.6	3,202,539.0	-	-	
Scope 3		Activity Data	Unit	t CO₂e	t CO₂	t CH₄	t N₂O	kg CO₂e	kg CO₂	kg CH₄	kg N₂O
Transmission & Distribution Losses	6,528,599.0	kWh	255.3	253.6	0.1	1.6	255,268.2	253,570.8	130.6	1,566.9	
Water Supply	64,347	m ³	22.1	-	-	-	22,141.8	-	-	-	
Water Treatment	55,879	m ³	39.6	-	-	-	39,590.0	-	-	-	
Business Travel	-	-	-	-	-	-	-	-	-	-	
Small Petrol Car	244,322.0	km	42.5	42.3	0.0	0.2	42,539.0	42,260.0	44.0	235.0	
Medium Petrol Car	374,922.0	km	81.0	80.6	0.1	0.4	80,983.0	80,556.0	67.0	360.0	
Large Petrol Car	32,721.0	km	9.8	9.8	0.0	0.0	9,833.0	9,796.0	6.0	31.0	
Small Diesel Car	101,912.0	km	15.0	14.8	0.0	0.2	14,970.0	14,796.0	5.0	169.0	
Medium Diesel Car	73,386.0	km	13.4	13.3	0.0	0.1	13,406.0	13,281.0	4.0	122.0	
Large Diesel Car	81,258.0	km	20.1	19.9	0.0	0.1	20,085.0	19,946.0	4.0	135.0	
Bus	152.0	passenger km	0.0	0.0	-	-	24.0	24.0	-	-	
Taxi	392.0	passenger km	0.1	0.1	-	-	60.0	60.0	-	-	
Rail	17,040.0	passenger km	1.0	0.9	0.0	0.1	963.0	910.0	1.0	52.0	
Ferry	-	passenger km	-	-	-	-	-	-	-	-	
Plane	1,335.0	passenger km	1.9	1.1	0.0	0.0	1,863.0	1,084.0	1.0	11.0	
Contractor Travel	-	-	-	-	-	-	-	-	-	-	
Refuse Collection Vehicles	566,474.0	litres	1,519.7	1,503.7	0.8	15.3	1,519,734.0	1,503,685.0	780.0	15,269.0	
Total Scope 3	-	-	2,021.5	1,940.0	1.0	18.0	2,021,460.0	1,939,968.8	1,042.6	17,950.9	
Total Net Emissions	-	-	7,366.1	7,234.3	3.7	32.6	7,366,054.0	7,234,386.1	3,739.6	32,563.9	