

DG Cities Carbon Reduction Plan

PUBLICATION DATE:

25th May 2022

COMMITMENT TO ACHIEVING NET ZERO

DG Cities is committed to achieving net-zero by 2045.

ABOUT DG CITIES:

DG Cities is an innovation consultancy specialising in the application of technology and data to benefit cities and their residents.

BASELINE EMISSIONS FOOTPRINT

Baseline year:	April 2020 to March 2021
Additional details:	<p>Baseline emissions for DG Cities are based on emissions from the point where data is available to the Company.</p> <p>This is the first emissions reporting year that DG Cities has conducted since its establishment in 2015.</p> <p>DG Cities is wholly owned by the Royal Borough of Greenwich, but it has its own board who oversee the company's operations and finances and DG Cities has operational control over its operations.</p> <p>The baseline emissions only consist of Scope 3 emissions, as staff have been working remotely.</p>
Baseline year emissions:	
EMISSIONS (includes market emissions where available)	1.21 (tCO₂e)
Scope 1 (Direct emissions)	0 <p>DG Cities does not own any buildings or vehicles.</p> <p>Staff have been working remotely from their own homes, and as a result</p>

	heat generation is not conducted on sites owned or controlled by DG Cities.																								
Scope 2 (Energy indirect emissions)	<p>0</p> <p>Staff have been working remotely from their own homes, and as a result electricity consumption is not conducted on sites owned or controlled by DG Cities.</p>																								
Scope 3 (Other indirect emissions)	<p>1.21 tCO2e</p> <p>DG Cities Scope 3 breakdown is as follows:</p> <table><tr><th>Category</th><th>Emissions (tCO2e)</th><th>Notes</th></tr><tr><td>Gas</td><td>1.10</td><td>Emissions from gas usage would typically be Scope 1 Direct Emissions, but as staff is remote working, these emissions are listed under Scope 3.</td></tr><tr><td>Electricity (utilises market emissions where available)</td><td>0.086</td><td>Emissions from electricity usage would typically be Scope 2 Indirect Emissions, but as staff is remote working, these emissions are listed under Scope 3.</td></tr><tr><td>Upstream transportation and distribution</td><td>0</td><td>DG Cities does not have any upstream transportation and distribution emissions as the company does not utilise or require purchased products for its operations.</td></tr><tr><td>Waste generated in operations</td><td>0</td><td>DG Cities does not generate operational waste. The only waste generated is household waste from staff living and working at home.</td></tr><tr><td>Business travel</td><td>0.024</td><td>Business travel is predominantly from public train, bus, taxi and private car journeys to client meetings, conferences and site visits.</td></tr><tr><td>Employee commuting</td><td>0</td><td>DG Cities staff worked remotely.</td></tr><tr><td>Downstream transportation and distribution</td><td>0</td><td>DG Cities does not sell or distribute products.</td></tr></table>	Category	Emissions (tCO2e)	Notes	Gas	1.10	Emissions from gas usage would typically be Scope 1 Direct Emissions, but as staff is remote working, these emissions are listed under Scope 3.	Electricity (utilises market emissions where available)	0.086	Emissions from electricity usage would typically be Scope 2 Indirect Emissions, but as staff is remote working, these emissions are listed under Scope 3.	Upstream transportation and distribution	0	DG Cities does not have any upstream transportation and distribution emissions as the company does not utilise or require purchased products for its operations.	Waste generated in operations	0	DG Cities does not generate operational waste. The only waste generated is household waste from staff living and working at home.	Business travel	0.024	Business travel is predominantly from public train, bus, taxi and private car journeys to client meetings, conferences and site visits.	Employee commuting	0	DG Cities staff worked remotely.	Downstream transportation and distribution	0	DG Cities does not sell or distribute products.
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CURRENT EMISSIONS REPORTING

