

# 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.

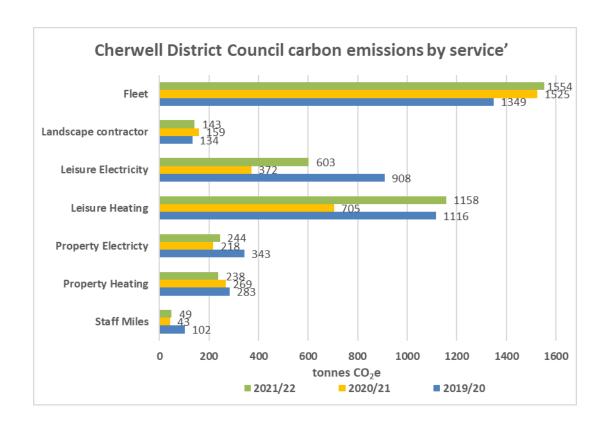
It should be noted that strict Covid lockdown in 2020/21 resulted in a significant reduction in emissions due to building closures and other reductions in activities and therefore cannot be attributed fully to carbon reduction progress. In 2021/22 the emissions have increased as buildings and activities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

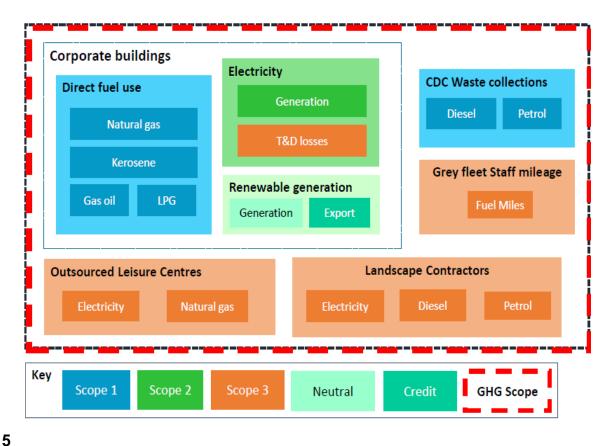
#### 4 Introduction, boundary and conversion factors

- 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>

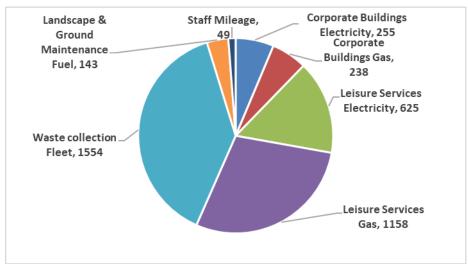
**Figure 2: CDC GHG Emissions Boundary** 



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												
	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**.

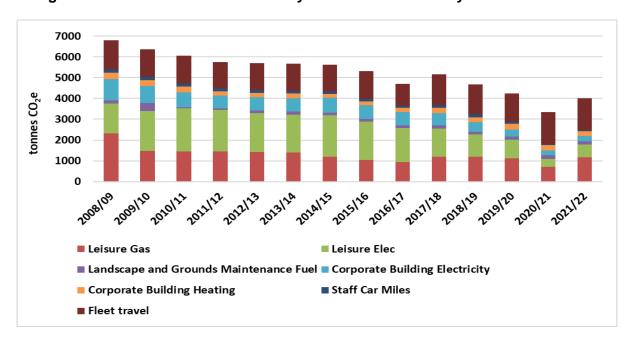
- 7.1. **Total emissions** were **6,804** tonnes of CO<sub>2</sub>e in 2008/09 and **3,988** tonnes CO<sub>2</sub>e in **2021/22**. This represents a decrease of **2,816** tonnes of CO<sub>2</sub>e or **41.4%** since the baseline year, equivalent to an average reduction of **3.2%** per year.
  - Emissions 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

