

# Greenhouse Gas Report

Reporting Year 2021 - 2022

**Cherwell District Council** 

Date: September 2022 Owner: Climate Action Team

## Contents

1	Executive Summary	3
2	Context	4
3	Reporting Period	4
4	Introduction, boundary and conversion factors	4
5	Greenhouse Gas (GHG Emissions) 2021/22	5
6	Change from Previous Year	6
7	Comparison against baseline year and reduction target	6
8	Measurement, data quality, methodology and refinements	8
Anr	nex A - Operational Scope breakdown	8
Anr	nex B – Detailed Breakdown of emissions from 2008/09 to 2021/22	9

#### 1 Executive Summary

1.1. During 2021/22 Cherwell District Council increased its carbon emissions by 21.2% (697 tonnes CO<sub>2</sub>e), from 3,291 tonnes CO<sub>2</sub>e in 2020/21 to 3,988 tonnes CO<sub>2</sub>e in 2021/22. This represents a 41.4% reduction against our baseline of 2008/09. This includes offsetting from solar exports.

Although there was a 21.2% increase in emissions in 2021/22 as compared to the previous year, there was an overall reduction of 4.2% since 2019/20 (Pre covid). This equates to an average reduction of 2.1% annually in the last two years.

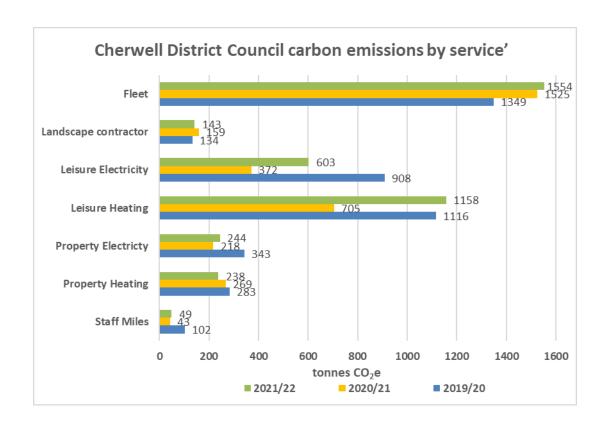
It should be noted that strict Covid lockdown in 2020/21 resulted in a significant reduction in emissions due to building closures and other reductions in activities and therefore cannot be attributed fully to carbon reduction progress. In 2021/22 the emissions have increased as buildings and activities return to near normal operation.

In addition two additional leisure centres were included in 2021/22 resulting in an additional 38 tonnes CO<sub>2</sub>e.

The **CV19** restrictions to working arrangements and subsequent guidance on ventilation has subsequently meant that realistic comparison with previous years is not appropriate at this stage.

In 2021/22 electricity grid decarbonisation reduced tonnes CO2e from electricity by 62.9.

**Figure 1** below shows comparison of tonnes of CO2 split by business sector during 2020/21 and 2021/22 (these figures do not include carbon offsetting)



#### 2 Context

- 2.1. Cherwell District Council provides services to residents, businesses and communities across the whole county. The following are the key service services are provided by the Council (but not an exhaustive list)
  - leisure services
  - housing
  - planning
  - landscape and ground maintenance
  - public convenience
  - waste collection.
- 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 2021** to **March 2022** with comparisons to previous years

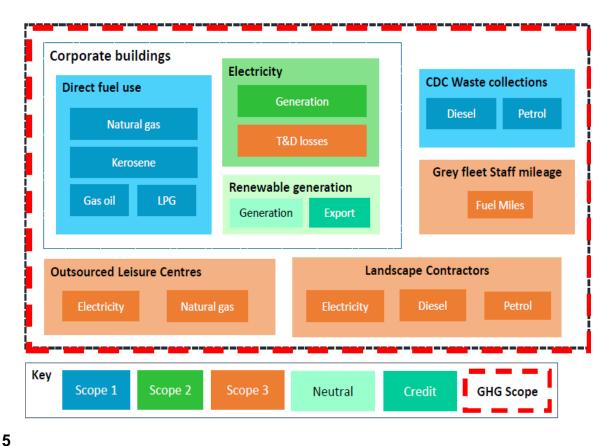
#### 4 Introduction, boundary and conversion factors

- 4.1. Each year, Cherwell District Council publishes details of its greenhouse gas (GHG) emissions in accordance with the 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.
- 4.3. **Figure 2** shows the scope of our reported GHG emissions boundary. The council reports on emissions from its:
  - Corporate buildings, public conveniences, waste collection fleet & business mileage
  - Outsourced leisure centres
  - Outsourced landscape service.

