

Divisions Affected - All

CABINET

16 NOVEMBER 2021

CLIMATE ACTION PROGRAMME UPDATE AND GREENHOUSE GAS REPORT 2020/2021

Report by Corporate Director, Environment and Place

RECOMMENDATION

1. The Cabinet is **RECOMMENDED** to approve the Greenhouse Gas Emissions report for 2020/2021 for publication on the County Council website, set out in Appendix 1.

Executive Summary

2. The Greenhouse Gas Emissions 2020/2021 report is an annual report on the council's operational greenhouse gas emissions and progress towards the target of net zero by 2030. This report covers the financial year 2020-2021 and the period of greatest operational COVID impact.
3. Emissions within the scope of our operational target to be net zero by 2030 have reduced substantially (by 17% compared to the previous year).
4. As service delivery resumes following the COVID pandemic it is important not to lose the gains made in emissions reduction. For example, new targets will be set to maintain the reduction in business mileage.
5. Services included in the scope of our operational net zero target (Corporate Buildings, Fleet, Staff Travel and Streetlighting) have been asked to identify emissions reduction pathways to achieve net zero by 2030 and to allow the council to set interim annual carbon reduction targets. The proposed targets will be reported at the next six-monthly Cabinet update.
6. In July the 'Pathways to Zero Carbon Oxfordshire' (PAZCO) report was published. This report covers Oxfordshire's scope 1 and 2¹ carbon emissions

¹ Carbon emissions are categorized as Scope 1,2 and 3 in Greenhouse Gas Protocol.

	Scope 1 Definition - Direct emissions	Scope 2 Definition - Indirect emissions from purchased power
At a geographical scale e.g. Oxfordshire	All Oxfordshire surface transport, land emissions and capture, heating and cooling in all buildings	All Oxfordshire power for buildings and industry.
At an organisational scale e.g. The County Council	All fuels that are purchased and burnt e.g. Petrol, diesel, gas, LPG	All power for buildings, pumps, lighting

Scope 3 emissions are indirect emissions in an organization, or areas, value chain. For the council's operations, these include

including transport, buildings and heat, power and land and sets out a pathway to reach net zero in Oxfordshire.

Oxfordshire County Council's Operational Greenhouse Gas Report 2020/21

7. The council has two targets for carbon reduction: reducing emissions from our operational estate to be net zero carbon by 2030 and contribute to reducing emissions county wide to net zero by 2050, in line with global reductions called for by the Intergovernmental Panel on Climate Change.
8. The Council's operational Greenhouse Gas report for 2020/2021 is included at Appendix 1. Headline figures for 2020/2021 are set out below:
 - a. Reported carbon emissions (which include those from maintained schools, the councils outsourced data centre and Skanska fleet fuel) dropped 12% to 16,865 t CO₂e, which represents a 75.2% decline since the baseline year of 2010-2011.
 - b. Emissions within the scope of our carbon neutrality target footprint, decreased 17% to 10,774 tCO₂e, a 59% decline since 2010-2011. Figure 1 overleaf identifies the scope of emissions included within our carbon neutrality target of net zero by 2030.
 - c. Figure 2 overleaf shows the emissions reduction trend between 2010/2011 and 2020/2021.
 - d. Electricity grid decarbonisation (more renewables becoming part of the overall national electricity mix) accounts for close to a third of the corporate emissions reduction this year. The remaining reduction was driven by streetlight LED conversion and changes in working patterns due to COVID, particularly a reduction in staff business travel (which fell by 68%).
 - e. Electricity usage in corporate buildings dropped by around 16%. Gas usage did not change owing in part to the need for additional air handling in our buildings to circulate fresh air.

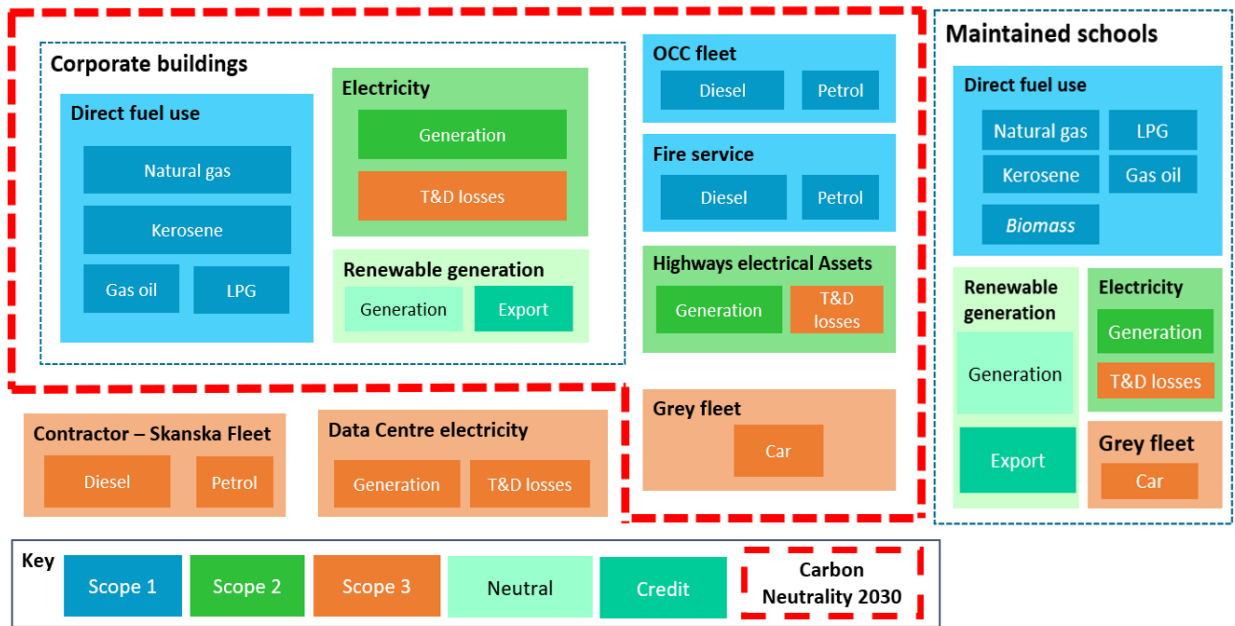


Figure 1 – Scope of Greenhouse Gas Report highlighting the emissions included in OCC’s carbon neutrality target (red line)