	200				2009/201	)	201	0/2011		2011/2	2012		2012	2013		20	013/2014		:	2014/2015			2015/2016		2	2016/2017			2017/2018			2018/2019			2019/2020	)		2020/202	н	1	2021/2022	2
		∞ <u>9</u>	S (En		ဖဋ	S E		9 5		9	0 5	7 _	. 0	e s	g .		ω <u>9</u>	S E		တ ဋ	S E		o 9	S (		or ≘	S (En		s 8	° E		or ≘	S E		ω <u>9</u>	En En		∞ <u>9</u>	° E		∞ <u>9</u>	, S
SCOPE 1	팔전	ac si	100 Hz	a ot	90 88	C #	1 of 1 of	ilss CC	1 2	ot   5 8	1 8	1 2	2 8	ž   Š	ž	2 2	8 8	0 ii	할정	ac si	CC iii	팔전	9 8	CO iii	in ot	ac ai	ic o	n ot	ac si	S #	I ot	ac si	CO is	Jn Tot	80 8	CC is	팔전	ac 25	0 15	± 6	8 8	1 8 8
	요프	ğ ğ	si os	등학	Q 0	22 0	2 5 5	lor 22e	. 2	5 S S	22	2 2	<u> </u>	22	ğ.	2 E	8 6	22 e	# ₩	Q 0	22 0	25 00	Q 0	220	25 00	학학	3i os	25 57	t or	220	S 2	or or	220	8 2	육형	3i os	25 00	8 8	22 0	S 20	학학	1 2 5
Gas (kWh) (from 17/18 m3)	1,522,167	0.1836	279	1375293	0.1836	253	1360012 0.	1852 252	9390	397 0.185	52 174	4 1097	712 0.18	152 20	3 10	96581 (	0.1840	202	914741	0.1850	169	879601	0.1845	162	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						$\overline{}$
Council fleet refuse trucks (km)	_	$\vdash$	0			0		0			0				)	$\rightarrow$	$\rightarrow$	0		$\vdash$	0		_	0			0			0			0			0	—	+				
other vehicles (litres) unknown (km)	-	-	0			0		0		_	0	_	_	- 6	-	-+	-+	0		$\vdash$	0		_	0	-		0			0		-	0			0	+	+	+	-	-	
Fleet (litres) diesel	456,535	2.5725	1174	427176	2.5725		418815 2.1			876 2.583	35 102	5 4023	99 2.58	35 10		03127	2.6008		399219	2.6024	1039	419719	2.5839	1085	334043	2.6116	872	456361	2.6002		440234	2.6269		420,109	2.5941		460.307	2.6879	1237	465,921	2,70553	1261
Landscaping petrol tools	100 000		0			0		0			0			23 4		4376			20173				2.1944		14815			20548			27036		60	.201.00			100,001	-		.eegez.		(
Landscaping diesel car			0			0				95 2.583													2.5839				0			0			0									
Landscaping diesel van >1.25<3.5T	54,201	2.5725	139	116446	2.5725		17136 2.1			34 2.583	35 40	178	28 2.58	35 4		0570	2.6008						2.5839					31181	2.6002	81	22820	2.6269	60				—	+				
Biomass (tonnes) wood pellets	_	-	0			0		0		_	0	_		- 6		-+	-+	0		46.0380			61.9800 49.8700		1/	55.5315	0			0			0			0	-	+-	+		_	
Biomass (tonnes) wood chips Total emissions scope 1		_	1593			1651		137		_	125		_	13		$\rightarrow$	$\rightarrow$	1365		40.0300	1324		43.0700	1362			1147			1519			1478			1341	-	+-	1475			1464
SCOPE 2																																						_				
Electricity (kWh)	1,666,636	0.4938		1388890	0.4938	686	1243515 0.4			0.460			191 0.46			65194	0.4455	519	1143688	0.4943		1136842	0.4622		1254089	0.4121		1361027	0.3516	478	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	2		50	)5		-	519			565			525			517			478			354			278			199			186
SCOPE 3									_	_	_		_	_		_	$\rightarrow$																						_			
Business mileage inc WTT	125,230	0.2016	25	119667	0.2016	24	102257 0	1002 20	124	241 0.100	22 25	007	02 0.25	01 2	0 1	06420	0.2427	22	86448	0.3091	27	90501	0.3052	20	79221	0.2094	24	101057	0.3203	22	112020	0.3184	20	0	0.3145	0	-	+-	_			
