

Energy Performance Q2 Update – Appendix 1

1. Top 30 Site Energy Performance & Bottom 5 Performance Overview

Performance comparison by top 30 sites: Q2 2021/22 with Q2 2020/21

Row Labels	Sum of Sep-20	Sum of Sep-21	kWh Difference	%
Animal Reception Centre	790,647	730,249	- 60,398	-8%
Barbican Arts Centre	17,384,466	12,988,109	- 4,396,357	-25%
Baynard House Car Park	160,772	169,216	8,444	5%
Billingsgate Market	3,614,165	3,384,633	- 229,532	-6%
Bishopsgate Police Station	3,112,496	2,455,624	- 656,871	-21%
Central Criminal Court	6,044,649	6,325,765	281,115	5%
City of London Crematorium	2,810,354	2,377,809	- 432,545	-15%
City of London Freeman's School	4,181,767	3,841,259	- 340,508	-8%
City of London School	2,916,539	3,136,383	219,843	8%
City of London School For Girls	2,199,197	1,842,933	- 356,264	-16%
GSMD	1,731,783	1,861,827	130,044	8%
GSMD - Milton Court	2,572,852	3,006,352	433,500	17%
GSMD - Sundial Court	1,462,352	1,739,046	276,694	19%
Guildhall Complex	16,085,645	14,434,214	- 1,651,431	-10%
London Central Market (Smithfield)	11,785,831	9,996,693	- 1,789,138	-15%
London Metropolitan Archives	1,451,656	1,360,058	- 91,597	-6%
London Wall Car Park	239,829	215,076	- 24,753	-10%
Mansion House	1,800,099	1,985,776	185,677	10%
Mayor's Court	244,595	287,635	43,040	18%
New Spitalfields Market (Landlords)	6,454,378	5,783,149	- 671,228	-10%
New Street (21)	1,859,677	2,044,964	185,287	10%
Open Spaces East Heath & Kenwood	160,503	195,720	35,217	22%
Open Spaces Epping Forest	658,195	625,540	- 32,655	-5%
Open Spaces Golders Hill & Extension	323,689	299,632	- 24,057	-7%
Open Spaces Hampstead Heath Leisure	594,006	594,296	291	0%
Open Spaces Parliament Hill	313,771	252,362	- 61,410	-20%
Streetlighting	2,666,328	2,100,601	- 565,727	-21%
Tower Bridge	2,130,933	1,819,516	- 311,417	-15%
Tower Hill Coach & Car Park	521,933	494,413	- 27,520	-5%
Walbrook Wharf Cleansing Depot	1,886,909	1,781,279	- 105,629	-6%
Grand Total	98,160,015	88,130,130	- 10,029,884	-10%

2. Bottom 5 Performing Sites

Weather Corrected data

Current Bottom 5	Sep-20	Sep-21	kWh Difference	% Difference	Performance Overview
GSMD - Milton Court	2,572,852	3,006,352	433,500	17%	A semi return to normal practices coupled with good shutdown practices is suspected. GSMD Sundial Court is still showing an improvement in consumption versus Sept 2019 when consumption was 3.4M kWh.
Central Criminal Court	6,044,649	6,325,765	281,115	5%	A semi return to normal practices coupled with good shutdown practices is suspected. It should be noted that the Central Criminal Court has improved as values in 2019 were 7.3 M kWh.
GSMD - Sundial Court	1,462,352	1,739,046	276,694	19%	A semi return to normal practices coupled with good shutdown practices is suspected. GSMD Sundial Court is still showing an improvement in consumption versus Sept 2019 when consumption was 1.8M kWh.
City of London School	2,916,539	3,136,383	219,843	8%	A semi return to normal practices is thought to be the reason for the uptick, as it should be noted that 2019 consumption was recorded as 3.3M kWh.
Mansion House	1,800,099	1,985,776	185,677	10%	Although Mansion House was shut down, an AHU and BEMS upgrade could be the reason for the increase. It should be noted that 2019 consumption was recorded as 2.2M kWh