These have historically been included in our carbon footprint.

- 4.4. In July 2019 the council committed to becoming carbon neutral by 2030 for all its reported emission sources, which include corporate and contractor emissions.
- 4.5. The carbon factor methodology applied are the **2021** advanced carbon factors for the emissions generated in the financial year **2021-22**, which can be found at <u>Greenhouse gas reporting: conversion factors 2021 GOV.UK (www.gov.uk)</u>

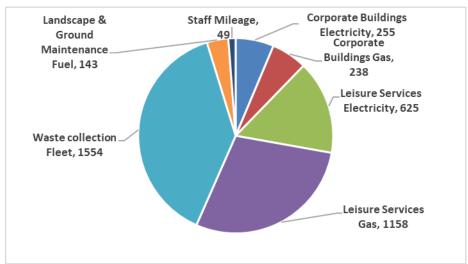
**Figure 2: CDC GHG Emissions Boundary** 



Greenhouse Gas (GHG Emissions) 2021/22

5.1. **Figure 3** shows that for **2021/22** gross emissions from Cherwell District Council were **3988** tonnes of CO<sub>2</sub> equivalent (CO<sub>2</sub>e) split across the six service areas and fuel types. This includes offsetting from solar exports in corporate and leisure centre buildings (as highlighted in Table 1).

Figure 3: Total GHG emissions breakdown per sector and fuel type (tonnes CO₂e)



#### 6 Change from Previous Year

- 6.1. Total emissions in **2021/22** increased from **3,291** tonnes of CO<sub>2</sub>e to **3,988** tonnes of CO<sub>2</sub>e, an increase of **21.2**% (**697** tonnes of CO<sub>2</sub>e).
  - Emissions from corporate buildings, public conveniences, waste collection fleet & business mileage increased from 2054 tonnes of CO<sub>2</sub>e in 2020/21 to 2,084 tonnes of CO<sub>2</sub>e in 2021/22, an increase of 1.5%. This includes offsets from Solar PV exports.
  - Emissions from outsourced leisure centres and outsourced landscape service increased from 1,236 tonnes of CO<sub>2</sub>e in 2020/21 to 1,903 tonnes of CO<sub>2</sub>e in 2021/22, an increase of 54.0%. This includes offsets from Solar PV exports. Two additional Leisure Centres have been included in this years calculations resulting in an additions 109 tonnes CO<sub>2</sub>e.
- 6.2. **Table 1** below shows the comparison of emissions in **2021/22** against **2020/21**.

Table 1: Emissions Comparison 2020/21 and 2021/22 (tonnes CO<sub>2</sub>e)

2020/21 and 2021/22 Comparison													
	2020/21	2021/22	Reduction										
Corporate Buildings	495	484	-2.3%										
Public Conveniences	10	9	-5.4%										
Waste collection Fleet	1,525	1,554	1.8%										
Staff Mileage	43	49	13.3%										
Solar Export Corporate (offset)	- 19	- 11											
Total - Corporate building, public	2,054	2,084	1.5%										
Leisure Services	1,101	1,783	61.9%										
Landscape & Ground Maintenance	159	143	-10.1%										
Solar Export Leisure Centre (offset)	- 24	- 22											
Total - Leisure Services & Landscape	1,236	1,903	54.0%										
Total Emissions	3.290	3.988	21 2%										

Note: Last years solar export corporate (offsetting) data has been amended this year due to an error in a meter reading last year.

- 6.3. Non-influenced **decarbonisation** (due to electricity grid **decarbonisation** and annual changes to carbon factors) accounted for a reduction in carbon of **63** tonnes CO<sub>2</sub>e.
- 6.4. Gas consumption in **2021/22** was not expected to fall due to weather effects. However, corporate gas consumption decreased by 31 tonnes of CO<sub>2</sub>e. Leisure centre gas increased due to the re-opening of sites after the lifting of COVID restrictions.

#### 7 Comparison against baseline year and reduction target

Cherwell District Council tracks emissions against the baseline year of **2008/09**.