OCC Carbon Neutrality target emissions Since 2010/11

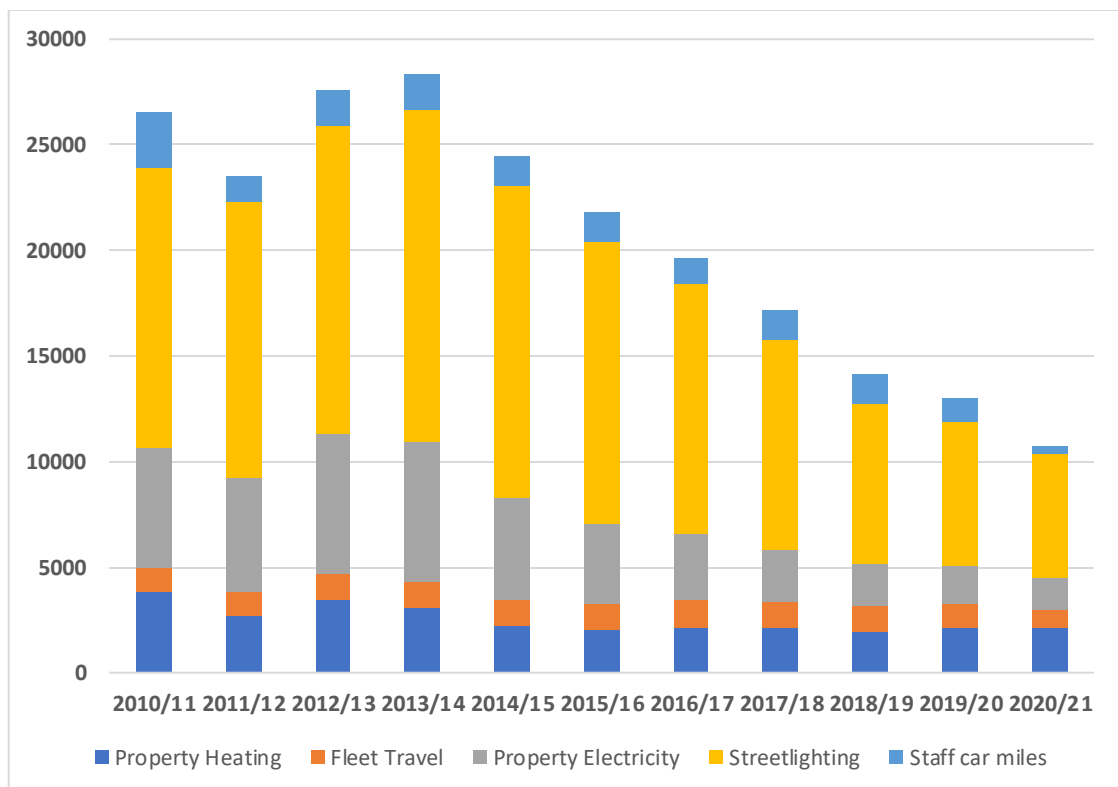


Figure 2 - OCC's carbon neutrality target emissions since 2010-2011

Climate Action Programme update

Programme delivery

9. An overview of programme delivery against the 21 priority actions for 2021/2022 covering both our operational and countywide footprints is set out in Appendix 2.
10. Delays have been reported against some workstreams linked to supply chain issues, service restructuring and additional community engagement measures, for instance on active travel. Issues and delays are being actively managed by project managers.
11. Key projects include the streetlight LED conversion and Public Sector Decarbonisation Scheme (PSDS)-funded energy efficiency measures. These are expected to deliver c. 800t CO₂e reduction once completed and c. 3,300 CO₂e by 2024/2025.

Next steps

12. Champion a countywide delivery plan for Oxfordshire's transition to zero carbon, based on the Pathways to Zero Carbon Oxfordshire report, through the Environment Advisory Group of the Future Oxfordshire Partnership.
13. Propose a range of workstreams to meet the Fair Deal Alliance ambition on climate and environment through both service planning and corporate budget planning processes.
14. Continue training of County Council staff and members to integrate climate action into day-to-day activities and decision-making by rolling out both the 'Carbon Literacy' peer-to-peer training for key teams and the new online Climate Action Training module.
15. Upgrade the Climate Impact Assessments to include criteria on adaptation and biodiversity.

Corporate Policies and Priorities

16. The Climate Action Programme supports the council's commitments to tackle the climate emergency, as expressed in the Corporate Plan and the Climate Action Framework.

Financial Implications

17. The budgetary implications of future programme developments will be put forward through the Service and Resource Planning process.
18. A review of costs relating to staff mileage is being undertaken and any savings achievable will be included as part of the Budget & Business Planning process for inclusion in the budget for 2022/2023 which will be set by Council in February 2022.

Comments checked by: Lorna Baxter, Director of Finance

Legal Implications

19. There are no legal implications.

Comments checked by: Christian Smith, on behalf of Anita Bradley, Director of Law and Governance

Staff Implications

20. Staff involvement in current programme delivery is funded by agreed resource allocation and grant funding. Staff requirements of future programme developments will be put forward through the service and resource planning process.

Equality & Inclusion Implications

21. This paper does not raise any specific equalities implications. The Council's Climate Action Framework targets a 'just transition'.
22. While acting on climate change will bring benefits to all, it is most likely to have additional positive impacts on several of the protected and disadvantaged groups considered within the Council's equality framework.

Sustainability Implications

23. The Climate Action Programme is at the core of the County Council's response to the climate emergency. A number of its projects have a direct impact on our corporate emissions, for example through the installation of heat pumps in our buildings or the roll out of LED street-lighting, while others are more county wide in impact, for example our efforts to increase climate resilience and emissions reduction through our strategies, policies and plans.

Risk Management

24. The main programme risks are:

Risk	Impact	Mitigation
Failure to capitalise on reductions in own estate emissions during pandemic leads to rebound in post-COVID restart	Some rebound is expected, but as emissions reductions have been made in particularly hard to decarbonise areas (such as travel), significant later	Integrate climate considerations and specific targets for staff travel and building energy usage into the County Council's Restart programme.

Risk	Impact	Mitigation
	<p>investment may be needed if these emissions aren't retained.</p> <p>The degree to which these reductions are maintained is subject to corporate decisions on agile working within our recovery strategy.</p>	
Absence of development of Property project pipeline	<p>Limits ability to access future rounds of the Public Sector Decarbonisation funding.</p> <p>Limits ability to cost and set high ambition emission reduction target.</p> <p>Limited resource for day-to-day energy management activity.</p>	<p>Specialist post recruited into Property team following restructure</p> <p>Decarbonisation roadmap with project pipeline and investment plan developed</p>

