

# Annual Greenhouse Gas Emissions Report 2020/21

for South Oxfordshire  
District Council



## Greenhouse gas emissions reporting requirements

Since 2011, the Department for Business, Energy & Industrial Strategy has required local authorities to measure and report greenhouse gas emissions from their estate and operations. 2020/21 is the eleventh year of reporting and 2009/10 represents the baseline year.

Their guidance draws on the principles of the Greenhouse Gas Protocol, an internationally recognised standard for corporate accounting and reporting of greenhouse gas emissions. Under the protocol all six greenhouse gases are taken into consideration namely, carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), perfluorocarbons (PFCs), hydrofluorocarbons (HFCs) and sulphur hexafluoride (SF<sub>6</sub>) and are reported in terms of tonnes of carbon dioxide equivalent.

## Greenhouse gas emissions reporting period April 2009 – March 2021

Table one shows South Oxfordshire District Council greenhouse gas emissions between 2009/10 and 2020/21 measured in tonnes of CO<sub>2</sub> equivalent (tCO<sub>2</sub>e). Across all scopes, emissions have fallen by 3,075 tCO<sub>2</sub>e – equivalent to a 57 per cent reduction – since 2009/10. Scope one emissions from gas and oil use in buildings and fuel use in fleet vehicles have decreased by 1,148 tCO<sub>2</sub>e, equivalent to a 41 per cent reduction. Scope two emissions from purchased electricity fell by 88 per cent – equivalent to a reduction of 1,412 tCO<sub>2</sub>e. Scope three emissions from business mileage, contractor energy and fuel use, well to tank (WTT) processes and transmission and distribution losses fell by 515 tCO<sub>2</sub>e, equal to a reduction of 52 per cent.

**Table One: South Oxfordshire District Council greenhouse gas emissions 2009/10 – 2020/21<sup>1</sup>**

Scope	tCO <sub>2</sub> e												Change since 2009/10	% change since 2009/10
	Baseline 2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21		
Scope one	2,820	2,594	2,462	2,422	2,422	2,480	2,452	2,399	2,274	2,068	2,074	1,672	-1,148	-41%
Scope two	1,610	1,447	1,221	1,162	1,092	1,217	1,001	922	809	809	524	198	-1,412	-88%
Scope three	999	936	852	857	901	929	880	838	814	802	630	484	-515	-52%
Gross emissions	5,429	4,977	4,535	4,441	4,414	4,626	4,333	4,160	3,896	3,680	3,228	2,354	-3,075	-57%
Carbon offsets	0	0	0	0	0	0	0	0	0	0				
Green tariff	0	0	0	0	0	0	0	0	0	0				
Scope	5,429	4,977	4,535	4,441	4,414	4,626	4,333	4,160	3,896	3,680	3,228	2,354	-3,075	-57%

<sup>1</sup> As a result of rounding, the totals presented may be slightly different to the sum of the individual values.

Table two shows in greater detail the sources of greenhouse gas emissions for each scope

