



**Carbon Audit:**  
**2019/2020**

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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. The council started an annual carbon audit programme in 2018/2019, which identified the council to have emitted 4,708.7 tCO<sub>2</sub>e for that financial year. This was an 24% decrease from the previous audit in 2014/2015.

This 2019/2020 audit highlights that the BCKLWN has achieved a 5% reduction in emissions from 2018/2019 levels.

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.

<b><i>BCKLWN tCO<sub>2</sub>e Emissions</i></b>			
<b><i>Year</i></b>	<b><i>2014/2015</i></b>	<b><i>2018/2019</i></b>	<b><i>2019/2020</i></b>
Scope 1	1,829.3	1,720.5	1,676.6
Scope 2	2,721.5	1,488.6	1,324.7
Scope 3	1,632.6	1,499.6	1,454.5
Total gross emissions	6,183.4	4,708.7	4,455.8
Carbon offsets	n/a	n/a	n/a
Green tariffs	n/a	n/a	n/a
Total net emissions	6,183.4	4,708.7	4,455.8

### 3. Emissions breakdown

Emissions Sources	Consumption		Emissions Data	
	Activity Data	Unit	t CO <sub>2</sub> e	kg CO <sub>2</sub> e
<b>Scope 1</b>				
Gas Consumption	7,068,540	kWh	1,299.6	1,299,551.1
Oil Consumption	0.0	litres	0.0	0.0
<b>Council Vehicle Fleet</b>	-	-	-	-
Petrol Vehicle	3,522.1	litres	7.8	7,780.4
Diesel Vehicle	118,327.3	litres	307.0	306,954.0
Red Diesel	22,599.4	litres	62.3	62,333.9
<b>Total Scope 1</b>	-	-	<b>1,676.6</b>	<b>1,676,619.3</b>

Scope 2	Activity Data	Unit	t CO <sub>2</sub> e	kg CO <sub>2</sub> e
Electricity Consumption	5,182,739	kWh	1,324.7	1,324,708.1
<b>Total Scope 2</b>	-	-	<b>1,324.7</b>	<b>1,324,708.1</b>

Scope 3	Activity Data	Unit	t CO <sub>2</sub> e	kg CO <sub>2</sub> e
Transmission & Distribution Losses	5,182,739	kWh	112.5	112,465.4
Water Supply	67,321	m <sup>3</sup>	23.2	23,158.4
Water Treatment	60,589	m <sup>3</sup>	42.9	42,896.9
<b>Business Travel</b>	-	-	-	-
Small Petrol Car	70,511.7	miles	17.4	17,441.8
Medium Petrol Car	26,648.8	miles	8.2	8,246.5
Large Petrol Car	6,731.2	miles	3.1	3,065.1
Small Diesel Car	57,563.1	miles	13.2	13,163.5
Medium Diesel Car	63,246.0	miles	17.4	17,366.7
Large Diesel Car	19,897.8	miles	6.7	6,708.1
Bus	1,174.8	km	0.1	140.8
Taxi	220.5	km	0.0	46.4
Rail	2,054.2	km	0.1	84.5
Ferry	0.0	km	0.0	0.0
Plane	0.0	km	0.0	0.0
<b>Contractor Travel</b>	-	-	-	-
Refuse Collection Vehicles	466,334.7	litres	1,209.7	1,209,723.4
<b>Total Scope 3</b>	-	-	<b>1,454.5</b>	<b>1,454,507.6</b>

<b>BCKLWN Emissions Total</b>	-	-	<b>4,455.8</b>	<b>4,455,835.0</b>
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## **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 01/04/2019 to 31/03/2020.

## **6. Changes to emissions**

### **6.1. The trend**

There has been a reduction in our emissions compared to last year's audit. Overall CO<sub>2</sub>e emissions decreased from 4,708.7 tCO<sub>2</sub>e in 2018/2019 to 4,455.8 tCO<sub>2</sub>e in 2019/2020. This is a decrease of 252.9 tCO<sub>2</sub>e.

The BCKLWN's emissions have decreased by 5% in 2019/2020, compared to the 2018/2019 audit. Scope 2 (electricity consumption) was the source of the largest emissions reduction (11% reduction), whilst scope 1 and 3 saw modest 3% reductions.