3.CO₂ Targets for City of London Corporation

City of London (own operations)	Units	Scope	2018	2019	2020	2021	2022	2023	2024	2025	2026	2030	2035	2040
Corporate Properties and Landlord Area	ktCO ₂ e	Scope 1 & 2	36.4	33.9	30.4	24.4	22.8	19.4	18.1	17.0	14.85	7.2	4.5	3.1
Carbon Removals and Land Management (Scope 1)	ktCO ₂ e	Scope 1	-16.2	-16.2	-16.2	-16.2	-16.2	-16.2	-16.2	-16.2	-17.64	-17.6	-17.6	-17.6
Total net zero emissions	ktCO₂e	Scope 1 & 2	20.2	17.7	14.2	8.19	6.54	3.18	1.83	0.76	-2.79	-10.5	-13.1	-14.6
Net (negative removed)	ktCO ₂ e	Scope 1 & 2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	17.6			
% reduction against baseline year	%	Scope 1 & 2	0%	-7%	-16%	-33%	-37%	-47%	-50%	-53%	-59%			
Target amount to reduce in period	ktCO ₂ e	Scope 1 & 2					13.6		4.7		3.2			
% of target to deliver in that period	%	Scope 1 & 2					63%		22%		15%			
Total target amount to reduce	ktCO ₂ e	Scope 1 & 2									21.5	To be reduced by 2026/7		

4. Timetable for the completion of PSDS Projects

Project	Practical Completion
RA-W	Mar-22
Guildhall Ventilation	Mar-22
Energy Software	Nov-21

5. List of Sites in an energy performance partnership with Vital Energi

Guildhall Complex	City of London School	London Metropolitan Archives
Barbican Arts Centre	City of London School for Girls	
London Central Market (Smithfield)	Walbrook Wharf Cleansing Depot	
Central Criminal Court	Tower Bridge	
New Spitalfields Market (Landlords)	GSMD - Milton Court	
City of London Freeman's School	Mansion House	
Billingsgate Market	GSMD	

Vital Energi are also in the early stages of mobilising surveys for a further tranche of 15 sites, for which it is estimated to take around 4 months to produce high level recommendations for all. Following this, projects will be selected to enter into investment level design. Projects under consideration will typically include (but not limited to):

- Energy efficient lighting and controls
- Improvements to HVAC systems
- Optimisation and improvement of BMS controls
- Hydraulic and pumping optimisation
- Low carbon heating
- Renewables
- Fabric measures and draught proofing

6. Cumulative Carbon Savings

		Carbon Savings - Cumulative (tCO ₂ e/yr)								
		Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9
		2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
PSDS	Gas	0	0	0	0	358	357	355	354	353
	Elec	0	0	0	0	595	622	579	585	548
	Citigen Heat	0	0	0	0	93	88	83	78	73
	Citigen Coolth	0	0	0	0	88	92	85	86	81
Phase 1 & 2	Gas	0	0	0	0	7	7	7	7	7
	Elec	0	0	0	0	93	97	91	91	86
	Citigen Heat	0	0	0	0	18	17	17	16	15
	Citigen Coolth	0	0	0	0	4	5	4	4	4
Energy Saving Loan scheme	Elec	23	21	19	15	14	14	13	13	12
GHC Chillers	Elec	0	0	0	0	0	179	166	168	157
Operational management	Gas	0	348	347	349	365	387	409	431	453
	Elec	14	355	351	277	290	348	367	413	427
	Citigen Heat	0	0	120	71	86	104	119	132	143
	Citigen Coolth	0	14	362	278	271	301	297	316	312
CAS	Gas				0	153	598	885	1,170	1,451
	Elec				0	356	1,192	1,527	1,963	2,233
	Citigen Heat				0	50	188	266	334	392
	Citigen Coolth				0	38	145	196	259	300
	Total	37	738	1,200	991	2,879	4,740	5,467	6,421	7,045

7. Chart Data

This chart provides backing data for the carbon trajectory chart. Note that 2021/22 represents the current, rolling year (October 2020 to September 2021).

Portfolio	Actual				Projected				
	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27
Total Carbon Housing	10,610	7,968	7,970	7,847	6,368	5,271	4,884	4,955	4,577
Total Carbon IPG	3,220	3,775	1,842	1,820	1,889	1,590	1,484	1,502	1,397
Total Carbon CPG	22,177	21,251	16,363	16,439	16,782	14,006	12,671	11,653	10,804
Carbon kt CPG	22	21	16	16	17	14	13	12	11
Carbon kt All	36	33	26	26	25	21	19	18	17
kt Saved	-	3	10	10	-	-	-	-	-
Tonnes Saved	-	3,014	9,832	9,901	-	-	-	-	-
% Saved			-27%	-27%	-	-	-	-	-