Annual Greenhouse Gas Emissions Report 2020/21

for Vale of White Horse 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_2), methane (CH_4), nitrous oxide (N_2O), perfluorocarbons (PFCs), hydrofluorocarbons (HFCs) and sulphur hexafluoride (SF_6) and are reported in terms of tonnes of carbon dioxide equivalent.

Greenhouse gas emissions reporting period April 2009 – March 2021

Table one shows Vale of White Horse District Council greenhouse gas emissions between 2009/10 and 2020/21 measured in tonnes of CO_2 equivalent (tCO_2e). Across all scopes, emissions have fallen by 2,947 tCO_2e – equivalent to a 53 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 1,017 tCO_2e, equivalent to a 36 per cent reduction. Scope two emissions from purchased electricity fell by 84 per cent – equivalent to a reduction of 1,336 tCO_2e. Scope three emissions from business mileage, contractor energy and fuel use, well to tank (WTT) processes and transmission and distribution losses fell by 594 tCO_2e, equal to a reduction of 51 per cent

Table One: Vale of White Horse District Council greenhouse gas emissions 2009/10 – 2020/21[1]

	tCO_2e													
Scope	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	Change since 2009/10	% change since 2009/10
Scope one	2,837	2,842	2,629	2,635	2,563	2,648	2,680	2,354	2,309	2,380	2,309	1,820	-1,017	-36%
Scope two	1,583	1,426	1,320	1,250	1,146	1,047	991	929	775	680	462	247	-1,336	-84%
Scope three	1,168	1,043	951	930	973	951	915	851	848	837	731	574	-594	-51%
Gross emissions	5,588	5,311	4,900	4,816	4,682	4,646	4,585	4,134	3,932	3,898	3,502	2,641	-2,947	-53%
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	5,588	5,311	4,900	4,816	4,682	4,646	4,585	4,134	3,932	3,898	3,502	2,641	-2,947	-53%

[1] 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

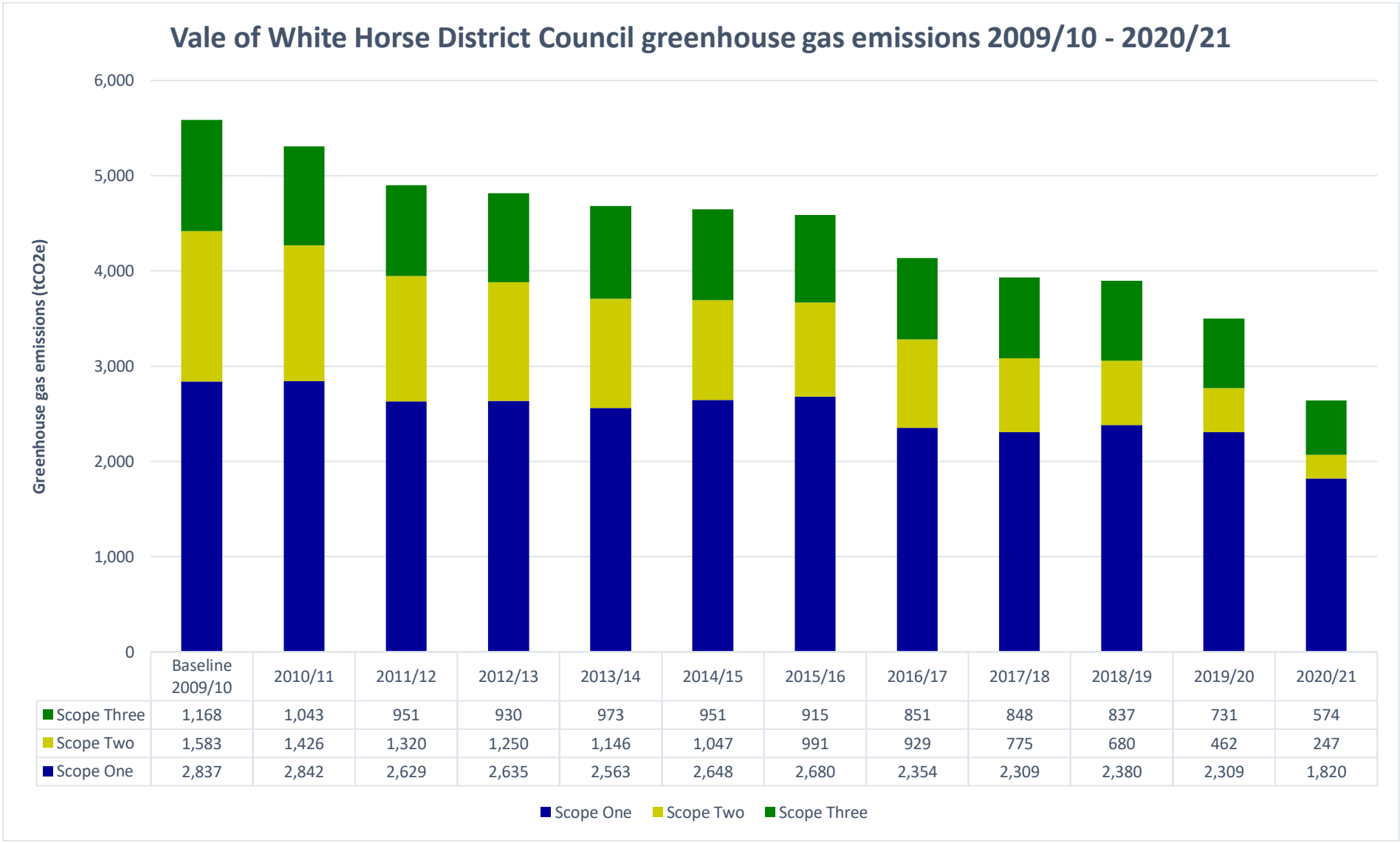
Table Two: Vale of White Horse District Council greenhouse gas emissions 2009/10 – 2020/21[2]