### **6.2. Scope 1**

Scope 1 emissions totalled at 1,676.6 tCO<sub>2</sub>e, compared to 1,720.5 tCO<sub>2</sub>e in 2018/2019. This is a reduction of 43.9 tonnes, which equates to a 3% reduction in scope 1 emissions.

Gas consumption contributed 1,299.6 tCO<sub>2</sub>e and the BCKLWN vehicle fleet contributed 377.1 tCO<sub>2</sub>e. Oil consumption was recorded at 0 tCO<sub>2</sub>e for the audit reporting period. The BCKLWN stopped using oil across its estates, saving the 33 tCO<sub>2</sub>e emitted from oil use in 2014/2015.

Scope 1 was identified as the largest contributor to BCKLWN emissions (37% of total emissions). Scope 1 increased its share of emissions by 1% from 2018/2019 to 2019/2020.

### **6.3. Scope 2**

Scope 2 emissions totalled at 1,324.7 tCO<sub>2</sub>e compared to 1,488.6 tCO<sub>2</sub>e in 2014/2015. This is a reduction of 163.9 tonnes, which equates to a 11% reduction in scope 2 emissions.

Scope 2 was identified as contributing 30% to BCKLWN overall emissions. This is a change compared to 2018/2019 where it contributed 32% of overall BCKLWN emissions.

The BCKLWN's electricity consumption decreased by 76,094 kWh, from 5,258,833 kWh in 2018/2019 to 5,182,739 kWh in 2019/2020. Whilst general consumption has decreased, these emissions decreases are also explained by further greening of the national grid between 2018/2019 and 2019/2020. Greening of the national grid results in less carbon intensive electricity production. Consequently, the amount of CO<sub>2</sub>e emitted from electricity production has decreased.

The Department of Business, Energy and Industrial Strategy explained the decrease in scope 2 emissions in their 2019 emissions factor update:

*“In this 2019 [emissions conversion factor] update the CO<sub>2</sub>e factor has decreased again (compared with 2018) by 10% due to a decrease in coal generation and an increase in renewable generation” (BEIS, 2019).*

#### **6.4. Scope 3**

Scope 3 emissions totalled at 1,454.5 tCO<sub>2</sub>e compared to 1,499.6 tCO<sub>2</sub>e in 2014/2015. This is a reduction of 45.1 tonnes, which equates to a 3% reduction in scope 3 emissions.

Transmission and distribution losses contributed 112.5 tCO<sub>2</sub>e. Water supply contributed 23.2 tCO<sub>2</sub>e, whilst water treatment contributed 42.9 tCO<sub>2</sub>e. Business travel contributed 66.3 tCO<sub>2</sub>e. Finally, contractor travel contributed 1,209.7 tCO<sub>2</sub>e.

Scope 3's emissions contribution was 33% of overall BCKLWN emissions, becoming the second largest contributor after scope 1.

#### **6.5. Emissions increases**

Emissions only increased in the 'red diesel' and 'small diesel car' business travel sub sector. However, consumption has increased in several areas:

- Red diesel consumption.
- Small petrol car, business miles.
- Small diesel car, business miles.
- Bus travel, business miles.
- Refuse collection vehicles, fuel consumption.

## **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.

### **Scope 1**

#### **Gas Consumption**

- Data obtained for council utility bills

#### **Oil Consumption**

- Data obtained for council utility bills

#### **Vehicle Fleet**

- Data obtained from council fuel invoices

### **Scope 2**

#### **Electricity Consumption**

- Data obtained from the council utility bills

### **Scope 3**

#### **Transmission and Distribution Losses**

- Obtained using electricity consumption data

#### **Water Supply**

- Obtained using council utility bills

#### **Water Treatment**

- Obtained using the water supply data

#### **Business Travel**

- Obtained using employee mileage claims

#### **Contractor Travel**

- Obtained through contractor fuel records

## **8. Scope explanation**

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

<b><u>Scope</u></b>	<b><u>Activity</u></b>	<b><u>Description</u></b>
Scope 1	Gas Consumption	Used to heat our buildings and sites.
	Oil Consumption	Used to heat our buildings and sites
	Vehicle Fleet	The council's operational vehicle fleet.
Scope 2	Purchased electricity	Electricity purchased from the national grid to power the council's buildings and sites.
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.
	Water Supply	The supply of water to our buildings and sites.
	Water Treatment	The water we return back to the system (90% return to sewer rate).
	Business Travel	Staff and member travel in their own vehicles on business grounds.
	Contractor Travel	Travel by contractors to carry out work commissioned by the council, e.g. waste collection.