small petrol cars (km, from 12/13 miles) medium petrol cars (km, from 12/13 miles)	349,842		87		0.2013	62	253217 0:	2493 63			23 53	11110	19 0.40	12 4											67628		26	27852		11	46070		18	0	0.3145	0	-	-	_	+	1	
large petrol cars (km, from 12/13 miles)		0.3523			0.3523		60584 0.3						33 0.57			8695		4	7098	0.5585	4	8783	0.5597	5	4993		3	38028	0.5844	22	27941	0.5815	16	0	0.5792			+				$\overline{}$
small diesel cars (km, from 12/13 miles)	26,956			44806			47359 0.			47 0.17			86 0.27			0928			74085				0.2811		59561			9101		3	46385	0.2890	13	0	0.2831							
medium diesel cars (km, from 12/13 miles)		0.2153					158974 0.:		152							15324							0.3437	24	68996		24	7100			60047		21	0	0.3401							
large diesel cars (km, from 12/13 miles)	10,383	0.2896	3	26137	0.2896	8	34812 0.:	2827 10	524	0.282	27 15	304	48 0.48	49 1	4 2	3511	0.44//	11	16029	0.4513	7	20256	0.4409	9	13388	0.4363	6	19122		8	102811	0.4283	44	0	0.3816		₩					
small other/hybrid (km, from 12/13 miles) medium other/hybrid (km, from 12/13 miles)	_	-			-		_	_	_	_	_	_	-	_	-	-	-			$\vdash$			_		-				0.2225	- 1	0		0	0	0.2132		+	+	+	-	_	
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		17	0	0.3456	0		1				
unknown petrol (km, from 12/13 miles)																												19134		7	17938		4	0	0.3701	0						-
unknown other/hybrid (km, from 12/13 miles)	_	$\vdash$												_	_	-	$\rightarrow$			$\vdash$			_		100	0.2556		718 159283				0.2536	0	0	0.2316		—	+				
unknown (km, from 12/13 miles) bike from 18/19 Average Car Diesel	_	-							_	_	-	_	_	_	-	-+	-			$\vdash$			_		_		0	159283	0.3687	59	81	0.2350	0	150 400	0.2355			0.3362	26	90.000	0.33712	27
Average Car Diesel Average Car Petrol								_	_	_	+	_	_	_	-	-+							_															0.3575			0.35915	
Average Car Hybrid														_		-																		1,120			88		0		0.24274	
Average car unknown																																						0.3469				
landscaping petrol tools																																		20,287	2.3150		22,078	2.3147	51	21,839	2.33969	
landscaping diesel car											_	_		_																				23.234	2 5941	0	00.500	2.6879	0	00.505	2.70553	0 64
landscaping diesel van >1,25<3.5T Leisure centre gas (kWh. from 17/18 m3)	11.532.557	0.1836	2117	7309029	0.1836	1342	6447775 0	2055 1329	6502	140 0 205	55 133	6 6325	957 0.20	55 13	00 66	57551	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				2.0879			2.70553	989
Leisure centre WTT (gas)	,				0000																					011010												0.2630				169
	2,351,934	0.4938	1161	3193055	0.4938	1577	3629230 0.	4600 1670	3489	9954 0.460	00 160	5 3258	963 0.46	00 14	99 32	33654	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				8 0.2331				456
Leisure T & D, WTT T & D and WTT gen																																		2,874,600	0.0604		1,425,628	8 0.0445	63	2,146,366	0.07897	169
leisure biomass wood chips (tonnes, from 15/16			0			0		0			0				)			0		46.0380			0.0132		1084260		14			0			0			0			0			0