			tCO2e												
Scope		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	Change since 2009/10	% change since 2009/10
One	Gas consumption	1,530	1,633	1,495	1,530	1,372	1,455	1,499	1,205	1,174	1,259	1,252	639	-891	-58%
	Oil consumption	31	30	31	52	52	25	32	93	0	59	83	0	-31	-100%
	Facilities fleet diesel							3	1	0	1	2	3		
	Waste Team											1	0		
	Grounds Maintenance fleet												19		
	Technical Services (Cleaning)												1		
	Env. Health fleet diesel	9	4	3	3	3	4	5	5	5	5				
	DSO fleet diesel	44	4												
	Waste fleet diesel	1,223	1,170	1,101	1,051	1,136	1,163	1,144	1,051	1,130	1,057	970	1,158	-65	-5%
	Total scope one	2,837	2,842	2,629	2,635	2,563	2,648	2,680	2,354	2,309	2,380	2,309	1,820	-1,017	-36%
Two	Purchased electricity	1,583	1,426	1,320	1,250	1,146	1,047	991	929	775	680	462	247	-1,336	-84%
	Total scope two	1,583	1,426	1,320	1,250	1,146	1,047	991	929	775	680	462	247	-1,336	-84%
Three	WTT Gas	150	160	146	158	210	195	202	164	178	190	163	83	-67	-45%
	WTT Oil	6	6	6	11	11	5	6	17	0	13	19	0	-6	-100%
	WTT Env. Health fleet diesel	2	1	1	1	1	1	1	1	1	1				
	WTT DSO fleet diesel	8	1												
	WTT waste fleet diesel	254	243	229	237	252	259	257	223	269	252	231	277	23	9%
	WTT facilities fleet							1	0	0	3	0.6	0.7		
	WTT Grounds Maintenance												5		
	WTT Technical Services												0.3		
	Waste Team											0.3			
	Finance contractor	31	22	13	13	12	13	12	9	6	7	7	6	-25	-81%
	Leisure contractor	19	3	3	4	4	2	5	6	6	5	5	1	-18	-95%
	Waste contractor	117	69	45	53	36	46	51	38	20	40	28	26	-91	-78%
	Grounds Maintenance contractor	141	168	119	94	95	107	89	105	110	102	109	83	-58	-41%
	Cleaning contractor			13	7	8	8	8	7	5	4	7	5		
	Facilities contractor								2	4					
	Car parks contractor								2	3	5	5	5		
	Property contractor								0.2	0.2					
	Council business travel	84	50	61	52	51	49	42	41	37	32	47	24	-60	-71%
	WTT electricity	230	205	202	201	196	173	160	152	135	119	70	37	-193	-84%
	T&D losses electricity	125	115	113	99	98	92	82	84	73	64	39	21	-104	-83%
	Total scope three	1,168	1,043	951	930	973	951	915	851	848	837	731	574	-594	-51%
	Total emissions	5,588	5,311	4,900	4,816	4,682	4,646	4,585	4,134	3,932	3,898	3,502	2,641	-2,947	-53%