**Table Two: South Oxfordshire District Council greenhouse gas emissions 2009/10 – 2020/21<sup>2</sup>**

Scope		tCO <sub>2</sub> e												Change since 2009/10	% change since 2009/10
		Baseline 2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21		
One	Gas consumption	1,369	1,284	1,249	1,263	1,169	1,197	1,218	1,113	1,065	917	1,031	423	-946	-69%
	Facilities fleet	5	7	5	5	5	6	7	2	0	1	2	3	-2	-40%
	Waste team											1	0		
	Grounds Maintenance fleet												5		
	Technical Services (Cleaning)												1		
	Waste fleet diesel	1,447	1,303	1,209	1,154	1,248	1,277	1,228	1,285	1,209	1,150	1,039	1,239	-208	-14%
	<b>Total scope one</b>	<b>2,820</b>	<b>2,594</b>	<b>2,462</b>	<b>2,422</b>	<b>2,422</b>	<b>2,480</b>	<b>2,452</b>	<b>2,399</b>	<b>2,274</b>	<b>2,068</b>	<b>2,074</b>	<b>1,672</b>	<b>-1,148</b>	<b>-41%</b>
Two	Purchased electricity	1,610	1,447	1,221	1,162	1,092	1,217	1,001	922	809	809	524	198	-1,412	-88%
	<b>Total scope two</b>	<b>1,610</b>	<b>1,447</b>	<b>1,221</b>	<b>1,162</b>	<b>1,092</b>	<b>1,217</b>	<b>1,001</b>	<b>922</b>	<b>809</b>	<b>809</b>	<b>524</b>	<b>198</b>	<b>-1,412</b>	<b>-88%</b>
Three	WTT Gas	134	126	122	130	178	161	164	151	161	139	134	55	-79	-59%
	WTT facilities fleet	1	1	1	1	1	1	2	0	0	3	0.6	0.7	-0.3	-30%
	WTT Waste Team											0.3	0		
	WTT waste fleet diesel	301	271	251	261	277	284	276	273	288	274	247	297	-4	-1%
	WTT Grounds Maintenance												1		
	WTT Technical Services												0.3		
	Finance contractor	36	29	18	19	16	15	13	13	7	8	8	9	-27	-75%
	Leisure contractor	2	2	3	3	5	5	5	6	6	5	5	1	-1	-50%
	Waste contractor	48	93	48	58	39	51	55	46	21	43	30	28	-20	-42%
	Ground maintenance contractor	19	22	14	13	13	15	22	22	21	21	20	11	-8	-42%
	Cleaning contractor			13	7	8	8	8	7	5	4	7	5		
	Facilities contractor								2	4					
	Car parks contractor								2	3	14	5	5		
	Council business travel	97	68	89	86	84	81	91	81	80	74	50	24	-73	-75%
	Scope 2 WTT electricity	234	208	187	187	187	201	161	151	141	141	79	30	-204	-87%
	Scope 2 T&D losses electricity	127	117	104	92	93	106	83	83	76	76	44	17	-110	-87%
	<b>Total scope three</b>	<b>999</b>	<b>936</b>	<b>852</b>	<b>857</b>	<b>901</b>	<b>929</b>	<b>880</b>	<b>838</b>	<b>814</b>	<b>802</b>	<b>630</b>	<b>484</b>	<b>-515</b>	<b>-52%</b>
<b>Total emissions</b>	<b>5,429</b>	<b>4,977</b>	<b>4,535</b>	<b>4,441</b>	<b>4,414</b>	<b>4,626</b>	<b>4,333</b>	<b>4,160</b>	<b>3,896</b>	<b>3,680</b>	<b>3,228</b>	<b>2,354</b>	<b>-3,075</b>	<b>-57%</b>	

<sup>2</sup> As a result of rounding, the totals presented may be slightly different to the sum of the individual values.

Figure one shows greenhouse gas emissions from council operations between 2009/10 and 2020/21 across each scope