Bill Cotton, Director for Environment and Place

Annex: Appendix 1 – Oxfordshire County Council Greenhouse gas report 2020/21

Appendix 2 – Climate Action Programme dashboard for Q2 2021/22

Background papers: Nil

Contact Officer: Sarah Gilbert, Climate Action Team Leader

October 2021

Appendix 1 - Oxfordshire County Council Greenhouse gas report 2020/21



Greenhouse Gas Report

Reporting Year 2020 - 2021

Oxfordshire County Council

Date: October 2021
Owner: Climate Action Team

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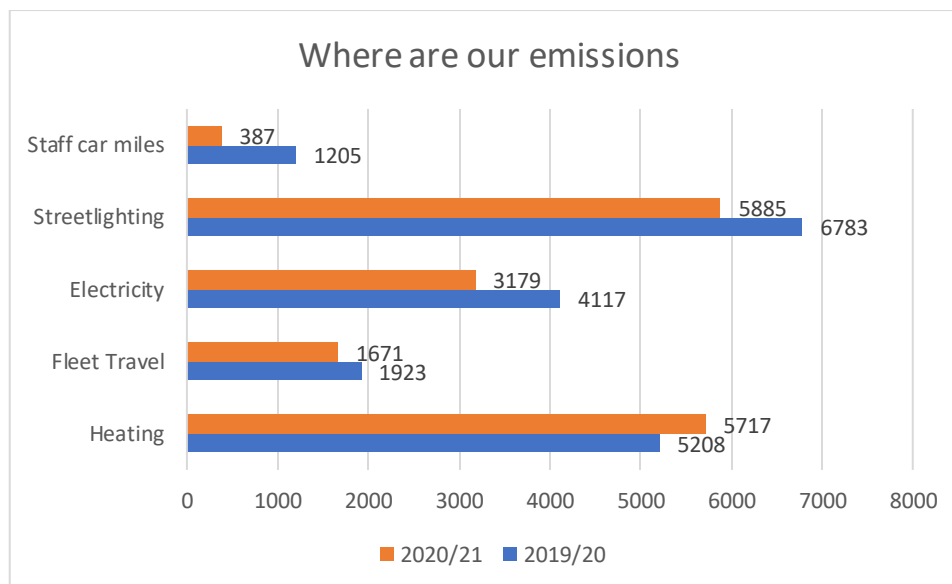
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1. Executive Summary

- 1.1. During **2020/21** Oxfordshire County Council reduced its carbon emissions by **12%** (2,299 tonnes CO₂e) from **19,164 tonnes CO₂e** in 2019/20 to **16,865 tonnes CO₂e** in 2020/21. This represents a **75.2%** reduction against our baseline in 2010/11.

In 2020/21, **873 tonnes CO₂e** of our reduction was due to the electricity grid continued decarbonisation. The remaining **1,436 tonnes CO₂e** can mostly be attributed to the COVID lockdown and therefore emission levels may bounce back in the following years.

Figure 1 below shows comparison of tonnes of CO₂ split by business sector during 2019/20 and 2020/21 (these figures do not include carbon offsetting)



2. Context

- 2.1. Oxfordshire County Council provides services to residents, businesses and communities across the whole county. We are responsible for around **80%** of local government spending in Oxfordshire. The following core services are provided by the Council:

- adult social care
- services for public health including mental health
- fire and rescue
- roads and transport planning
- waste disposal
- libraries and museums
- coroners' and registration services
- trading standards

- 2.2. The Council either provides these services directly or commissions them from other organisations. Most of these services are statutory – things we are obliged by law to do.

3. Reporting Period

- 3.1. This report covers GHG emissions from **April 2020 to March 2021**

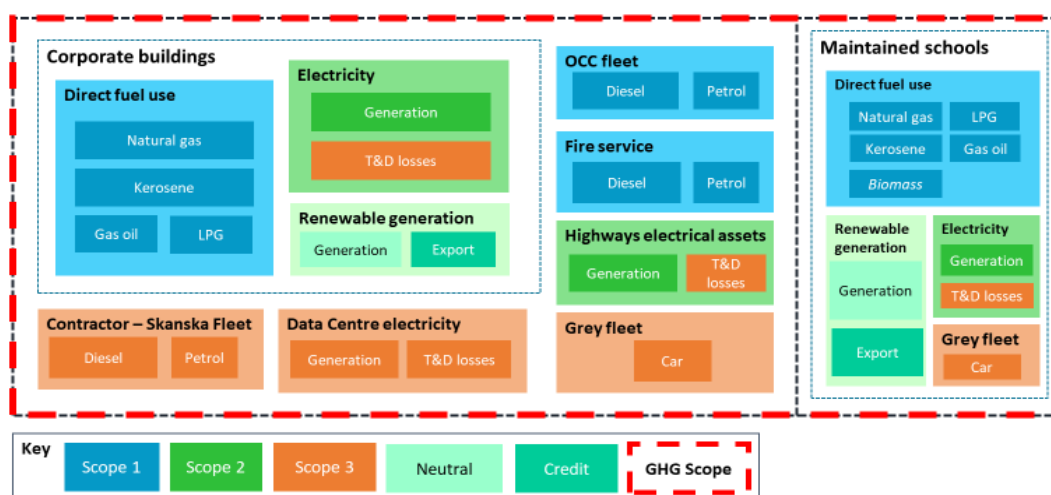
4. Introduction, boundary and conversion factors

- 4.1. Each year, Oxfordshire County Council publishes details of its greenhouse gas (GHG) emissions in accordance with guidance published by the Department of Business, Energy and Industrial Strategy (BEIS).
- 4.2. The Council is committed to improving our GHG reporting in line with the latest BEIS guidance. We will be auditing our data in **2020/21**.
- 4.3. **Figure 2** shows the scope of our reported GHG emissions boundary. The council reports on emissions from its:
- corporate estate and activities (excluding contractors)
 - maintained schools
 - Contractors - Skanska highway fleet fuel and outsourced Data Centre electricity consumption.

These have historically been included in our carbon footprint.

- 4.4. In **2019** the council committed to become carbon neutral for its corporate estate and activities (excluding contractor emissions) by **2030**. This report creates a new category to show the emissions in scope for this target (refer to Section 7).
- 4.5. The carbon factor methodology applied are the **2020** carbon factors for the emissions generated in Financial year **2020-21** which can be found at: [Greenhouse gas reporting: conversion factors 2020 - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2020)

Figure 2: OCC GHG Emissions Boundary



5. Greenhouse Gas (GHG Emissions) 2020/21

- 5.1. **Table 1** shows that for **2020/21** gross emissions from Oxfordshire County Council were **16,865** tonnes of CO₂e equivalent (CO₂e) split across the three scopes. This includes offsetting from solar exports.
- 5.2. Our **corporate estate and activities** (the scope of our carbon neutrality target) amounted to **10774** tonnes CO₂e (**63.9%**) of the total emissions.
- 5.3. Emissions from **maintained schools** was **5,238** tonnes CO₂e (**31.1%** of the total emissions).
- 5.4. Whereas emissions from fleet used by our highway's **contractors**, Skanska, and electricity consumption by our outsourced Data Centre servers **853 tonnes CO₂e**, **5.1%** of total emissions.