[2] 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: Vale of White Horse District Council greenhouse gas emissions 2009/10 – 2020/21



	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 Three	1,168	1,043	951	930	973	951	915	851	848	837	731	574
Scope Two	1,583	1,426	1,320	1,250	1,146	1,047	991	929	775	680	462	247
Scope One	2,837	2,842	2,629	2,635	2,563	2,648	2,680	2,354	2,309	2,380	2,309	1,820

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

Table Three: 2020/21 CO_2, CH_4 and N_2O emissions

Scope	2020/21		
	CO_2	CH_4	N_2O
Scope one	1,802.4	1.0	16.6
Scope two	244.3	0.8	1.5
Scope three	142.5	0.2	1.4
Total	2,189.2	2.0	19.5

Contextual analysis

Along with other Oxfordshire councils, Vale of White Horse 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 13 February 2019, Vale of White Horse 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 the Vale can contribute to carbon reduction targets and minimise damage to the environment through its policies and practices. At its inaugural meeting on 15 October 2019, the Committee recommended that Vale of White Horse should:

- reduce council carbon emissions by 75 per cent by 2025 and become a carbon neutral local authority by 2030.
- reduce district carbon emissions by 75 per cent by 2030 with an ambition to become carbon neutral by 2045.

These targets were endorsed by the Cabinet on 6 December 2019. An ongoing programme of work has been developed to assist and guide Vale of White Horse in achieving its climate change ambitions. Tackling the Climate Emergency is also one of the key themes of the Vale's Corporate Plan 2020-24 – The Corporate 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 Beacon in Wantage was closed to the public throughout much of 2020/21. During Q4, it was used as a Covid-19 testing centre.

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

Although Vale of White Horse 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 District Community Centre to Vale of White Horse 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

<table>
<tr><th>Scope One</th><th>Scope Two</th><th>Scope Three</th><th>Scope Four</th></tr>
<tr><td rowspan="2">Gas and oil use in council offices, civic buildings, leisure centres and temporary accommodation hostels</td><td rowspan="5">Electricity use in council offices, civic buildings, leisure centres, temporary accommodation hostels, car parks, CCTV, public conveniences, pumping stations and sewage treatment works</td><td rowspan="2">Contractor electricity, gas, oil and fuel use and mileage</td><td>Perfluorocarbons, hydrofluorocarbons and sulphur hexafluoride</td></tr>
<tr><td>Staff commuting</td></tr>
<tr><td rowspan="2">Fuel used in council vehicle fleet</td><td>Business mileage by car</td><td>Council office waste collection, treatment and disposal</td></tr>
<tr><td rowspan="2">Business mileage by public transport</td><td>Water</td></tr>
<tr><td rowspan="2">Fuel used in waste collection vehicle fleet</td><td rowspan="2">Residential waste treatment and disposal</td></tr>
<tr><td>WTT processes and transmission and distribution losses</td><td>Fugitive emissions</td></tr>
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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 2019/20 have been reported in line with the joint DECC/Defra guidance published in June 2013[3] and calculated using the 2019 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 has been modelled. Following a fire at its office in January 2015, Vale of White Horse 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 Vale of White Horse District Council.

Carbon offsetting

Green tariff

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

Carbon offsets - renewable technologies

The council does not currently generate renewable energy from any of its sites.