**Figure One: South Oxfordshire District Council greenhouse gas emissions 2009/10 – 2020/21**

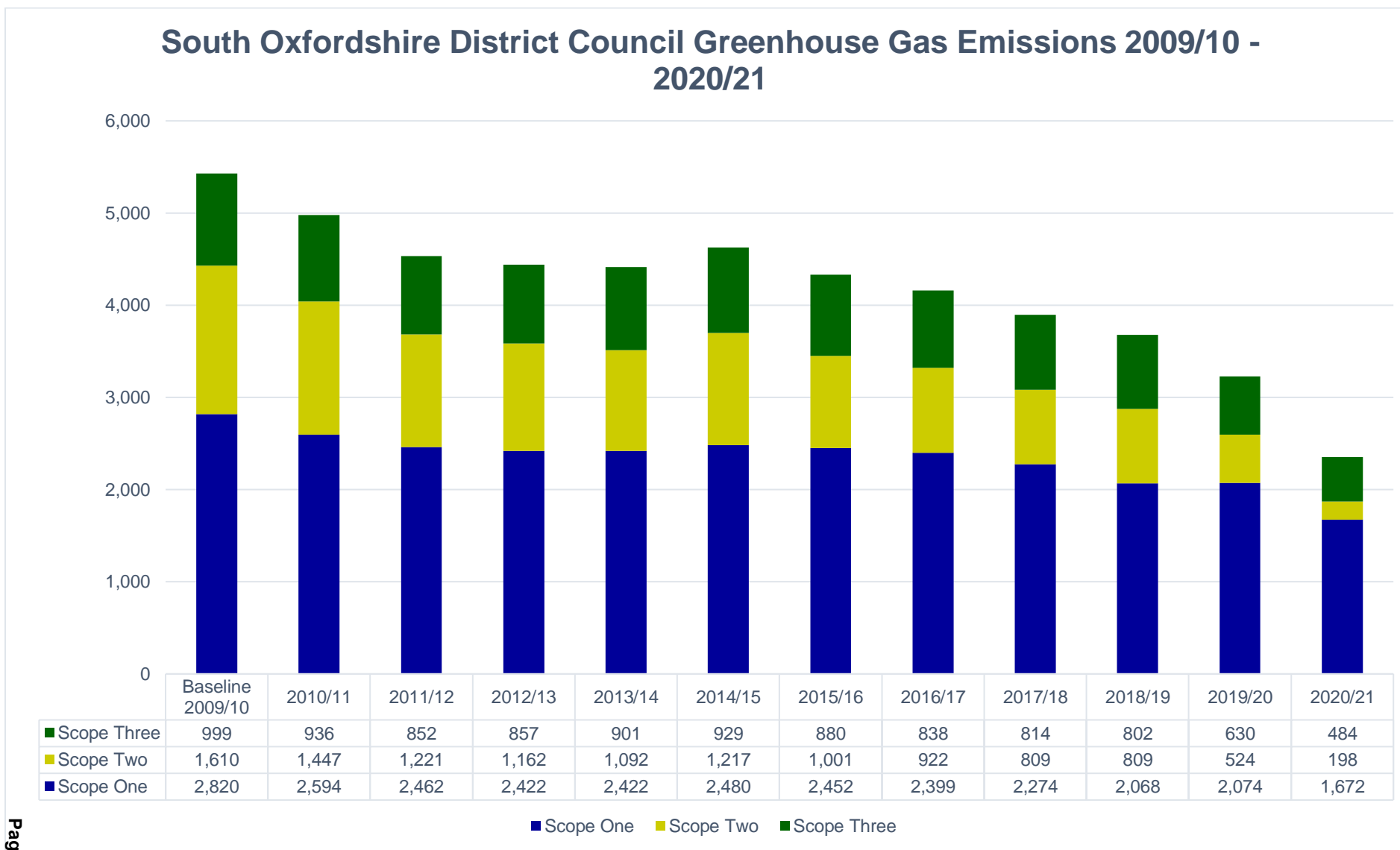


Table three shows the breakdown of greenhouse gas emissions by gas type

**Table Three: 2020/21 CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O emissions**

Scope	2020/21		
	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O
Scope one	1653.4	0.7	17.4
Scope two	196.5	0.6	1.2
Scope three	85.2	0.2	0.6
<b>Total</b>	<b>1,935.1</b>	<b>1.5</b>	<b>19.2</b>

## Contextual analysis

Along with other Oxfordshire councils, South Oxfordshire District Council is committed to the Oxfordshire 2030 priority to reduce greenhouse gas emissions. The objective is to reduce carbon emissions from the local authority estate by an average of 3 per cent annually against a 2010/2011 baseline.

At a meeting of the Full Council on 11 April 2019, South Oxfordshire declared a Climate Emergency. This committed the council to working towards reducing its impact upon the environment. To facilitate this, a Climate Emergency Advisory Committee was established to advise on how South Oxfordshire can contribute to carbon reduction targets and minimise damage to the environment through its policies and practices. At its inaugural meeting on 19 September 2019, the Committee recommended that South Oxfordshire should become a carbon neutral council by 2025 and a carbon neutral district by 2030 – these targets were endorsed by the Cabinet and Full Council on 8 October 2019 and 10 October 2019 respectively. An ongoing programme of work has been developed to assist and guide South Oxfordshire in achieving its climate change ambitions.

Action on the Climate Emergency is one of the key themes of South's Corporate Plan 2020-24. The Plan was adopted at a meeting of the full council in October 2020.