## **9. Organisational boundary**

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

*“The indicator is to include all CO<sub>2</sub> 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**

Our base year is: 01/04/2018 to 31/03/2019.

The 2018/2019 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.

## **12. Target**

The BCKLWN’s previous target was a 5% year on year decrease in CO<sub>2</sub>e emissions. We currently have no yearly target for emissions reductions.

## **13. Intensity measurement**

No intensity measurement has been carried out as this is more applicable to private sector businesses.

## **14. External assurance statement**

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

## **15. Carbon offsetting**

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

## **16. Green tariffs**

The BCKLWN was not on a green tariff for 2019/2020.

## **17. Electricity generation**

The BCKLWN has solar PV panels on Lynn Sport Leisure Centre and King's Court, which generated 34,676 kWh of clean electricity in 2019/2020. This electricity is directly used by the BCKLWN, which helps reduce electricity consumption from the national grid.

## **18. Heat generation**

There are no heat generation facilities used or owned by the BCKLWN.

## **19. Reducing our emissions**

The BCKLWN is following a broadly phased approach to reducing emissions and combating climate change. Phase one focuses on corporate emissions reporting and reduction. The monitoring and reporting the council's own emissions form the basis of the council's journey by establishing a baseline for reductions to be monitored against.

Since the first audit year of 2018/2019 the council has updated its corporate business plan to include "protecting and enhancing the environment including tackling climate change" in priority three. The BCKLWN also commissioned Ameresco to conduct a Re:fit of the borough council's estate. The Re:fit includes a number of projects that once implemented will help to reduce CO<sub>2</sub> emissions and energy costs. This Re:fit is expected to reduce emissions by roughly 400 tonnes CO<sub>2</sub> per year. Full impacts are expected to be seen once work is completed in 2020. The council has also approved the switch to a renewable electricity tariff, starting from the 2020/2021 financial year. This will help us reduce our electricity emissions until we are able to significantly supplement our consumption with our own generation.

As part of phase one a climate change policy has been written and was adopted in October 2020. Following this policy, a climate change strategy and action plan will be developed, which will provide detail on how the council's scope 1,2 and 3 emissions will be reduced. This is expected to be completed and implemented in 2021. We

have established officer task and finish groups for each scope subsector, and an informal member working group is to be established to also feed into this work. These groups will work to help identify strategies to reduce emissions, for inclusion in the 2021 strategy and action plan. The council is working with national targets for emissions reductions and is therefore, aiming to be net zero by 2050, in line with the UK 2008 Climate Change Act.

## **20. Glossary**

- 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)., 2019. *UK Government GHG Conversion Factors for Company Reporting*. Available at: <https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2019>. Last accessed 13/08/2020.
- 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 12 for our complete emissions statement, detailing carbon dioxide equivalent (CO<sub>2</sub>e), carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O) emissions from scopes 1, 2 and 3 for the financial year 2019/2020.*