Reporting year:	April 2021 to March 2022
EMISSIONS (utilises market-based emissions where available)	2.399 (tCO₂e)
Scope 1 (Direct emissions)	0 DG Cities does not own any buildings or vehicles. Staff have been working remotely from their own homes, and as a result heat generation is not conducted on sites owned or controlled by DG Cities.
Scope 2 (Energy indirect emissions)	0 Staff have been working remotely from their own homes, and as a result electricity consumption is not conducted on sites owned or controlled by DG Cities.
Scope 3 (Other indirect emissions)	2.399 tCO₂e

DG Cities Scope 3 breakdown is as follows:

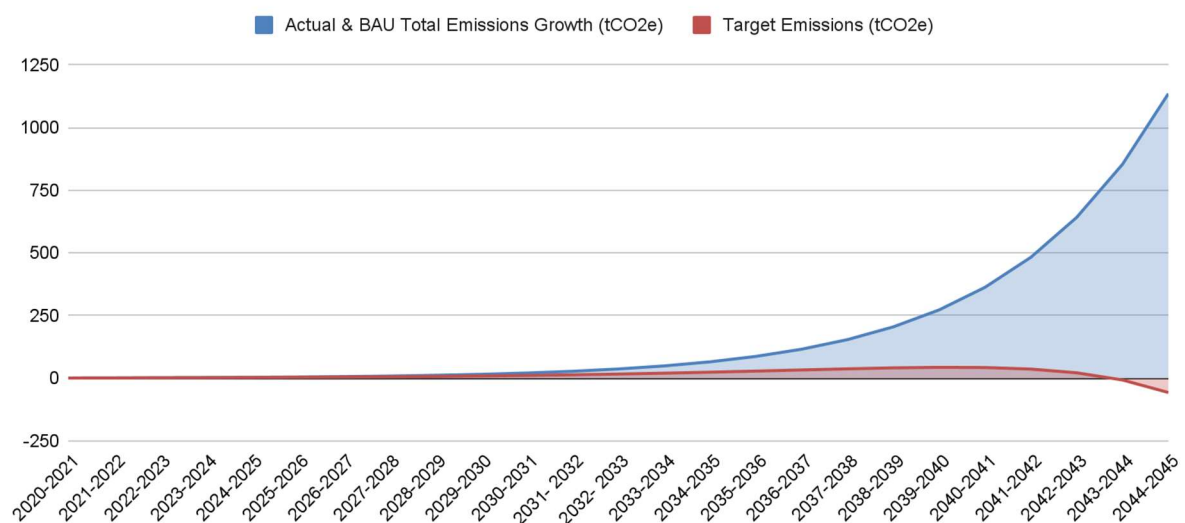
Category	Emissions (tCO ₂ e)	Notes
Gas	1.44	<i>Emissions from gas usage would typically be Scope 1 Direct Emissions, but as staff is remote working, these emissions are listed under Scope 3.</i>
Electricity (utilises market based emissions where available)	0.06	<i>Emissions from electricity usage would typically be Scope 2 Indirect Emissions, but as staff is remote working, these emissions are listed under Scope 3.</i>
Upstream transportation and distribution	0	<i>DG Cities does not have any upstream transportation and distribution emissions as the company does not utilise or require purchased products for its operations.</i>
Waste generated in operations	0	<i>DG Cities does not generate operational waste. The only waste generated is household waste from staff living and working at home.</i>
Business travel	0.899	<i>Business travel is predominantly from public train, bus, taxi and private car journeys to client meetings, conferences and site visits.</i>
Employee commuting	0	<i>DG Cities staff worked remotely.</i>
Downstream transportation and distribution	0	<i>DG Cities does not sell or distribute products.</i>

EMISSIONS REDUCTION TARGETS

In order to continue our progress to achieving Net Zero, we have adopted the following carbon reduction targets:

- DG Cities commits to net-zero emissions by 2045.

We project that carbon emissions will decrease over the next five years to 3.77 tCO₂e by 2026, compared to projected business¹ as usual growth from the baseline year. This is a reduction of 25.2%, equating to an annual reduction of 4.2% from the base year. With the same annual linear reduction rate, DG Cities will commit to achieving net-zero emissions by 2043.