On 13 March 2020, council staff were advised to work from home if possible due to the coronavirus. Ten days later, the United Kingdom entered a full nationwide lockdown. This led to the closure of council owned and operated buildings throughout the district and the prohibiting of all but essential travel. Measures to control the spread of Covid-19 lasted throughout 2020/21:

- Council staff were advised to continue working from home throughout 2020/21. Use of the council's offices was severely restricted, with only people who were unable to carry out their duties elsewhere allowed access.
- Meetings of the council and its committees were moved online.
- Leisure centres were closed from 20 March 2020 until 25 July 2020. After a period of reopening, they were then obliged to close again – apart from educational use – between 2 November 2020 and 23 December 2020. From 23 December, all facilities were closed until joint use facilities with schools were allowed to reopen in March 2021.

- The Cornerstone in Didcot remained closed to the public throughout 2020/21. The facility was used to house the Community Hub.
- The Council's Community Centres were closed as a result of lockdown – while they did reopen intermittently throughout the year, hiring rates were low.

Because of the impacts of the pandemic, South Oxfordshire's overall greenhouse gas emissions reduced during 2020/21. As the Council returns to normal operations during 2021/22, we would expect to see emissions increase.

Although South Oxfordshire District Council's waste fleet has achieved fuel efficiencies in recent years (through changes in terms of both vehicles and operations, 2020/21 saw an increase in overall fuel use. This was due to a combination of factors which included: operational changes due to the pandemic, continued growth in the number of properties being serviced, large peaks in tonnage forcing vehicles to carry out extra tip runs and an increase in garden waste customers.

Taylor Wimpey handed control of the Southern Community Centre to South Oxfordshire on 1 October 2020.

The grounds maintenance and public convenience cleaning contracts were brought in-house on 1 November 2020.

The waste team vehicles are no longer in use – they are to be sold/scrapped.

In order to give a more accurate indication of the greenhouse gas emissions generated, and to better reflect the shared nature of the workforce, staff mileage is divided equally between South Oxfordshire and Vale of White Horse.

The carbon factor for electricity has reduced by nine per cent in the last year, which has impacted favourably on the scope two emissions reported by the council – since 2009, the carbon factor for electricity has reduced by over 50 per cent.

## Data Set

The approach set out in the Greenhouse Gas Protocol is to identify and categorise emissions-releasing activities into three groups, known as scopes. The guidance recommends reporting scope one and scope two emissions, but states that reporting scope three emission is discretionary. The three scopes are:

### Scope one, direct emissions:

Activities owned or controlled by the council that release emissions straight into the atmosphere. Scope one emissions include emissions from combustion in owned or controlled boilers, furnaces and vehicles.

### Scope two, indirect energy:

Emissions being released into the atmosphere associated with the council's consumption of purchased electricity. These are indirect emissions that are a consequence of the council's activities, but which occur at sources the council does not own or control.



**Scope three, other indirect:**

Emissions that are a consequence of the council’s actions that occur at sources which the council does not own or control and which are not classed as scope two emissions. Examples of scope three emissions are business travel by means not owned or controlled by the council, well to tank processes and electricity transmission and distribution losses.

The Department for Business, Energy & Industrial Strategy has not imposed exact instructions on what local authorities should include in their annual greenhouse gas emissions report. The council has identified activities which are responsible for greenhouse gas emissions being released into the atmosphere. These include energy use in all buildings occupied by either the council or its contractors, fuel use in plant and equipment operated by the council or its contractors and fuel use by vehicles owned or used by the council and its contractors.

Emissions from residential waste collection are included under scope one however, emissions from the treatment and disposal of residential waste are not included. Emissions from the collection and disposal of waste from council offices, water use and staff commuting have also been excluded due to insufficient data and difficulties obtaining data. The council will work towards including these emissions in future reports. Emissions of PFCs, HFCs and SF6 have not been included in this report as council activities are not significant sources of these gases.

Emissions associated with the extraction, refining and transportation of raw fuels before their combustion are referred to as well to tank (WTT) processes and form part of scope three emissions. Emissions associated with electricity transmission and distribution losses are also included in scope three.