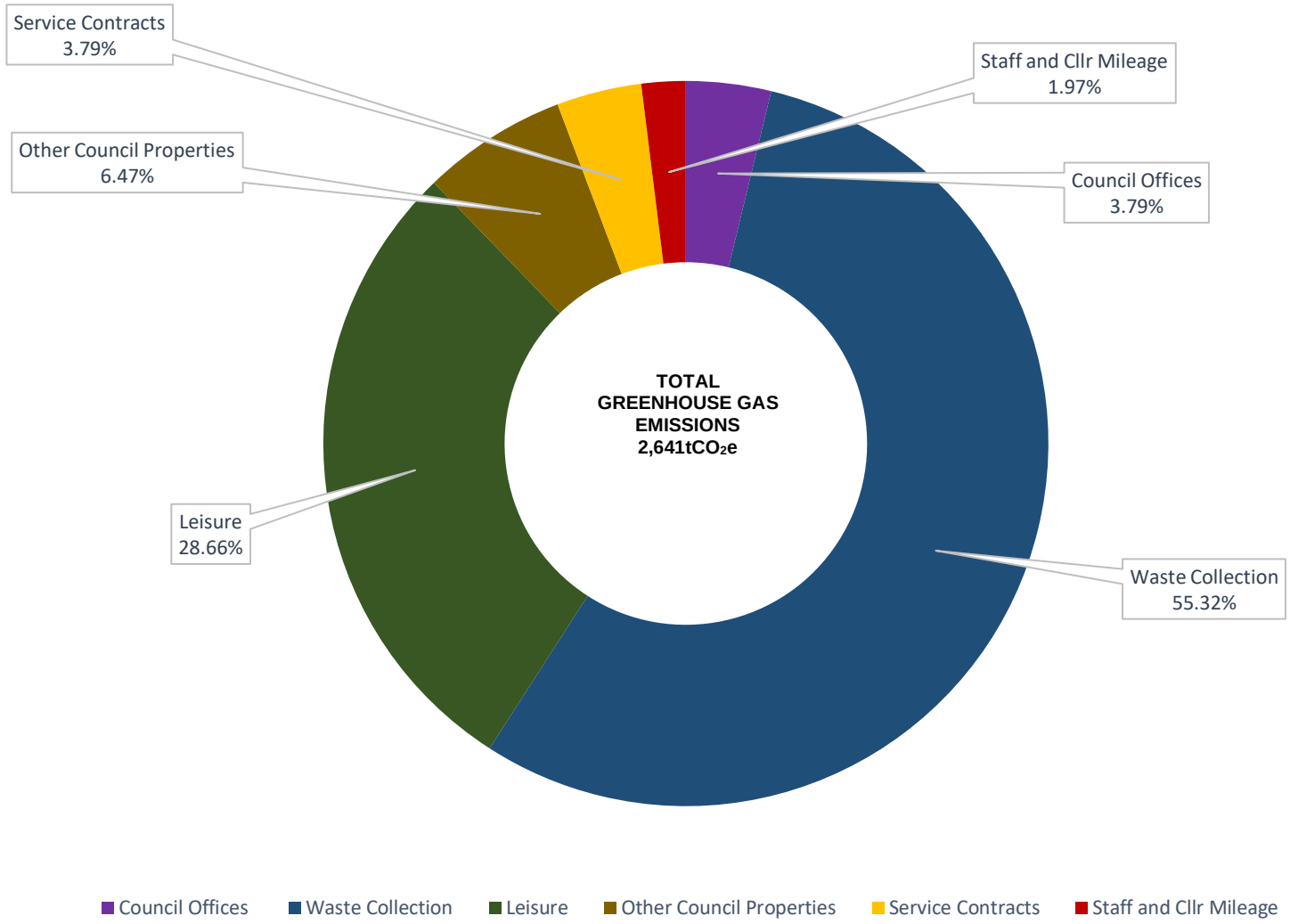
[3] https://www.gov.uk/guidance/measuring-and-reporting-environmental-impacts-guidance-for-businesses

Appendix One – Vale of White Horse Greenhouse Gas Emissions (kgCO2e) by source 2020/21[4]