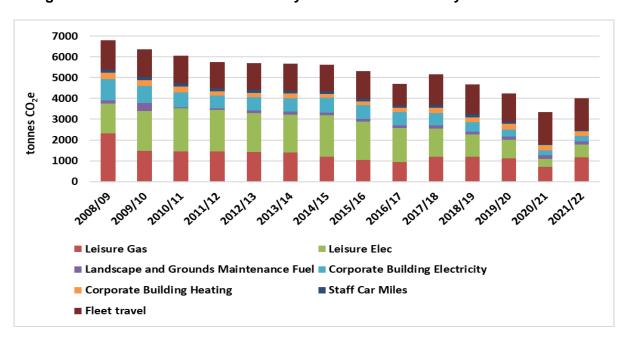
- 7.1. **Total emissions** were **6,804** tonnes of CO<sub>2</sub>e in 2008/09 and **3,988** tonnes CO<sub>2</sub>e in **2021/22**. This represents a decrease of **2,816** tonnes of CO<sub>2</sub>e or **41.4%** since the baseline year, equivalent to an average reduction of **3.2%** per year.
  - Emissions from corporate buildings, public conveniences, waste collection fleet & business mileage have reduced by 27.5% since 2008/09, an average reduction of 2.1% per year.
  - Emissions from outsourced leisure centres and outsourced landscape service have reduced by 50.8% since 2008/09, an average reduction of 3.9% per year.

Table 2: Emissions Comparison 2008/09 and 2021/22 (tonnes CO₂e)

2008/09 and 2021/22 Comparison													
	2008/09	2021/22	Reduction										
Corporate Buildings	1,278	484	-62.1%										
Public Conveniences	37	9	-75.8%										
Waste collection Fleet	1,419	1,554	9.5%										
Staff Mileage	154	49	-68.4%										
Solar Export Corporate (offset)	-	- 11											
Total - Corporate building, public	2,888	2,084	-27.8%										
Leisure Services	3,748	1,783	-52.4%										
Landscape & Ground Maintenance	168	143	-15.3%										
Solar Export Leisure Centre (offset)	-	- 22											
Total - Leisure Centres & Landscape Cor	3,916	1,903	-51.4%										
Total Emissions	6,804	3,988	-70.6%										

7.2. **Figure 4** below shows carbon emissions from the baseline year **2008/09** to **2021/22** with a breakdown of consumption by sector and fuel type.

Figure 4: Annual carbon emissions by sector from baseline year 2008-2009



#### 8 Measurement, data quality, methodology and refinements

8.1. Cherwell District Council collects data from property invoices, staff millage claims and fleet travel records.

#### Annex A - Operational Scope breakdown

- Central Offices (Scopes 1 and 2)
- Operational Depots (Scope 1 and 2)
- EV Fleet (Scope 2)
- Fleet (Scope 1)
- Business miles (including cycling)- corporate estate and activities (Scope 3)
- Transmission and Distribution (Scope 3)
- Vacant properties (in Scope 3)
- Outsourced Leisure Centre's (Scope3)
- Landscape Contractors (Scope 3)

#### Not included in current reporting and reasoning

We do not currently include the following in our reporting for a variety of reasons but will annually review this situation:

- Water Scope 3 currently no reliable data available
- Supply Chain Scope 3 no data available
- Staff Commuting to work Scope 3 no data available
- Business mileage from public transport and walking Scope 3 currently no data available.