**Table Four: Council greenhouse gas emissions sources under each scope**

Scope One	Scope Two	Scope Three	Scope Four
Gas and oil use in council offices, civic buildings, leisure centres and temporary accommodation hostels	Electricity use in council offices, civic buildings, leisure centres, temporary accommodation hostels, car parks, CCTV, public conveniences, pumping stations and sewage treatment works	Contractor electricity, gas, oil and fuel use and mileage	Perfluorocarbons, hydrofluorocarbons and sulphur hexafluoride
Fuel used in council vehicle fleet		Business mileage by car	Staff commuting
Fuel used in waste collection vehicle fleet		Business mileage by public transport	Council office waste collection, treatment and disposal
		WTT processes and transmission and distribution losses	Water
			Residential waste treatment and disposal
			Fugitive emissions

## **Data collection and methodology**

The Department for Business, Energy & Industrial Strategy and Defra publish joint guidance for local authorities on how to report and measure their greenhouse gas emissions including annually updated greenhouse gas conversion factors. Greenhouse gas emissions for 2020/21 have been reported in line with the joint DECC/Defra guidance published in June 2013<sup>3</sup> and calculated using the 2020 conversion factors. In line with the guidance, emissions from electricity are no longer calculated using the five-year grid rolling average and are instead calculated using the average conversion factor applicable to the reporting year.

Energy and fuel use in council and contractor buildings, plant, equipment and vehicles and the resulting carbon dioxide emissions have been reported annually since 2007 when the council established its carbon management plan. Data is manually collected on a monthly basis or in some cases quarterly. Each service area is responsible for collecting and collating data on energy consumed in delivering their services. Contractors are responsible for collecting and passing data to client managers on a monthly or quarterly basis.

It should be noted that electricity consumption for the council's office during 2015/16 was modelled. Following a fire at its office in January 2015, South Oxfordshire District Council moved into leased temporary office accommodation between late June and late July 2015. The electricity supply at the new office has one fiscal utility meter that feeds both the council's electrical load as well as a data centre, which is the responsibility of the landlord. On 8 April 2016 the council installed a sub-meter to measure their consumption however, in the absence of sub-meter data during the period 1 April 2015 to 31 March 2016 the council required a reliable estimate of their own electricity consumption to inform their greenhouse gas emissions reporting. The council therefore appointed an environmental consultancy, EEVS Insight Ltd (Energy Efficiency Verification Specialists), to carry out an analysis of the electricity consumption data from the fiscal utility meter and the council's sub-meter to model the electricity consumption in the building which can be attributed to South Oxfordshire District Council.

## **Carbon offsetting**

### **Green tariff**

Currently the council does not purchase any electricity from a green tariff.

### **Carbon offsets - renewable technologies**

Solar photovoltaic panels are installed on some public conveniences owned by the council. The amount of energy generated by these systems has not been included in this report due to insufficient data.

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<sup>3</sup> <https://www.gov.uk/guidance/measuring-and-reporting-environmental-impacts-guidance-for-businesses>