T & D, WTT T & D and WTT gen (electricity)							4872745 O. 7807786 O.		4581														0.1127		4429797						4252571 613504		296	1,085,743			850,166 117,575	0.0445			0.07897	69
WTT (gas) WTT (liquid fuels)	13,054,724	0.0180	234	8684322	0.0180	156	7807/86 0.0	0191 149	7441	537 0.019	91 142	2 7423	869 0.01	91 14	2 77	54131	0.0281	218	65/4248	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	35
WTT (liquid ruels) WTT fleet (litres) diesel	AE0 E2E	0.5348	244	427176	0.5240	228	418815 0.1	5837 244	396	876 0.583	37 232	2 4023	99 0.58	37 23	E A	03127	0.5775	233	399219	0.5707	221	410710	0.5811	244	334043	0.6643	185	456361	0.6404	283	440234	0.0105	272	420.109	0.6171	259	460.307	0.6261	288	405.001	0.62874	293
WTT landscaping petrol tools	400,030	0.0346	0	42/1/0	0.0346	0	410010 0.	0 0		0.36	3/ 23/	219					0.4820			0.3787	9		0.4616		14815		7	20548		12		0.5967	16	20,105	0.6171						0.60283	13
WTT landscaping petrol tools WTT landscaping diesel car			0			0		0		95 0.583	37 4	906					0.4020	7	12415		7		0.5811	8	14010	0.4013	0	20040	0.0577	0	27030	0.0507	0	20,207	0.0171	0	22,070	0.0201	- 0	21,033	0.00203	0
WTT landscaping diesel van >1.25<3.5T (from	54201	0.5348	29	116446	0.6340	62	17136 0	5837 10				178					0.5775			0.5787	0	17402		10	24504	0.6642	14	31181	0.6404	19	22020	0.6185	14	23234	0.5985	14	28580	0.5973	17	22 505	0.62874	
WTT biomass wood chips (tonnes)	04201	0.0348	0	110440	0.0348	0.	17 136 U.	0		61.41	, ,	1/8					83 9300	1		62 8000	3	1/402	62 8000	-10	24004	0.0043	14	31 (81	0.0791	0	22820	0.0185	0	23234	0.0985	0	20080	0.3973	1/	23,030	0.028/4	
WTT biomass wood crips (tonnes) WTT biomass wood pellets (tonnes)	-	+	0		-	0	$\vdash$	0		61.41	00 1			300 9					8				151,0000	4	17 1	177 0000	3	$\vdash$		0	-	-	0		-	0	+	+-	+	+	-	
WTT biomass wood pellets (tonnes) WTT biomass wood chips (kWh)		$\vdash$	U			U		U	+	_	- 0	40	103.5	S		~+ b	4100			131.0000			0.0166		1084260				-	0	_	_	0			0	-	+-	+	+	1	$\overline{}$
Total emissions scope 3			4388			4027		409			398	13	-	38	38			3781			3737	223140	2.2100	3453		2.2373	3068			3160			2847			2617	t	+	1660			2371
Total emissions (all scopes)			6804			6364		604			574			57		_		5665			5626		$\overline{}$	5340			4731			5158			4679			4235	1	1	3334			4021
Corporate Carbon offset (solar PV) (kWh)			0			0	4335 0.4	4455 2	130	060 0.445	55 6	3185	22 0.44	55 14	12 3	80210	0.4455	160	357080	0.4943	176	362869	0.4622	168	338721	0.4121	140	322697	0.3516	113	105,944	0.2831	30	310,982	0.2556	40	166,950	0.2331	19	101,542	0.21233	-11
Leisure Carbon offset (solar PV) (kWh)																															265,338	0.2831	75	254,547	0.2556	33	206,019	0.2331		210,833	0.21233	-22
Total overall emissions			6804			6364		6043			573			55				5505			5450			5173			4592			5044			4574			4162			3291			3988
Change from 2008/2009 baseline						-6		-11			-16	3		-1				-19			-20			-24			-33			-26			-33			-39	$\perp = $		-52			-41
change from previous year	1					-6		-5			-5				3		$\rightarrow$	-1			-1			-5			-11			9.85			-9.33			-9	1		-21	1		21