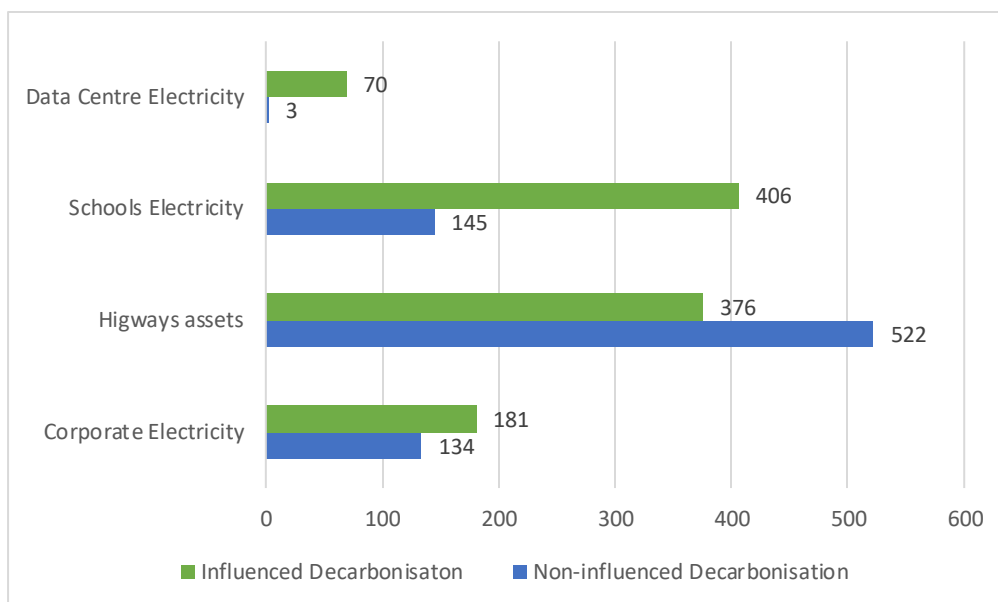
Table 1: Total GHG Emissions (Corporate estate and activities, Maintained Schools and Highways contractor fuel and data center)

	Corporate Estate & Activities	Maintained Schools	Contractors (Highways & Data Centres)	Total
Scope 1	2992	3663	-	6656
Scope 2	6801	1506	-	8307
Scope 3	986	132	853	1971
Total Emissions	10779	5301	853	16934
Solar Export Corpora	5	64	0	69
Total	10774	5238	853	16865

6. Change from Previous Year

- 6.1. Total emissions in **2020/21** were **12% lower** than in **2019/20**, a total reduction of **2,299** tonnes CO₂e. Electricity grid **decarbonisation** and annual changes to carbon factors accounted for **863** tonnes CO₂e, **37.5%** of total reduction as compared to **2019/20**.
 - Emissions from the Council's **corporate estate and activities** (excluding outsourced contractors and maintained schools) fell from **13,047 tonnes** in **2019/20** to **10774** tonnes in **2020/21**, a reduction of **17%** (**2,273** tonnes CO₂e). This includes offset from Solar PV exports. Electricity grid **decarbonisation** accounted for **704** tonnes CO₂e i.e., **31%** of total reduction for corporate estate and activities.
 - Emissions from **maintained schools** increased by 0.4% (**22** tonnes CO₂e) from **5,260 tonnes** to **5238 tonnes CO₂e** (this includes offset from schools Solar PV exports). Out of this reduction, **2.1%** (**110** tonnes CO₂e) is because three schools have converted to academies during the reporting year and have therefore been removed from the footprint. Electricity grid **decarbonisation** would have accounted for a reduction of **156** tonnes CO₂e. Due to schools remaining open during the COVID lockdown for essential workers children, emissions did not fall as expected.

- Emissions from the Council's **Contractors** (Skanska highway fleet fuel and outsourced data center electricity consumption) fell by **0.5%** during this period from **858 tonnes** in **2019/20** to **853 tonnes CO₂e** in **2020/21**. Electricity grid **decarbonisation** accounted for **3 tonnes CO₂e**. **3.9%** of the total reduction.
- **Figure 3** below shows the impact of non-influenced and influenced decarbonisation.



6.2. Although emissions are expected to bounce back after the COVID restriction end; we do expect some emissions to rise and some to continue to fall.

- As buildings reopen fully gas consumption is likely to increase from the pre-COVID levels due to legislative changes in air handling.
- Street lighting LED conversion will continue to reduce emissions.
- Electricity from property is likely to remain lower than pre-COVID levels due to a decrease in property occupation by staff.
- Emissions from electricity will continue to reduce from grid decarbonisation.
- Staff millage may remain lower than pre-COVID levels due to the use of Teams meetings.

6.3. Gas consumption – annual weather data (degree day data) indicated heating fuel demand should not be significantly affected by weather changes in **2020/21**. However, gas consumption decreased by **426 tonnes CO₂e**.

A significant proportion of the reduction of electricity consumption this year has been due to the **COVID** lockdown.

Although we saw a reduction in our emissions due to site closures some sites increased their consumption due to **CV19** restrictions to working arrangements and subsequent guidance on ventilation. This is to mitigate the spread of **COVID** resulting in heated fresh air not being re-distributed around buildings.

- 6.4. Refer to section 9 for details of the projects and energy efficiency measures that contributed to the decrease in council's GHG emissions in **2020/21**
- 6.5. Table 2 below shows the comparison of emissions in **2020/21** against **2019/20**. A further breakdown of consumption at source is detailed in Annex B, C, D & E.

Table 2: Emissions Comparison 2019/20 and 2020/21 (tonnes CO₂e)

2020/21 and 2019/20 Comparison tonnes CO ₂ e.			
	2019 20	2020 21	Reduction
Corporate Estate & Activities	13051	10779	17.4%
Solar Export Corpportate (offset)	-4	-5	17.4%
Total Corporate Estate & Activities	13047	10774	17.4%
Schools	5321	5301	0.4%
Solar Export SChools (offset)	-62	-64	-3.5%
Total Schools	5260	5238	0.4%
Contractors	858	853	0.5%
Total Emissions	19164	16865	12.0%

7. Comparison against baseline year and reduction target

Oxfordshire County Council track emissions against a baseline year of **2010/11**.

- 7..1. **Total emissions** for this year, against a baseline year were **16865** tonnes CO₂e in **2020/21** and **55,862** tonnes of CO₂e in **2010/11**. This represents a decrease of **38,997** tonnes of CO₂e, a decrease of **70%**. An average annual reduction of **7%** per year. This does not include the effect of purchasing green energy in 2010/11 or **REGO** backed electricity in 2020/21.

Although we are purchasing **REGO** backed energy we have chosen not to count this as a carbon reduction as we are committed to reduce our reliance on grid electricity. We have an energy hierarchy approach to energy reduction as set out in our **2020** Climate Action Framework (page 6). See link in section 8.

- Emissions from our **corporate estate and activities excluding contractor emissions & maintained schools (the scope of our carbon neutrality target)** have reduced by **59%** since **2010/11**, an average annual reduction of **5.9%** per year.