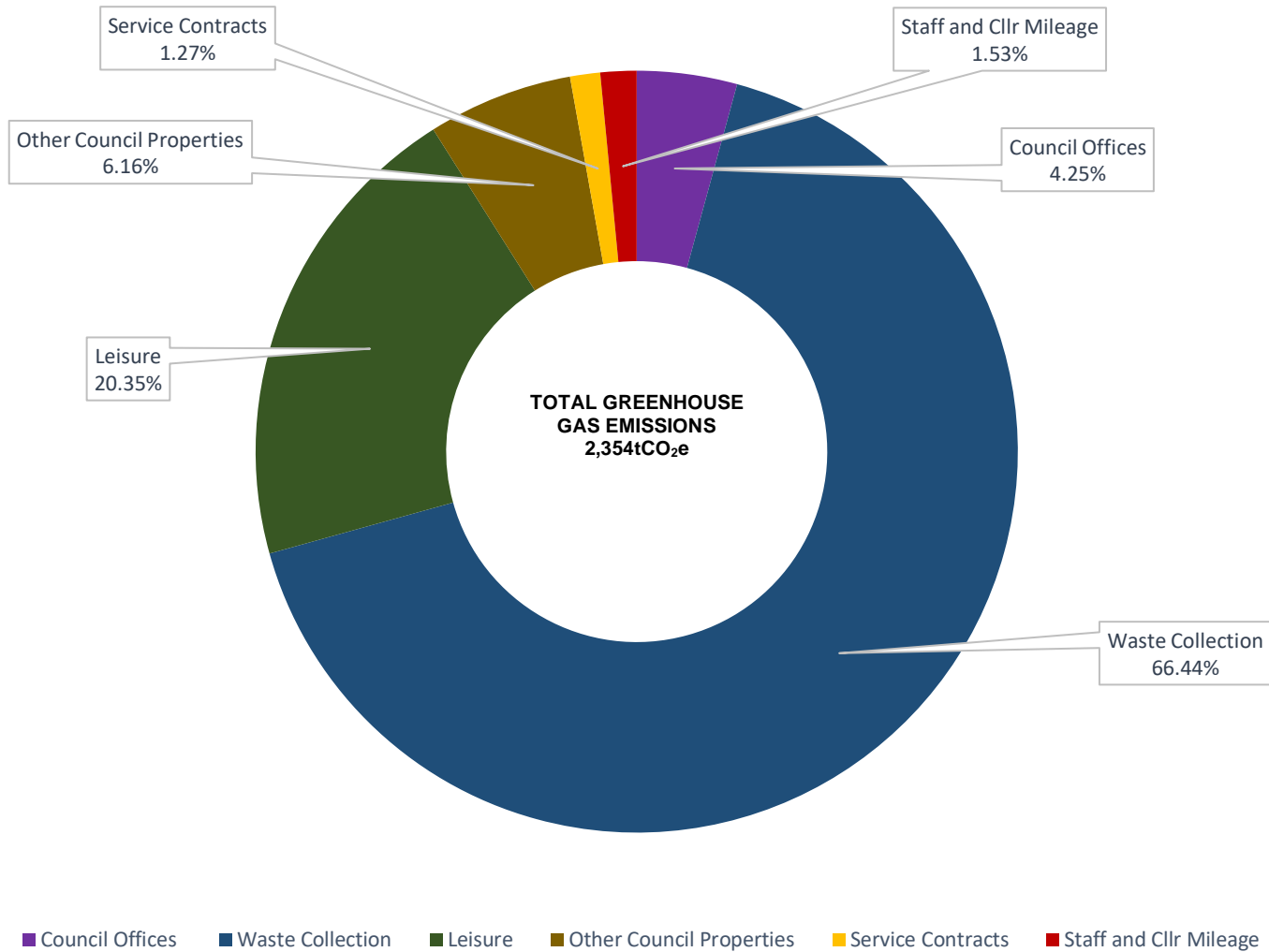


## Appendix One – South Oxfordshire Greenhouse Gas Emissions (kgCO<sub>2</sub>e) by source 2020/21<sup>4</sup>

		Scope One	Scope Two	Scope Three							
				Electricity							
				WTT: Generation	WTT: T&D	T&D Losses	Indirect Emissions	WTT	Total	Total GHG (kgCO <sub>2</sub> e)	Conversion to tCO <sub>2</sub> e
		Total GHG	Total GHG	Total GHG	Total GHG	Total GHG	Total GHG	Total GHG			
Council Offices	Milton Park	48,516	21,752	3,002	258	1,871		6,309	81,708	100,391	100
	Abbey House	9,245	6,664	920	79	573		1,202	18,683		
Waste Collection	Biffa Fleet	1,239,194						296,970	1,536,164	1,563,735	1,564
	Biffa Buildings and Business Mileage			3,078	265	1,919	22,309	0	27,571		
Leisure	Abbey Sports Centre	1,994	3,035	419	36	261		259	6,004	478,603	479
	Didcot Leisure Centre	632	4,426	611	53	381		82	6,185		
	Didcot Wave	116,062	35,372	4,881	420	3,042		15,092	174,870		
	Henley Leisure Centre	91,250	21,148	2,918	251	1,819		11,866	129,252		
	Park Sports Centre	4,479	7,773	1,073	92	669		582	14,668		
	Riverside Pool	0	810	112	10	70		0	1,001		
	Thame Leisure Centre	93,714	31,939	4,407	379	2,747		12,186	145,372		
	Leisure Mileage						982	269	1,251		
Other Council Properties	Cornerstone	51,616	24,157	3,333	287	2,078		6,712	88,183	145,204	145
	Northern Neighbourhood Community Centre	2,409	562	78	7	48		313	3,417		
	Southern Neighbourhood Community Centre	3,036	647	89	8	56		395	4,230		
	Public Conveniences		15,113	2,085	180	1,300			18,678		
	Car Parks		24,759	3,416	294	2,129			30,598		
	Foxhall Manor Park		79	11	1	7			98		
Service Contracts	Capita			599	52	374	7,189	654	8,868	29,974	30
	Saba						4,254	1,130	5,384		
	Sodexo						8,841	2,167	11,008		
	Healthmatic						3,803	911	4,714		
Staff and Cllr Mileage	Waste Team	0						0	0	35,918	36
	Facilities Fleet	2,868						690	3,558		
	Grounds Maintenance	5,398						1,312	6,710		
	Technical Services (Cleaning)	1,116						268	1,384		
	Staff and Councillor Business Travel						19,302	4,964	24,266		
<b>Grand Total</b>									<b>2,353,825</b>	<b>2,354</b>	

<sup>4</sup> As a result of rounding, the totals presented may be slightly different to the sum of the individual values.