## Appendix 1: Detailed emissions statement

Emissions Sources		Consumption		Emissions (tonnes)				Emissions (kilograms)			
Scope 1		Activity Data	Unit	t CO <sub>2</sub> e	t CO <sub>2</sub>	t CH <sub>4</sub>	t N <sub>2</sub> O	kg CO <sub>2</sub> e	kg CO <sub>2</sub>	kg CH <sub>4</sub>	kg N <sub>2</sub> O
Gas Consumption		7,068,540	kWh	1,299.6	1,297.1	1.7	0.7	1,299,551.1	1,297,147.8	1,696.4	706.9
Oil Consumption		0.0	litres	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Council Vehicle Fleet</b>		-	-	-	-	-	-	-	-	-	-
Petrol Vehicle		3,522.1	litres	7.8	7.7	0.0	0.0	7,780.4	7,733.9	24.2	22.2
Diesel Vehicle		118,327.3	litres	307.0	302.9	0.0	4.1	306,954.0	302,865.8	35.5	4,052.7
Red Diesel		22,599.4	litres	62.3	61.6	0.1	0.7	62,333.9	61,564.6	66.2	140.8
<b>Total Scope 1</b>		-	-	<b>1,676.6</b>	<b>1,669.3</b>	<b>1.8</b>	<b>5.5</b>	<b>1,676,619.3</b>	<b>1,669,312.1</b>	<b>1,822.4</b>	<b>5,484.9</b>
<b>Scope 2</b>		<b>Activity Data</b>	<b>Unit</b>	<b>t CO<sub>2</sub>e</b>	<b>t CO<sub>2</sub></b>	<b>t CH<sub>4</sub></b>	<b>t N<sub>2</sub>O</b>	<b>kg CO<sub>2</sub>e</b>	<b>kg CO<sub>2</sub></b>	<b>kg CH<sub>4</sub></b>	<b>kg N<sub>2</sub>O</b>
Electricity Consumption		5,182,739	kWh	1,324.7	1,314.2	3.4	7.1	1,324,708.1	1,314,239.0	3,368.8	7,100.4
<b>Total Scope 2</b>		-	-	<b>1,324.7</b>	<b>1,314.2</b>	<b>3.4</b>	<b>7.1</b>	<b>1,324,708.1</b>	<b>1,314,239.0</b>	<b>3,368.8</b>	<b>7,100.4</b>
<b>Scope 3</b>		<b>Activity Data</b>	<b>Unit</b>	<b>t CO<sub>2</sub>e</b>	<b>t CO<sub>2</sub></b>	<b>t CH<sub>4</sub></b>	<b>t N<sub>2</sub>O</b>	<b>kg CO<sub>2</sub>e</b>	<b>kg CO<sub>2</sub></b>	<b>kg CH<sub>4</sub></b>	<b>kg N<sub>2</sub>O</b>
Transmission & Distribution Losses		5,182,739	kWh	112.5	111.6	0.3	0.6	112,465.4	111,584.4	259.1	621.9
Water Supply		67,321	m <sup>3</sup>	23.2	n/a	n/a	n/a	23,158.4	n/a	n/a	n/a
Water Treatment		60,589	m <sup>3</sup>	42.9	n/a	n/a	n/a	42,896.9	n/a	n/a	n/a
<b>Business Travel</b>		-	-	-	-	-	-	-	-	-	-
Small Petrol Car		70,511.7	miles	17.4	17.4	0.0	0.0	17,441.8	17,362.8	36.0	43.0
Medium Petrol Car		26,648.8	miles	8.2	8.2	0.0	0.0	8,246.5	8,216.6	13.6	16.3
Large Petrol Car		6,731.2	miles	3.1	3.1	0.0	0.0	3,065.1	3,057.6	3.4	4.1
Small Diesel Car		57,563.1	miles	13.2	13.0	0.0	0.2	13,163.5	12,992.0	0.6	171.0
Medium Diesel Car		63,246.0	miles	17.4	17.2	0.0	0.2	17,366.7	17,178.2	0.6	187.8
Large Diesel Car		19,897.8	miles	6.7	6.6	0.0	0.1	6,708.1	6,648.8	0.2	59.1
Bus		1,174.8	km	0.1	0.1	0.0	0.0	140.8	139.6	0.0	1.1
Taxi		220.5	km	0.0	0.0	0.0	0.0	46.4	45.9	0.0	0.4
Rail		2,054.2	km	0.1	0.1	0.0	0.0	84.5	83.7	0.1	0.6
Ferry		0.0	km	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Plane		0.0	km	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Contractor Travel</b>		-	-	-	-	-	-	-	-	-	-
Refuse Collection Vehicles		466,334.7	litres	1,209.7	1,193.6	0.1	16.0	1,209,723.4	1,193,611.5	139.9	15,972.0
<b>Total Scope 3</b>		-	-	<b>1,454.5</b>	<b>1,370.9</b>	<b>0.5</b>	<b>17.1</b>	<b>1,454,507.6</b>	<b>1,370,921.3</b>	<b>453.6</b>	<b>17,077.4</b>
<b>BCKLWN Emissions Total</b>		-	-	<b>4,455.8</b>	<b>4,354.5</b>	<b>5.6</b>	<b>29.7</b>	<b>4,455,835.0</b>	<b>4,354,472.3</b>	<b>5,644.8</b>	<b>29,662.6</b>