		Scope One	Scope Two	Scope Three							
				Electricity							
				WTT: Generation	WTT: T&D	T&D Losses	Indirect Emissions	WTT	Total	Total GHG (kgCO2e)	Conversion to tCO2e
		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	1,157,701						277,440	1,435,141	**1,460,899**	**1,461**
	Biffa Buildings and Business Mileage			2,876	248	1,792	20,842	0	25,758		
Leisure	Faringdon Leisure Centre	56,162	19,519	2,693	232	1,679		7,303	87,588	**756,733**	**757**
	Wantage Leisure Centre	72,628	26,330	3,633	313	2,264		9,444	114,612		
	White Horse Leisure and Tennis Centre	361,875	116,204	16,035	1,381	9,994		47,057	552,546		
	Abingdon Outdoor Pool & Kiosk	0	649	90	8	56		0	803		
	Leisure Mileage						929	255	1,184		
Other Council Properties	The Beacon	49,756	10,634	1,467	126	915		6,470	69,368	**171,021**	**171**
	District Community Centre	11,777	2,409	332	29	207		1,531	16,285		
	Temporary Accommodation Hostels	29,223	5,287	730	63	455		3,800	39,558		
	Public Conveniences		5,660	781	67	487			6,995		
	Abingdon Multi Storey Car Park		17,428	2,405	207	1,499			21,539		
	Car Parks		13,350	1,842	159	1,148			16,499		
	CCTV		629	87	7	54			777		
Service Contracts	Capita			481	41	300	5,280	370	6,472	**99,605**	**100**
	Saba						4,254	1,130	5,384		
	Sodexo						66,879	16,156	83,035		
	Healthmatic						3,803	911	4,714		
Staff and Cllr Mileage	Waste Team	0						0	0	**52,325**	**52**
	Facilities Fleet	2,868						690	3,558		
	Grounds Maintenance	19,122						4,646	23,768		
	Technical Services (Cleaning)	1,116						268	1,384		
	Staff and Councillor Business Travel						18,787	4,828	23,615		
								Grand Total		**2,640,974**	**2,641**

[4] As a result of rounding, the totals presented may be slightly different to the sum of the individual values.

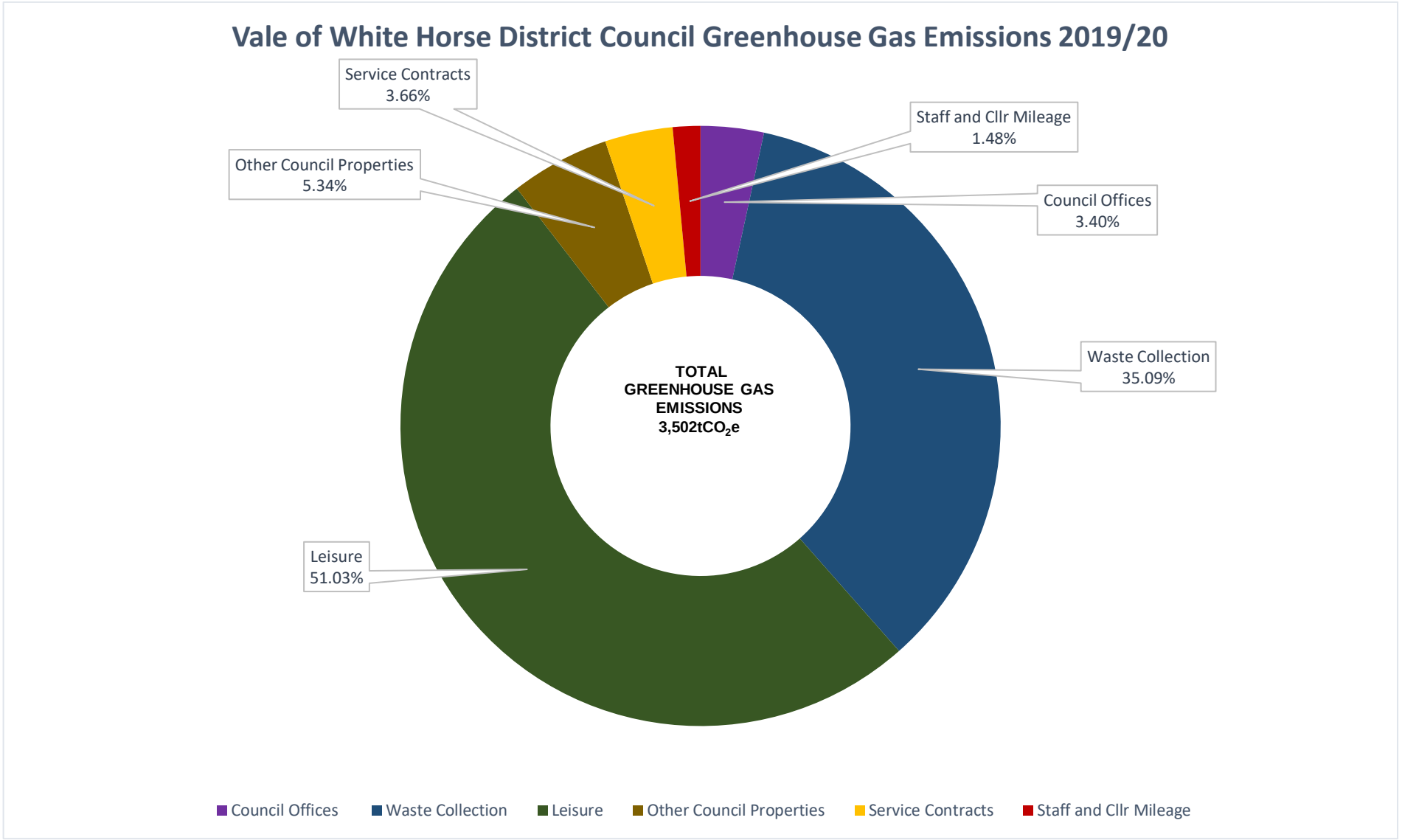
Vale of White Horse District Council Greenhouse Gas Emissions 2020/21