## South Oxfordshire District Council Greenhouse Gas Emissions 2020/21

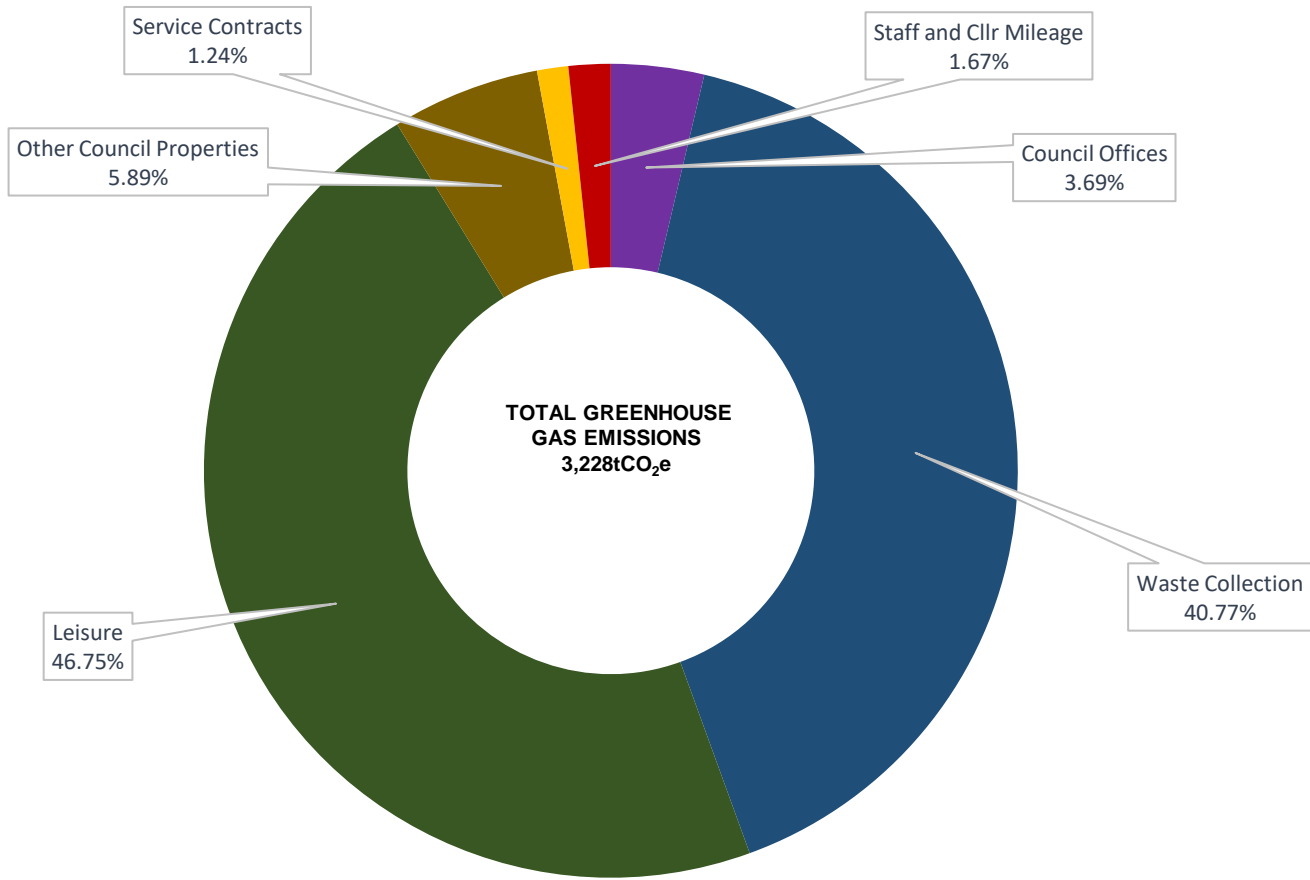


## Appendix Two – South Oxfordshire Greenhouse Gas Emissions (kgCO<sub>2</sub>e) by source 2019/20<sup>5</sup>

		Scope One	Scope Two	Scope Three							
				Electricity							
				WTT: Generation	WTT: T&D	T&D Losses	Indirect Emissions	WTT	Total	Total GHG (kgCO <sub>2</sub> e)	Conversion to tCO <sub>2</sub> e
		Total GHG	Total GHG	Total GHG	Total GHG	Total GHG	Total GHG	Total GHG			
Council Offices	Milton Park	41,425	36,604	5,105	434	3,108		5,387	92,063	118,957	119
	Abbey House	9,684	12,903	1,800	153	1,095		1,259	26,894		
Waste Collection	Biffa Fleet	1,038,627						247,070	1,285,697	1,315,933	1,316
	Biffa Buildings and Business Mileage			3,411	290	2,076	24,459	0	30,236		
Leisure	Abbey Sports Centre	76,750	39,126	5,457	464	3,322		9,982	135,101	1,509,057	1,509
	Didcot Leisure Centre	13,604	19,641	2,739	233	1,668		1,769	39,654		
	Didcot Wave	247,780	84,518	11,788	1,002	7,175		32,224	384,487		
	Henley Leisure Centre	179,756	104,002	14,506	1,233	8,830		23,378	331,705		
	Park Sports Centre	36,731	32,649	4,554	387	2,772		4,777	81,870		