Note: If we include the effect of **REGO** backed electricity in **2010/11** accounting to **12,179** tonnes and **4950** tonnes CO₂e in **2020/21** the reduction would have been **25%** since **2010/11** (**2.5%** per year).

- Emissions from the maintained schools** have reduced by **63%** since the baseline year **2010/11**. **158** schools converting to academies and therefore falling outside the Council's reporting has contributed significantly to this change.
- Emissions from the remaining 126 maintained schools** (adjusted to remove the effect of schools converting to academies) have reduced by an estimated **28%** since **2010/11**, an average of **2.8%** per

year.

- **Our contractor emissions (Skanska fleet fuel and ICT Data Centers)** have reduced by **27%** since **2010/11**; an average annual reduction of **2.7%** per year.

7.2. From October **2020** we pay a premium to purchase all our electricity from certified renewable sources (**REGO** - Renewable Electricity Guarantee of Origin) to support national investment in renewable energy.

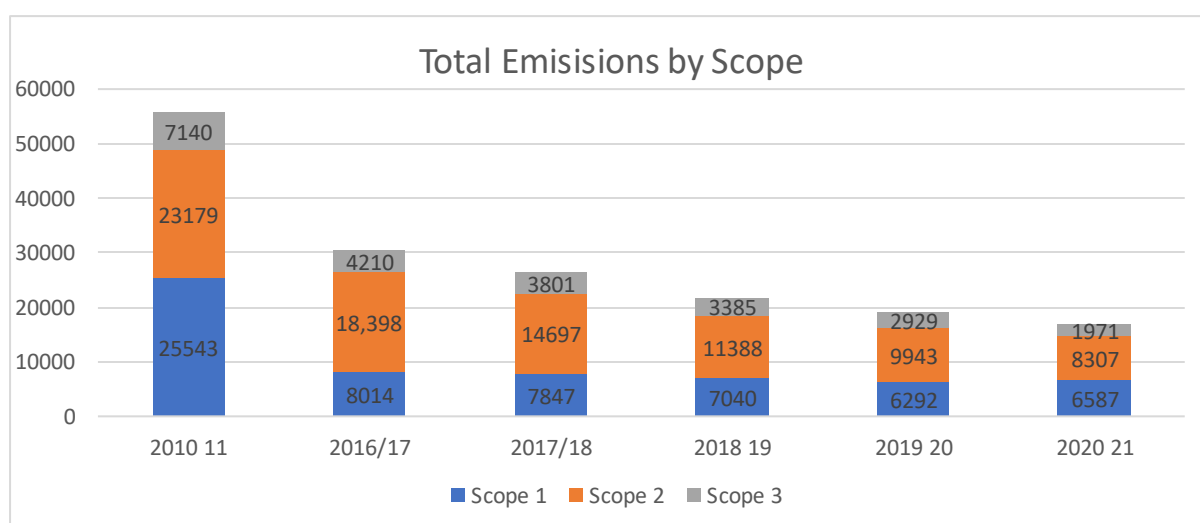
Since **2020/21** the County Council has achieved a **75.2%** reduction in underlying CO₂e emissions and an **73%** reduction in emissions after allowing for the purchase of green energy in 2010/11 and **REGO** certified grid renewable electricity in 2020/21.

7.3. **Table 3** below shows the comparison of emissions in **2020/21** against baseline year **2010/11**. A further breakdown of consumption at source is detailed in Annex F.

Table 3: Emissions Comparison 2020/21 and 2010/11

2020 21 and 2010 11 Baseline Comparison tonnes CO ₂ e.			
	2010 11	2020 21	Reduction
Corporate Estate & Activities	26511	10779	59.3%
Solar Export Corporate Estate & Activities (offset)	0	-5	-
Total Corporate Estate & Activities	26511	10774	59.4%
Academies	25833	0	100.0%
Maintained Schools	14534	5,301	63.5%
Solar Export Schools (offset)	-	-64	-
Total Schools	40367	5238	63.5%
Contractors	1163	853	26.7%
Total	68041	16865	75.2%

Figure 4: Emissions Comparison by scope from 2010/11 to 2020/21



8. Carbon Neutrality Target 2030

- 8.1. In **2019** the council committed to become carbon neutral for its corporate estate and activities (excluding contractor and maintained school's emissions) by **2030**².
- 8.2. **Figure 5** below shows the boundary of our Carbon Neutrality **2030** target.
- 8.3. **Figure 6** shows carbon neutrality performance since baseline year **2010/11**
- 8.4. The council is in the process of reviewing its annual targets to meet this objective, and currently tracking progress against a **6%** annual reduction target.

Figure 5: OCC Carbon Neutrality 2030 Target Boundary

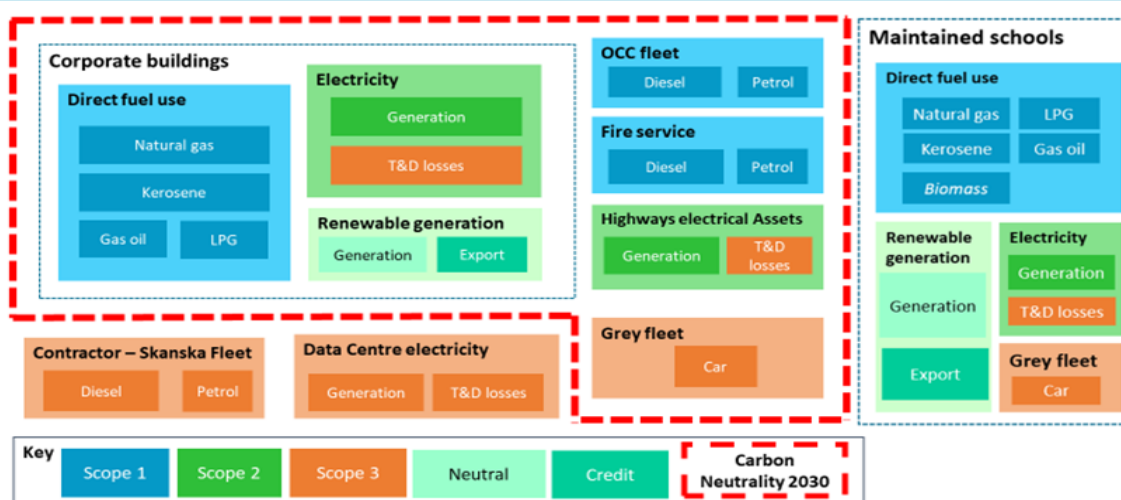
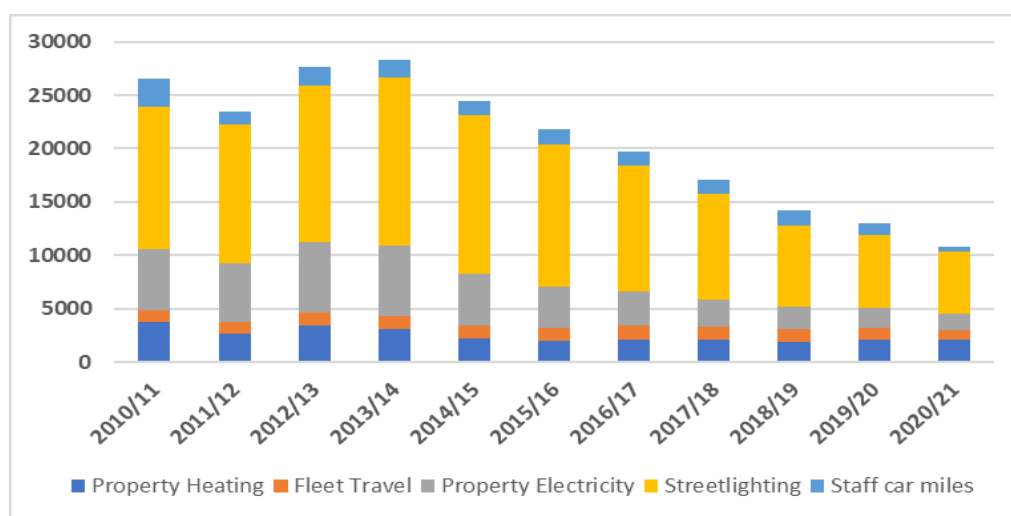