### Annex B – Detailed Breakdown of emissions from 2008/09 to 2021/22

	2008/2009											20	010/2011	- 1		011/2012			2012/2013			2013/201			2014/201	5		2015/2016			2016/2017			2017/2018			2018/2019			2010/2020			2020/202	1		2021/2022	
		- e	o m		- 0	o m	<u> </u>	4 0 W	° m	ī	0	ωп			o m	1	o	o m		- 0	l o m			o m	l i	4 B	or m		0	o m		0	o m		0	o m		- 0	o m	-		o m					
	⊊ ≓	a ≥.	8 =	도코	# 3.	8 =	도크	# P   2	₹ 1	⊊ ≓	# B	£ 5	⊊≓	5 3	€ ₹	⊆ ≓	- 3 - 3 - 3	8 3	⊊ ≓	± 3.	8 2	⊊ ≓	± 3.	8 3	도크	# E	8 ₹	⊆ ≓	# B	8 =	⊊≓	± 3	£ 3	⊊₹	# 3	8 3	⊊ ₹	2 3.	€ ₹	5 ₹	. # P	8 2					
SCOPE 1	Total	5 8	<u>8</u> 8	景 蓋	5 8	8 8	등 절	5 5	3 €	芸芸	5 5	Ö <u>S</u>	등 살	C 85	8 8	# M	5 8	8 8	景益	C 85	Ö <u>s</u> .	兼益	5 8	Ö <u>S</u>	# 절	58	Ö <u>∞</u>	養養	5 8	Ö <u>s</u>	11 01 21	es s	8 8	計畫	5 8	8 8	景益	C 8	8 8	# M	5 2	Š š					
		* 9	و ق		¥ 9	<u>ë</u> 9		¥ 9 (g	2 9		¥ 9	و ق		* 9	<u>@</u> 9		* 9	<u>@</u> 9		¥ 9	<u>@</u> 9		¥ 9	9 9		on ×	<u></u> 9		* 9	<u>ë</u> 9		on ×	9 9		* 9	on (e)		¥ 9	9 9		. 4 9	<u>@</u> 9					
Gas (kWh) (from 17/18 m3)	1,522,167	0.1836	279	1375293	0.1836	253	1360012 0			939397	0.1852	174	1097712	0.1852		109658	0.1840		914741	0.1850	169	879601	0.1845		962024	0.1840	177	98409	2.0967	206	98573	2.0465	202	123,521	2.0305	251	117,575	2.0227	238	100,490	2.02135	203					
Council fleet vans (km)			0			0			0			0			0			0			0			0			0			0			0			0					-						
Council fleet refuse trucks (km)			0			0			0		-	0			0	_		0			0			0	-		0			0		-	0			0					$\longrightarrow$						
other vehicles (litres)			0			0			0			0			0	-	+	0	-	_	0			0			0			0		-	0			0		_		-							
unknown (km) Fleet (litres) diesel	450 525	2.5725		427176	2 5725		418815			396876	2 5025		402200	2 5025		402427	2.6008		200210	2.6024		410710	2 5020		334043	2.0110		450204	2 6002		440224	2.6260		420.109	2 5044		400 207	2.6879	1227	405 021	2.70553	1261					
Landscaping petrol tools	400,030	2.0720	0	427170	2.0120	0	410010		0	390070	2.0030	1023		2.2423			2.2144			2.0024			2.0039		14815				2.1984	45			60	420,105	2.0541	1030	400,307	2.0075	1237	403,521	2.70003	1201					
Landscaping petrol tools  Landscaping diesel car			0			0				6995	2 5835	18					2.6008						2.5839		14010	2.1570	0	20040	2.1504	-40	27030	2.2031	0					_	+		-						
Landscaping diesel van >1.25<3.5T	54 201	2 5725	139	116446	2 5725		17136			15534							2.6008						2.5839		24504	2 61 16	64	31181	2 6002	81	22820	2 6269	60						1	-	-	-					
Biomass (tonnes) wood pellets	0.1,001		0		2.0.20	0	1		0			0	11020	2.0000	0	10010		0	8	55.9032	0	27	61.9800	2					2.0002	0	LLULU		0			0				<del>                                     </del>	-						
Biomass (tonnes) wood chips			0			0			0			0			0			0	5	46.0380	0	4	49.8700	0			0			0			0			0				<b>†</b>	-						
Total emissions scope 1			1593			1651		1	1378			1258			1362			1365			1324			1362			1147			1519			1478			1341			1475			1464					
SCOPE 2																																															
Electricity (kWh)	1,666,636	0.4938		1388890	0.4938	686	1243515 (			1091084	0.4600		1097191	0.4600	505	116519	0.4455			0.4943		1136842	2 0.4622		1254089	0.4121		1361027	0.3516		1250382	0.2831	354	1,085,743	0.2556	278	850,166	0.2331		875,777	0.21233	186					
Total emissions scope 2			823			686		:	572			502			505			519	_		565			525			517			478			354			278			199			186					
SCOPE 3									_		_					_	_			_	_				-							_						_			-						
Business mileage inc WTT small petrol cars (km. from 12/13 miles)	405.000	0.2015	05	119667	0.0045	04	400057	. 4000	00	124241	0.1083	05	00700	0.0404	- 00	400400	0.3127	- 00	00440	0.3091	07	00504	0.3052	- 00	79221	0.0004	- 04	404057	0.3203	- 00	440000	0.3184	00		0.3145			_		+	-						