Appendix Two – Vale of White Horse Greenhouse Gas Emissions (kgCO2e) by source 2019/20[5]

		Scope One	Scope Two	Scope Three							
				Electricity							
				WTT: Generation	WTT: T&D	T&D Losses	Indirect Emissions	WTT	Total	Total GHG (kgCO2e)	Conversion to tCO2e
		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	970,322						230,821	1,201,143	**1,229,391**	**1,229**
	Biffa Buildings and Business Mileage			3,187	271	1,940	22,850		28,248		
Leisure	Faringdon Leisure Centre	154,622	59,976	8,365	711	5,092		20,109	248,875	**1,786,907**	**1,787**
	Wantage Leisure Centre	286,024	96,126	13,407	1,140	8,161		37,198	442,056		
	White Horse Leisure and Tennis Centre	683,783	161,748	22,560	1,917	13,732		88,927	972,667		
	Abingdon Outdoor Pool & Kiosk	82,746	13,806	1,926	164	1,172		18,976	118,790		
	Leisure Mileage						3,554	965	4,519		
Other Council Properties	The Beacon	46,733	21,811	3,042	259	1,852		6,078	79,775	**186,805**	**187**
	Temporary Accommodation Hostels	29,873	5,803	809	69	493		3,885	40,932		
	Public Conveniences		5,911	824	70	502			7,307		
	Abingdon Multi Storey Car Park		28,874	4,027	342	2,451			35,694		
	Car Parks		17,993	2,510	213	1,528			22,244		
	CCTV		690	96	8	59			853		
Service Contracts	Capita			533	45	324	5,872	432	7,206	**128,301**	**128**
	Saba						4,337	1,141	5,478		
	Sodexo						87,517	21,021	108,538		
	Healthmatic						5,719	1,360	7,079		
Staff and Cllr Mileage	Waste Team	1,085						259	1,344	**51,636**	**52**
	Facilities Fleet	2,339						559	2,898		
	Staff and Councillor Business Travel						37,723	9,671	47,394		
								Grand Total		**3,501,997**	**3,502**

[5] As a result of rounding, the totals presented may be slightly different to the sum of the individual values.


Vale of White Horse District Council Greenhouse Gas Emissions 2019/20
Service Contracts
3.66%
Staff and Cllr Mileage
1.48%
Other Council Properties
5.34%
Council Offices
3.40%
Waste Collection
35.09%
TOTAL
GREENHOUSE GAS
EMISSIONS
3,502tCO2e
Leisure
51.03%
Council Offices
Waste Collection
Leisure
Other Council Properties
Service Contracts
Staff and Cllr Mileage