Figure 6: Carbon Neutrality performance



² Further information about the council's carbon reduction strategy:
[Climate action in Oxfordshire | Oxfordshire County Council](#)
[What we are doing to reduce our greenhouse gas emissions | Oxfordshire County Council](#)
[2020 Climate Action Framework \(oxfordshire.gov.uk\)](#)

9. Measurement, data quality, methodology and refinements

- 9.1. Oxfordshire County Council wish to collect high-quality data and has invested in AMR (Automatic meter reading), loggers and meter upgrades.
- 9.2. Our data quality is as follows:
- **55%** of our electricity data is from actual meter data and the remaining **45%** is based on invoiced annual consumption.
 - **100%** of our oil data is from delivered fuel invoices/ Fuel card data
 - **38%** of our gas data is from actual meter data and **62%** is based on invoiced annual consumption.
 - Street lighting data is calculated from *Elexon BSCP520 –Unmetered supplies Registered in SMRS*
 - Mileage data for business miles is collected from claim forms (as is cycle mileage) through staff expenses claims.
 - We also collect motorbike business mileage through staff expenses claims.

10. Energy Efficiency measures and carbon reduction projects 2020/21

Below is a list of some of the energy efficiency projects undertaken to reduce both energy and carbon emissions.

- **8,330** street lighting lanterns have been replaced with LEDs as part of an ongoing programme to convert **51,000** lanterns by **2025/26**. This has resulted in savings **3,193,514** kWh in electricity usage (**808** tonnes CO₂e). Note: some of the CO₂ savings is because of grid **decarbonisation**.
- New energy efficient boilers were installed at Carswell School, Enstone School, Hailey School and St Swithun's School. Based on a **10%** reduction in gas consumption a reduction of **10.7** tonnes CO₂e was expected. However, due to air handling changes to mitigate the **COVID** risks additional heating was required which reduced the reduction to **2.1** tonnes CO₂e.

Below is a list of some of the carbon reduction measures undertaken to reduce carbon emissions.

- Over the past 12 months EV additional **10** EV charging points have been installed at **3** sites. This includes a mix of 7kW/22kW dual wall mount units and free-standing posts.

Annex A – GHG Data Breakdown at Source

Scope	Energy source	Units	Quantity	CO2
1	Corporate gas	kWh	11500154	2115
	Voluntary Aided Schools gas	kWh	1137539	209
	Church of England funded Schools gas	kWh	5838264	1073
	Catholic Church Funded Schools gas	kWh	385519	71
	Community Schools gas	kWh	9534811	1753
	Total gas	kWh	28396287	5221
	Corporate gas oil	litres	5586	15
	Church of England funded Schools oil	litres	93990	259
	Catholic Church Funded Schools oil		7329	20
	Foundation Schools gas oil	litres	14177	39
	Total gas oil	litres	155539	429
	Corporate burning oil (kerosene)	litres	0	0
	Community Schools (kerosene)	litres	9245	23
	Church of England funded Schools	litres	24254	62
	Voluntary Aided School burning oil	litres	7645	19
	Total burning oil	litres	41144	105
	Corporate LPG	litres	8132	13
	Community Schools LPG	litres	7413	12
	Foundtion Schools LPG	litres	9151	14
	Church of England funded Schools LPG	litres	8345	13
	Total LPG	litres	33041	51
	Corporate diesel - Fire Service	litres	142923	384
	Corporate diesel - OCC fleet	litres	143110	385
	Schools Mini Bus fuel	litres	24773	67
	Total diesel	litres	310806	835
	Corporate petrol - OCC fleet	litres	4772	11
	Corporate petrol - Fire Service	litres	1489	3
Total petrol	litres	6261	14	
Corporate fuel oil	litres	25	0	
Fire Service fuel oil	litres	1	0	
Vehicle fuel oil	litres	26	0	

2	Corporate electricity	kWh	5,204,730	1,213
	Travellers Sites	kWh	722,938	169
	Community Schools electricity	kWh	2,985,327	696
	Foundation Schools electricity	kWh	119,430	28
	Voluntary Controlled Schools electricity	kWh	33,216	8
	Voluntary Aided School electricity	kWh	356,962	83
	Church of England funded Schools	kWh	2,763,727	644
	Catholic Church Funded Schools	kWh	201,468	47
	Street lighting electricity	kWh	23,244,363	5,419
	Total electricity	kWh	35,632,161	8,307
3	Corporate Average unknown car (miles)	Miles	1,392,986	384
	Community Schools Average unknown car (miles)	Miles	5,144	1
	Foundation Schools Average unknown car (miles)	Miles	390	0
	Casual staff Schools Average unknown car (miles)	Miles	0	0
	Voluntary Controlled Schools Average unknown car (miles)	Miles	565	0
	Church of England funded Schools Average unknown car (miles)	Miles	2,181	1
	Catholic Church Funded Schools Average unknown car (miles)	Miles	0	0
	Voluntary Aided School Average unknown car (miles)	Miles	0	0
	Total OCC business travel Average unknown car (miles)	Miles	1,401,266	387
	Corporate business travel Motorbike	Miles	3,026	1
	Skanska diesel	Miles	248,472	668
	Total Skanska Diesel	Miles	248,472	668
	Skanska petrol	Miles	66,129	153
	Total Skanska Petrol	Miles	66,129	153
	Electricity Transmission losses	kWh	35,799,925	718
	Data Centre Contractor Electricity	kWh	127,263	30
	Corporate Vacant Electricity	kWh	40,501	9
	Corporate Vacant Gas	kWh	30864	6
	Solar Export Corporate	kWh	-22686	-5
	Solar Export Schools	kWh	-273560	-64
Total Solar Export	kWh	-296246	-69	
Total Emissions			16,865	