medium petrol cars (km, from 12/13 miles) medium petrol cars (km, from 12/13 miles)		0.2498	20	246713	0.2015	82	253217 (	0.1983		213440		£2	111010	0.3191	29		0.3127						0.3836		67628		29	27852		32	46070		10	0	0.3145	0		_	_		-						
large petrol cars (km, from 12/13 miles)		0.3523		43713			60584 0			38073				0.5757			0.5734			0.5585			0.5597	5	4993			38028		22	27941		16	ő	0.5533		1		<del> </del>	-	-	-					
small diesel cars (km, from 12/13 miles)		0.1725		44806						42747				0.2758			0.2739		74085					20			17	9101	0.2896	3	46385		13	0	0.2831		1	1		-	-	-					
medium diesel cars (km, from 12/13 miles)		0.2153		162426			158974 (				0.2129		93667	0.3427	32		0.3408			0.3468			0.3437		68996				0.3462		60047		21	ō	0.3401												
large diesel cars (km. from 12/13 miles)	10,383	0.2896	3	26137	0.2896	8	34812 (	0.2827	10	52403	0.2827	15	30448	0.4549	14	23511	0.4477	11	16029	0.4513	7	20256	0.4409	9	13388	0.4363	6	19122	0.4351	8	102811	0.4283	44	0	0.3816	0				1	-						
small other/hybrid (km, from 12/13 miles)																												2518	0.2225	1	0	0.2219	0	0	0.2132	0				-							
medium other/hybrid (km, from 12/13 miles)																													0.2270	0	0		0	0	0.2198												
larger other/hybrid (km, from 12/13 miles)																													0.2101	0		0.3239	0	0	0.2647												
unknown diesel (km, from 12/13 miles)																													0.3304	2	63354 17938		17	0	0.3456	0				'							
unknown petrol (km, from 12/13 miles) unknown other/hybrid (km, from 12/13 miles)									_		_					_	_	_	_	_	_				400	0.2556	_		0.3801		1/938		4	0	0.3701	0	_	_		-	-						
unknown other/hybrid (km, from 12/13 miles) unknown (km, from 12/13 miles) bike from 18/19									_	_	_					+	+		+	+	-	-	_		100	0.2556	0		0.2382				0	0	0.2316			-	<del> </del>		-						
Average Car Diesel	-	_		-	_		_		_	_	-					+	+	_	+	-	-		_				- 0	109203	0.3007	00	01	0.2330	0				72 085	0.3362	26	80.096	0.33712	27					
Average Car Petrol											-					1	+		_	_												_		124,724	0.3533	44	50.734	0.3575	18	58.215		21					
Average Car Hybrid																1	1		+	_	1		_									-		1.120			88		0	2.692		0.7					
Average car unknown																1	+			_														63.111	0.0622	4	757	0.3469	0	373	0.34851	0.1					
landscaping petrol tools																																		20,287	2.3150		22,078	2.3147	51	21,839	2.33969	51					
landscaping diesel car																																				0			0			0					
landscaping diesel van >1.25<3.5T																	J																		2.5941	60	28,580	2.6879	77	23,535		64					
Leisure centre gas (kWh, from 17/18 m3)	11,532,557	0.1836	2117	7309029	0.1836	1342	6447775	0.2055 1	1325	6502140	0.2055	1336	6325957	0.2055	1300	665755	0.1840	1225	5659508	0.1850	1047	4925436	0.1845	908	4496877	0.1840	827	495906	2.0967	1040	514931	2.0465	1054	486,143	2.0305			2.0227		489,096		989 169					
Leisure centre WTT (gas)																																								489,096							
Leisure centre electricity (kWh) Leisure T & D. WTT T & D and WTT gen	2,351,934	0.4938	1161	3193055	0.4938	15//	3629230 (	0.4600 1	1670	3489954	0.4600	1605	3258963	0.4600	1499	323365	0.4455	1441	3228551	0.4943	1596	3219266	0.4622	1488	3175709	0.4121	1309	3011202	0.3516	1059	3002189	0.2831	850	2,874,600			1,425,628	0.2331	63	2,146,366		456 169					
leisure 1 & D, W11 1 & D and W11 gen leisure biomass wood chips (tonnes, from 15/16										_	_	_	_			+	+	-	45	46 0380		000440	0.0400	40	1084260	0.0404						-		2,874,600	0.0604	1/4	1,425,628	0.0445	63	2,146,366	0.07897	169					