The above figure illustrates the current and business as usual growth of emissions (tCO₂e) versus target emissions (tCO₂e). The actual emissions are provided for the baseline year (2020-2021) and BAU projections using a 33% growth rate are applied from the baseline year up until 2044-2045. The actual figure for the current year (2021-2022) was not considered for understanding the target emissions, as it reflects an unrealistic growth in emissions (3,645% increase) compared to the baseline year, due to travel restrictions imposed in the baseline year compared to the current year.

¹ DG Cities is projected to experience 33% business growth per year, due to an estimated increase of 3 employees per year.

CARBON REDUCTION PROJECTS

The following environmental management measures and projects were implemented prior to the baseline:

- Membership of cycle to work scheme.

Data relating to the carbon emission reductions achieved by these would have been considered in the baseline year, but as staff has been working remotely, employee travel via bicycles and or alternative modes of transport has not been accounted for. This will be considered in upcoming reporting years. In the future we hope to implement further measures such as:

- From now until 2026, DG Cities will:
 - Promote the existing cycle to work scheme.
 - Establish policies that promote low carbon modes for commuting and business travel.
 - Explore opportunities for offsetting emissions that are difficult to reduce.
 - Educate staff on ways they can reduce their home energy usage and to make sustainable choices outside of work.
 - Review options to enable or incentivise staff to switch to green tariffs that result in zero market-based emissions.
 - Review opportunities to build carbon reduction into our subcontracting arrangements.
 - Work with the management of our shared office space to explore avenues to reduce office-based energy use.
 - Install submetering to enable the accurate measurement of the company's energy use within its shared office space.
 - Review the Sustainable Development Goals and align DG Cities' policies to align with those that are relevant to the business.
 - Submit carbon reduction targets for Science Based Target validation.
- From 2026 onwards, DG Cities will:
 - Develop policies that prioritise working in sustainable co-working offices.
 - Provide a salary sacrifice scheme to enable employees that own their own homes to enable them to fund energy reduction measures such as solar panels and heat pumps).
 - Provide a salary sacrifice scheme to enable employees to replace private petrol or diesel vehicles with electric models.

Declaration and Sign Off

This Carbon Reduction Plan has been completed in accordance with PPN 06/21 and associated guidance and reporting standard for Carbon Reduction Plans.

Emissions have been reported and recorded in accordance with the published reporting standard for Carbon Reduction Plans and the GHG Reporting Protocol corporate standard[1] and uses the appropriate Government emission conversion factors for greenhouse gas company reporting [2].

Scope 1 and Scope 2 emissions have been reported in accordance with SECR requirements, and the required subset of Scope 3 emissions have been reported in accordance with the published reporting standard for Carbon Reduction Plans and the Corporate Value Chain (Scope 3) Standard[3].

This Carbon Reduction Plan has been reviewed and signed off by the board of directors

Signed on behalf of the DG Cities:

A handwritten signature in black ink, appearing to read 'T. Dorling', with a horizontal line underneath.

Trevor Dorling
Managing Director
Date: 24th May 2022

[1]<https://ghgprotocol.org/corporate-standard>

[2]<https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting>

[3]<https://ghgprotocol.org/standards/scope-3-standard>

Appendix

The following tables outline the various scope 3 emission sources for the base year and current year emissions.

Summary of emissions:

	Electricity (tCO2e)	Heating (tCO2e)	Other Gas (tCO2e)	Business Travel (tCO2e)
Year 2020 - 2021	0.09	0.9	0.2	0.024
Year 2021 - 2022	0.06	1.08	0.36	0.90

Base year emissions:

Emissions from home working gas usage:

Base year April 2020 to March 2021					
Staff Name	WFH vs Office	Heating (kWh/employee/ year)	kg CO2e for heating (per employee, per year)	Other gas (kWh/employee/year)	kg CO2e for total gas (per employee, per year)
Employee 1	WFH	546.75	100.14	136.10	24.93
Employee 2	WFH	427.07	78.22	53.15	9.74
Employee 3	WFH	1,732.18	317.27	431.17	78.97
Employee 4	WFH	980.96	179.67	244.18	44.72
Employee 5	WFH	1,023.85	187.53	159.63	29.24
Employee 6	WFH	45.94	8.41	53.09	9.72
Employee 7	WFH	0.00	0.00	1.09	0.20
Employee 8	WFH	175.80	32.20	21.88	4.01
Employee 9		4,932.55	903.45	1100.30	201.53
Total kWh/ year					6,033
Total kg CO2e/ year					1105
Total tCO2e/ year					1.10

Emissions from home working electricity usage:

Base year April 2020 to March 2021				
Staff Name	WFH vs Office	Electricity (kWh/employee/year)	kg CO2e (per employee, per year) location based	kg CO2e (per employee, per year) market based
Employee 1	WFH	211.98	45.01	0
Employee 2	WFH	61.09	12.97	0
Employee 3	WFH	268.64	57.04	12.9

Employee 4	WFH	153.84	32.66	0
Employee 5	WFH	113.09	24.01	24.01
Employee 6	WFH	156.16	33.16	33.16
Employee 7	WFH	51.94	11.03	11.03
Employee 8	WFH	1.10	0.23	0.23
Employee 9	WFH	22.07	4.69	4.69
Total kWh/year			1,040	
Total kg CO2e/year			221	86
Total tCO2e/year			0.221	0.086

Emissions from business travel:

Base year April 2020 to March 2021							
Staff Name	Trip description	Number of trips	Travel mode	miles per trip	Km per trip	Emission factor (kg CO2e per km per passenger)	total kg CO2e
Employee 1	North Greenwich to Woolwich	3.00	Average car (unknown)	3.70	5.95	0.17	3.06
	North Greenwich to Plexal	1.00	Average car (unknown)	6.20	9.98	0.17	1.71
Employee 2	London (St pancras) to Sheffield	2.00	National rail	139.00	223.65	0.04	15.87
Employee 3	North Greenwich to Woolwich	1.00	Average car (unknown)	3.70	5.95	0.17	1.02
	North Greenwich to Plexal	1.00	Average car (unknown)	6.20	9.98	0.17	1.71
	Plexal (stratford to Saint John's Wood Station)	1.00	London underground	13.10	21.08	0.03	0.59
Total tCO2e							0.024

Current year emissions:

Emissions from home working gas usage:

Current year April 2021 to March 2022					
Staff Name	WFH vs Office	Heating (kWh/employee/ year)	kg CO2e for heating (per employee, per year)	Other gas (kWh/employee/year)	kg CO2e for total gas (per employee, per year)
Employee 1	WFH	427.37	78.28	106.38	19.48
Employee 2	WFH	412.07	75.47	102.57	18.79
Employee 3	WFH	1,572.16	287.96	391.34	71.68
Employee 4	WFH	1,288.85	236.07	320.82	58.76
Employee 5	WFH	0.00	0.00	4.78	0.88

Employee 6	WFH	0.00	0.00	1.09	0.20
Employee 7	WFH	130.97	23.99	49.39	9.05
Employee 8	WFH	476.25	87.23	535.52	98.09
Employee 9	WFH	206.05	37.74	51.29	9.39
Employee 10	WFH	1,136.47	208.16	282.89	51.81
Employee 11	WFH	270.78	49.60	102.12	18.70
Sub-total		5,920.95	1084.48	1948.20	356.83
Total kWh/ year	7,869				
Total kg CO2e/ year	1441				
Total kg CO2e/ year	1.44				

Emissions from home working electricity usage:

Current year April 2021 to March 2022				
Employees	WFH vs Office	Electricity (kWh/employee/year)	kg CO2e (per employee, per year) location based	kg CO2e (per employee, per year) market based
Employee 1	WFH	192.80	40.94	0
Employee 2	WFH	243.87	51.78	0
Employee 3	WFH	263.99	56.05	12.67
Employee 4	WFH	314.73	66.83	0
Employee 5	WFH	4.68	0.99	0.99
Employee 6	WFH	1.10	0.23	0.23
Employee 7	WFH	48.66	10.33	10.33
Employee 8	WFH	163.38	34.69	34.69
Employee 9	WFH	29.93	6.36	0
Employee 10	WFH	130.09	27.62	0
Employee 11	WFH	221.83	47.10	0
Employee 12	WFH	69.86	14.83	0
Total kWh/ year			1,685	
Total kg CO2e/ year			358	58.9
Total tCO2e/year			0.358	0.06

Emissions from business commuting:

Current year April 2021 to March 2022							
Staff Name	Trip description	Number of trips	Travel mode	miles per trip	Km per trip	Emission factor (kg CO2e per km per passenger)	total kg CO2e
Employee 1	Hoxton to North Greenwich	6.00	London underground	5.60	9.01	0.03	1.50
	North Greenwich to Eltham Station	6.00	Local London Bus	4.40	7.08	0.08	3.28
	Paddington to Farnborough	1.00	National Rail	36.70	59.05	0.04	2.10
	Farnborough to Waterloo	1.00	National Rail	33.00	53.10	0.04	1.88

	Paddington to Waterloo	1.00	Average Car (unknown)	33.00	53.10	0.17	9.11
	Paddington to Oxford	2.00	National Rail	62.90	101.21	0.04	7.18
	Lambeth North to Paddington	2.00	London underground	4.10	6.60	0.03	0.37
	Bus to Lambeth North	2.00	Local London Bus	4.30	6.92	0.08	1.07
	St Pancras International to Corby	3.00	National Rail	79.00	127.11	0.04	13.53
	Euston to Coventry	4.00	National Rail	93.60	150.60	0.04	21.38
	Brixton (home) to Euston	2.00	Local London Bus	6.50	10.46	0.08	1.61
	Brixton to Kingscross	2.00	London underground	6.40	10.30	0.03	0.57
	Kings Cross to York	2.00	National Rail	187.70	302.01	0.04	21.44
	London to Norwich	2.00	National Rail	114.40	184.07	0.04	13.07
	St Pancras International to Derby	2.00	National Rail	127.60	205.31	0.04	14.57
Employee 2	London (St pancras) to Flitwick	4.00	National rail	39.90	64.20	0.04	9.11
	London Euston to Chester	4.00	National rail	178.10	286.56	0.04	40.68
	King's Cross to Edinburgh Waverly	2.00	National rail	390.20	627.83	0.04	44.56
Employee 3	London (St pancras) to Flitwick	2.00	National rail	39.90	64.20	0.04	4.56
	London to Leeds	2.00	National rail	184.90	297.50	0.04	21.12
	London to Norwich	2.00	National rail	114.40	184.07	0.04	13.07
	Travelling within London	2.00	London underground	5.00	8.05	0.08	1.24
Employee 4	London (St pancras) to Flitwick	2.00	National rail	39.90	64.20	0.04	4.56
	Travelling within London	10.00	London underground	5.00	8.05	0.08	6.21
	Euston to Coventry	2.00	National Rail	93.60	150.60	0.04	10.69

	Woolwich to Barnfield Estate	2.00	Average Car (unknown)	1.00	1.61	0.17	0.55
Employee 5	London to Devon	2.00	Average Car (petrol)	174.00	279.97	0.17	97.60
	Bromley South to Flitwick	2.00	National rail	52.90	85.12	0.04	6.04
Employee 6	London to Devon	2.00	Average Car (petrol)	174.00	279.97	0.17	97.60
	London to Stonehenge	2.00	Average Car (petrol)	90.00	144.81	0.17	50.48
	King's Cross to York	4.00	National rail	187.70	302.01	0.04	42.87
	London to Exter	6.00	Average Car (petrol)	173.00	278.36	0.17	291.12
Employee 7	King's Cross to Edinburgh Waverly	2.00	National rail	390.20	627.83	0.04	44.56
Total tC02e							0.899