Annex B – Total GHG emissions summary (Corporate Estate, Contractors & Schools)

Annex B. Total GHG emissions for period 1 April 2020 to 31 March 2021					
2020/19	Total Units	CO ₂	CH ₄	N ₂ O	Total
Scope 1					
Gas (kWh)	28,396,287	5,211,287	7,099	2,840	5,221,225
Gas Oil (litres)	155,539	423,715	439	4,786	428,939
Kerosene (litres)	41,144	104,005	258	259	104,522
LPG (litres)	33,041	51,321	37	33	51,391
Diesel (litres)	310,806	824,388	78	10,940	835,406
Petrol (litres)	6,261	14,411	43	38	14,492
Fuel Oil (litres)	26	82	0	0	83
Scope 1 Total		6,629,209	7,953	18,896	6,656,058
Scope 2					
Electricity (kWh)	35,632,161	8,232,454	25,655	49,172	8,307,282
Scope 3					
Electricity transmission	35,799,925	711,345	2,148	4,296	717,788
Contractor diesel	248,472	659,052	62	8,746	667,860
Contractor petrol (litres)	66,129	152,213	450	404	153,067
Business Travel	1,401,266	383,695	364	2,466	386,525
Business travel Motor	3,026	336	5	2	552
Electricity (kWh)	167,764	38,760	121	232	39,112
Gas (kWh)	30,864	5,664	8	3	5,675
Scope 3 Total		1,951,065	3,158	16,149	1,970,581
Scope 1, 2 & 3 Total (kg)		16812728	36766	84218	16933921
Carbon Offsetting (Solar)					-69067
Scope 1&2 Total (tonnes)		14862	34	68	16865

Annex C – Corporate Estate GHG emissions

Annex C. Corporate GHG emissions for period 1 April 2020 to 31 March 2021					
202/21	Total Units	CO ₂	CH ₄	N ₂ O	Total
Scope 1					
Gas (kWh)	11,500,154	2,110,508	2,875	1,150	2,114,533
Gas Oil (litres)	5,586	15,217	16	172	15,405
Kerosene (litres)	0	0	0	0	0
LPG (litres)	8,132	12,631	9	8	12,648
Diesel (litres)	310,806	824,388	78	10,940	835,406
Petrol (litres)	6,261	14,411	43	38	14,492
Fuel Oil (litres)	26	82	0	0	0
Scope 1 Total		2,977,238	3,020	12,309	2,992,485
Scope 2					
Electricity (kWh)	29,172,031	6,739,906	21,004	40,257	6,801,167
Scope 3					
Electricity transmission and distribution (kWh)	29,212,532	580,453	1,753	3,506	585,711
Vacant Elec	40,501	9,357	29	56	9,442
Vacant Gas	30,864	5,664	8	3	5,675
Business Travel Average unknown car (miles)	1,392,986	381,427	362	2,452	384,241
Motorbike	3,026	336	5	2	552
Scope 3 Total		977,238	2,157	6,018	985,622
Total (kg)		10,694,383	26,181	58,584	10,779,274
Offsetting (Solar)					-5
Total (tonnes)		10,694	26	59	10,774

Annex D - Maintained schools GHG emissions

Annex D. Schools GHG emissions for period 1 April 2020 to 31 March 2021					
2020/21	Total Units	CO ₂	CH ₄	N ₂ O	Total
Scope 1					
Gas (kWh)	16,896,133	3,100,778	4,224	1,690	3,106,692
Gas Oil (litres)	149,953	408,497	423	4,614	413,534
Kerosene (litres)	41,144	104,005	258	259	104,522
LPG (litres)	24,909	38,690	28	25	38,743
Scope 1 Total		3,651,970	4,933	6,588	3,663,491
Scope 2					
Electricity (kWh)	6,460,130	1,492,548	4,651	8,915	1,506,115
Scope 3					
Electricity transmission and distribution (kWh)	6,460,130	128,363	388	775	129,526
Business Travel Average unknown car	8,280	2,267	2	15	2,284
Scope 3 Total		130,630	390	790	131,810
Total (kg)		5,275,149	9,974	16,292	5,301,415
Offsetting (Solar)					-63,778
Total (tonnes)		5,275	10	16	5,238

Annex E - Contractor GHG emissions

Annex E. Contractor GHG emissions for period 1 April 2020 to 31 March 2021					
2020/21	Total Units	CO ₂	CH ₄	N ₂ O	Total
Scope 1					
Gas (kWh)	0	0	0	0	0
Gas Oil (litres)	0	0	0	0	0
Kerosene (litres)	0	0	0	0	0
LPG (litres)	0	0	0	0	0
Diesel (litres)	0	0	0	0	0
Petrol (litres)	0	0	0	0	0
Scope 1 Total	0	0	0	0	0
Scope 2					
Electricity (kWh)	0	0	0	0	0
Scope 3					
Electricity (kWh)	127,263	29,403	92	176	29,670
Diesel (litres)	248,472	659,052	62	8,746	667,860
Petrol (litres)	66,129	152,213	450	404	153,067
Electricity transmission and distribution (kWh)	127,263	2,529	8	15	2,552
Scope 3 Total	569,127	843,197	611	9,341	853,149
Total (kg)	569,127				853,149
Total (tonnes)					853

Annex F - Total corporate GHG CO2 Emissions Summary

Annex F: GHG emissions for period 1 April 2010 to 31 March 2021											
Tonnes of CO2e	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Scope 1											
Gas/Kerosene/Oil/LPG/Petrol/Diesel	25,543	17,948	22,293	19,356	10,873	9,088	8,076	7,954	7,119	6,364	6,656
Scope 2											
Purchased Electricity	35,358	31,865	33,264	31,100	25,228	21,619	18,398	14,697	11,388	9,943	8,307
Scope 3											
Electricity Transmission & Distribution/ Business Travel/ Energy used in contractor's office	7,140	6,015	5,894	6,567	5,588	4,855	4,210	3,801	3,385	2,929	1,971
Total Gross Emissions	68,041	55,828	61,451	57,023	41,688	35,562	30,684	26,452	21,893	19,236	16,934
Carbon offsets	0	0	0	0	0	0	0	0	0	0	0
Green tariff	12,179	0	0	0	0	0	0	0	0	0	0
Renewable electricity	0.00	0.00	35.00	69.64	93.81	57.62	62.58	107.04	79.22	71.53	69.07
Total annual net emissions	55,862	55,828	61,416	56,953	41,595	35,505	30,621	26,345	21,814	19,164	16,865