	Riverside Pool	26,833	11,063	1,543	131	939		3,490	43,999		
	Thame Leisure Centre	335,667	87,696	7,445	1,040	12,231		43,654	487,733		
	Leisure Mileage						3,545	963	4,508		
Other Council Properties	Cornerstone	60,521	49,446	6,897	586	4,198		7,871	129,519	189,591	190
	Northern Neighbourhood Community Centre	2,743	1,512	211	18	128		357	4,969		
	Public Conveniences		17,357	2,421	206	1,474			21,458		
	Car Parks		27,144	3,786	322	2,304			33,556		
	Foxhall Manor Park		72	10	1	6			89		
Service Contracts	Capita			664	56	404	6,153	295	7,572	40,145	40
	Saba						4,337	1,141	5,478		
	Sodexo						16,081	3,935	20,016		
	Healthmatic						5,719	1,360	7,079		
Staff and Cllr Mileage	Waste Team	1,085						259	1,344	53,899	54
	Facilities Fleet	2,339						559	2,898		
	Staff and Councillor Business Travel						39,491	10,166	49,657		
<b>Grand Total</b>										<b>3,227,582</b>	<b>3,228</b>

<sup>5</sup> As a result of rounding, the totals presented may be slightly different to the sum of the individual values.

# South Oxfordshire District Council Greenhouse Gas Emissions 2019/20



■ Council Offices ■ Waste Collection ■ Leisure ■ Other Council Properties ■ Service Contracts ■ Staff and Cllr Mileage