	4 018 570	0.4444	447	4581945	0.4444	510	4872745 (	0.1108 6	540	4581039	0.1108	500	1050454	0.1108	400	439884	0 1144	503	4372239				0.0132			0.0131	464	4372229	0.0040	412	4252571	0.0007	296	1 085 743	0.0604	66	850 166	0.0445	38	875 777	0.07007	69					
WTT (gas)	13 054 724			8684322		156	7807786 (				0.0191			0.1108			0.0281			0.0248			0.1127		5458901		136		0.0942	188	613504		175	123 521	0.0604		117 575			100 490		35					
WTT (liquid fuels)	13,054,724	0.0180	234	8084322	0.0180	100	7807786	0.0191	149	/44153/	0.0191	192	7423009	0.0191	142	//5413	0.0281	218	00/4248	0.0248	163	5805036	0.0248	144	5458901	0.0250	136	594316	0.3170	188	613504	0.2845	1/5	123,521	0.2641	33	117,575	0.2630	- 31	100,490	0.34593						
WTT fleet (litres) diesel	4E0 E2E	0.5249	244	427176	0.6340	220	418815 (	0.5027	244	396876	0.5837	232	402200	0.5837	225	402427	0.5775	222	200210	0.5787	224	410710	0.5811	244	334043	0.6643	105	450204	0.6191	283	440224	0.6185	272	420 109	0.6171	250	460.307	0.6364	288	465 921	0.62974	293					
WTT landscaping petrol tools	400,030	0.0346	0	42/1/0	0.0346	0	410010		0	350070	0.0037	0		0.4750					20173				0.4616		14815						27036		16		0.6171			0.6261		21.839		13					
WTT landscaping petrol tools WTT landscaping diesel car			0	_		0			0	6995	0.5837	- 0	9086	0.4750	10	12933				0.4690	9		0.4616	/	14815	0.4013		20048	0.5977	0	27036	0.5967	16	20,287	0.6171	0	22,078	0.0201	14	21,839	0.60283	0					
WTT landscaping diesel car WTT landscaping diesel van >1.25<3.5T (from		_	- 0	-			_					- 4			- 0			-			-			- 8			- 0					-	U				-	_	U	-	$\overline{}$						
	54201	0.5348	29	116446	0.5348	62	17136		10		0.5837	9	17828	0.5837	10	10570		- 6	14702	0.5787	9	17402		10	24504	0.5543	14	31181	0.6191	19	22820	0.6185	14	23234	0.5985	14	28580	0.5973	17	23,535	0.62874	15					
WTT biomass wood chips (tonnes)			0			0			0	9	61.4100	1	7	61.4100	0	6	183.9300		50	62.8000	3	4	62.8000	0			0			0			0			0		1									
WTT biomass wood pellets (tonnes)		$\perp$	0	$ldsymbol{\square}$		0	1 1		0			0	48	183.9300	9	34	61.4100	2	8	151.0000	1		151.0000			177.0000				0			0			0		_	_	╨	. —Т						
WTT biomass wood chips (kWh)		_														1	1	1			ļ	898140	0.0166		1084260	0.0079		1		0			0			0		1	1	<b>↓</b>	$\rightarrow$						
Total emissions scope 3			4388			4027			1095			3983			3838	-	_	3781		_	3737			3453			3068			3160			2847			2617		_	1660	-	$\rightarrow$	2371 4021					
Total emissions (all scopes)	_	+	6804	$\vdash$		6364			3045			5742		$\vdash$	5705	1	+	5665	_	1-	5626		$\perp$	5340	$\vdash$		4731	1		5158		$\vdash$	4679			4235	1	-	3334		$\rightarrow$						
Corporate Carbon offset (solar PV) (kWh)	1		0			0	4335 (	0.4455	2	13060	0.4455	6	318522	0.4455	142	360210	0.4455	160	357080	0.4943	176	362869	0.4622	168	338721	0.4121	140	322697	0.3516	113	105,944		30	310,982	0.2556	40	166,950		19	101,542		-11					
Leisure Carbon offset (solar PV) (kWh)		_																L	_	_	L							1			265,338	0.2831	75	254,547	0.2556	33	206,019	0.2331	24	210,833	0.21233	-22					
Total overall emissions	L		6804			6364			3043			5737			5563	<del></del>		5505			5450			5173			4592	1		5044			4574			4162		1	3291	<b></b> -		3988					
Change from 2008/2009 baseline		$\perp$				-6	1		-11			-16			-18			-19			-20			-24			-33	1		-26		$\vdash$	-33			-39			-52	<b>↓</b> '		-41					
change from previous year						-6			-5			-5			-3			-1			-1			-5			-11	1	$\sqcup$	9.85			-9.33			-9		1	-21			21					