Annex G – Carbon neutrality GHG CO2 Emissions Summary

Annex G: Carbon Neutrality GHG emissions for period 1 April 2010 to 31 March 2021											
Tonnes of CO2e	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Scope 1											
Gas	3,652	2,502	3,335	2,933	2,153	1,970	2,006	2,061	1,867	2,088	2,115
Kerosene	100	10	9	9	5	7	-	-	-	-	-
Gas Oil	26	51	82	90	50	29	95	27	13	2	15
LPG	-	84	57	58	40	9	-	9	3	1	13
Fire Service Diesel	571	542	553	543	479	583	648	635	626	588	384
Fire Service Petrol	5	4	1	1	7	-	5	3	3	3	3
OCC Fleet Diesel	567	597	601	682	739	608	648	568	586	539	451
OCC Fleet Petrol	-	-	4	1	7	5	5	19	35	38	11
Fire Service Fuel Oil	-	-	-	-	-	-	-	-	-	-	0.00
Corporate Fuel Oil	-	-	-	-	-	-	-	-	-	-	0.08
Scope 2											
Electricity Corporate Buildings	5,215	5,014	6,162	6,190	4,412	3,580	2,916	2,280	1,881	1,683	1,382
Electricity Highways Assets (Street Lighting)	12,179	11,969	13,632	14,626	13,623	12,329	10,801	9,123	6,993	6,252	5,419
Scope 3											
Corporate T&D losses	469	449	460	453	386	296	264	213	162	143	120
Highways Assets T&D losses	1,094	1,075	1,018	1,071	1,191	1,018	977	853	603	531	466
Grey Fleet (unknown car / fuel)	2,633	1,194	1,729	1,673	1,377	1,385	1,311	1,346	1,411	1,182	385
Vacant Properties Elec	-	-	-	-	-	-	-	-	-	-	9
Vacant Properties Gas	-	-	-	-	-	-	-	-	-	-	6
Corporate Fuel oil	-	-	-	-	-	-	-	-	-	-	0.0
Carbon Offsetting											
Green tariff	-12,179									0.00	-4950
Renewable electricity generation										0.00	0.00
Renewable electricity export	0.00	0.00	0.00	0.00	-25.11	-5.04	-5.73	-4.74	-4.40	-3.99	-5.29
Total annual net emissions	14,331	23,491	27,644	28,328	24,444	21,813	19,671	17,132	14,179	13,047	10,774

Annex H - Operational Scope breakdown

- Central Offices (Scopes 1 and 2)
- Fire Stations (Scopes 1 and 2)
- Libraries (Scopes 1 and 2)
- Highway Depots (Scope 1 and 2)
- EV Fleet (Scope 2)
- Fleet (Scope 1)
- Business miles (including cycling)- corporate estate and activities & schools (Scope 3)
- Gypsy and Travelers sites communal lit areas (Scope 2)
- Maintained community schools (Scope 1 and 2)
- VC and Foundation Schools (Scope 1 and 2)
- Day Centers (Scope 1 and 2)
- Children's Homes (Scope 1 and 2)
- Highways furniture and car parks (Scope 2)
- Street lighting and traffic signals (Scope 2)
- Skanska Fleet (Scope 3)
- Data Centres (Scope 3)
- Transmission and Distribution (Scope 3)
- Vacant properties (Scope 3)

Not included in current reporting and reasoning

We wish to increase the data we report in our GHG reporting. We do not currently include the following in our reporting:

- Leisure Centers - Scope 1 & 2 - complex use arrangements, in the main leased to Districts and reported in their scopes
- Academy Schools - not in scope - leased on 125-year leases to separate operational trusts. Data not Available.
- Care homes – Scope 1 & 2 - complex use arrangements as long term leased to third parties - currently no data available
- Water - Scope 3 - currently no reliable data available
- Supply Chain - Scope 3 - currently reporting Skanska fleet Fuel and Data Centre. No further data currently collected.
- Staff Commuting to work - Scope 3 - no data available
- Business mileage from public transport and walking - Scope 3 - currently no data available.

Annex I – Operational Scopes

Scope One	Scope Two	Scope Three	Not included
Fuel used to heat our buildings (e.g. natural gas, gas oil, kerosene and liquid petroleum gas)	Purchased electricity for our buildings and other electricity consuming sites (e.g. offices, leisure centres, depots, car park and public conveniences).	Electricity (transmissions and distribution factors)	Perfluorocarbons (PFC), hydrofluorocarbons (HFC) and sulphur hexafluoride (SF ₆)
Fuel used in council vehicle fleet and also to power non-road going vehicles and plant such as lawn-mowers and, chippers.		Business mileage by car	Staff commuting
Fuel used in waste collection vehicle fleet		Business mileage by public transport (bus and train)	Emissions from Council operational waste deposited in landfill sites
		Water consumed (supply and treatment)	Emissions from Leased commercial properties or housing stock where tenants are paying energy/water bills.
		Half-hourly metered and non-half-hourly metered electricity supplies (ie Meter profile classes 01-08, HH and Unmetered Supplies)	
			Emissions from goods and services purchased and employed to conduct council business and operations. Council financial investments.

CLIMATE ACTION PROGRAMME Q2 2021/22 report R



Next steps:

- Develop decarbonisation roadmaps for fleet and property
- Work with Environment Advisory Group on developing delivery plan associated with Pathways to Zero Carbon Oxfordshire (PAZCO) report
- Broaden scope of Climate Impact Assessments to include adaptation and biodiversity

Key risks:
PSDS funding missed for lack of project pipeline for corporate estate
Public Sector Decarbonisation Scheme (PSDS)

Key opportunities:
Restart strategy – consolidate emission reductions (staff travel)
PAZCO – mobilise partnership to develop Oxon routemap
COP26 – lobby, showcase, build momentum

Operating at net zero by 2030

Delivery in progress of streetlight LED conversion programme and PSDS measures in corporate buildings

Decarbonisation roadmap with project pipeline being developed by OCC property

Fleet audit completed to inform fleet electrification

Action needed to retain reductions in staff travel emissions

	Roadmap ▶	Funding ▶	Delivery
Highway assets	Green	Green	Green
Property OCC	Amber		
Fleet	Amber		
Staff travel	Amber		

Enabling a zero-carbon future for Oxfordshire

Key plans and strategies being aligned with net zero

Review of 'Pathways to Zero Carbon Oxfordshire' (PAZCO) implications highlighted gaps on adaptation, zero-carbon infrastructure, community outreach – opportunity to address through routemap development

Data/Strategy	Roadmaps	Delivery
PAZCO	Needed for Oxon	Delays affecting ZEZ, Park and Charge, LTN, Green Homes LAD1b
Energy Insights	Needed for homes retrofit	
OxIS		
LTCP		
OxEVIS		
Social Value Policy		

Becoming climate active council

Carbon Literacy

STAFF TRAINED

11

TARGET 2021/22: 30

Climate Action e-learning

STAFF TRAINED

426

TARGET 2021/22: 700