

Appendix

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

Performance comparison by top 30 sites: Q1 2021/22 with Q1 2020/21

Weather Corrected Data					
Rolling 12 month comparison: 12 months to June 21 versus 12 months to June 20					
SL Ref	Row Labels	Sum of Jun-20	Sum of Jun-21	Difference kWh	%
SL134	Barbican Arts Centre	18,646,985	11,473,838	- 7,173,147	-38%
SL038	Guildhall Complex	16,470,236	14,301,936	- 2,168,300	-13%
SL101	London Central Market (Smithfield)	12,804,819	9,826,936	- 2,977,883	-23%
SL123	New Spitalfields Market (Landlords)	6,417,136	5,753,961	- 663,175	-10%
SL113	Central Criminal Court	6,038,212	6,197,578	159,366	3%
SL189	City of London Freeman's School	4,287,738	3,715,347	- 572,391	-13%
SL007	Billingsgate Market	3,730,045	3,362,096	- 367,949	-10%
SL129	Bishopsgate Police Station	3,225,056	2,611,279	- 613,776	-19%
SL021	City of London Crematorium	3,021,435	2,273,265	- 748,171	-25%
SL191	Streetlighting	2,923,907	2,139,478	- 784,429	-27%
SL188	City of London School	2,915,176	3,150,892	235,716	8%
SL103/L001	GSMD - Milton Court	2,798,902	2,628,191	- 170,711	-6%
SL076	City of London School For Girls	2,291,111	1,796,051	- 495,060	-22%
SL122	Tower Bridge	2,196,746	1,782,837	- 413,908	-7%
SL157	Walbrook Wharf Cleansing Depot	1,893,717	1,752,314	- 141,403	-6%
SL174/L001	Mansion House	1,867,997	1,755,259	- 112,737	-6%
SL268	New Street (21)	1,856,542	1,788,583	- 67,960	-4%
SL161	GSMD	1,807,204	1,788,787	- 18,417	-1%
SL253	London Metropolitan Archives	1,502,415	1,338,018	- 164,397	-11%
SL242	Animal Reception Centre	806,048	704,260	- 101,788	-13%
SL099	Open Spaces Epping Forest	642,226	635,527	- 6,699	-1%
SL166	Open Spaces Hampstead Heath Leisure	640,109	566,716	- 73,393	-11%
SL154/L001	GSMD - Sundial Court	638,277	1,630,111	991,833	155%
SL159	Tower Hill Coach & Car Park	539,947	484,742	- 55,205	-10%
SL175	Open Spaces Golders Hill & Extension	333,543	279,039	- 54,505	-16%
SL240	Open Spaces Parliament Hill	327,835	229,310	- 98,525	-30%
SL053	London Wall Car Park	241,916	213,895	- 28,020	-12%
SL039	Mayor's Court	179,044	288,264	109,220	61%
SL072	Baynard House Car Park	158,738	174,869	16,131	10%
SL250	Open Spaces East Heath & Kenwood	102,700	186,346	83,646	81%
Grand Total		101,305,764	84,829,725	-16,476,039	-16%

2. Bottom 5 Performing Sites

Weather Corrected data

Current Bottom 5	Jun-20	Jun-21	kWh Difference	% Difference	Performance Overview
GSMD - Sundial Court	638,277	1,630,111	991,833	155%	A semi return to normal practices coupled with good shutdown practices is suspected. GSMD Sundial Court is still showing an improvement in consumption versus June 2019 when consumption was 1.8M kWh. The Energy Team is in communication with the site.
City of London School	2,915,176	3,150,892	235,716	8%	A semi return to normal practices coupled with good shutdown practices is suspected. It should be noted that the City of London School has improved as values in 2019 were 3.2M kWh.
Central Criminal Court	6,038,212	6,197,578	159,366	3%	There has been an increase in fresh air drawn to the site. Tilbury Douglas is running temporary supplies in certain parts of the site as the on going plant upgrade. Catering operational 7 days per week. Work completion on risers and power switch overs.
Mayor's Court	179,044	288,264	109,220	61%	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 312k kWh.
Open Spaces East Heath & Kenwood	102,700	186,346	83,646	81%	An increase in gas consumption has been recorded. The Energy Team are collaborating with the site.

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 Carbon Removals and Land Management (Scope 1)	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
	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	ktCO ₂ e	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. Cumulative Energy Cost Savings

		Energy Cost Savings - Cumulative (£/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	£ -	£ -	£ -	£ -	£ 59,733	£ 62,127	£ 65,295	£ 68,482	£ 69,359
	Elec	£ -	£ -	£ -	£ -	£ 530,581	£ 535,785	£ 539,696	£ 549,928	£ 565,152
	Citigen Heat	£ -	£ -	£ -	£ -	£ 81,950	£ 85,235	£ 89,581	£ 93,953	£ 95,156
	Citigen Coolth	£ -	£ -	£ -	£ -	£ 51,278	£ 53,333	£ 56,053	£ 58,788	£ 59,541
Phase 1 & 2	Gas	£ -	£ -	£ -	£ -	£ 1,197	£ 1,245	£ 1,308	£ 1,372	£ 1,390
	Elec	£ -	£ -	£ -	£ -	£ 82,928	£ 83,741	£ 84,352	£ 85,951	£ 88,331
	Citigen Heat	£ -	£ -	£ -	£ -	£ 16,327	£ 16,982	£ 17,848	£ 18,719	£ 18,959
	Citigen Coolth	£ -	£ -	£ -	£ -	£ 2,557	£ 2,659	£ 2,795	£ 2,931	£ 2,969
Energy Saving Loan scheme	Elec	£ 11,274	£ 11,761	£ 11,941	£ 11,670	£ 12,046	£ 12,164	£ 12,253	£ 12,485	£ 12,831
GHC Chillers	Elec	£ -	£ -	£ -	£ -	£ -	£ 153,895	£ 155,018	£ 157,957	£ 162,330
Operational management	Gas	£ -	£ 54,948	£ 51,159	£ 52,052	£ 60,857	£ 67,430	£ 75,211	£ 83,437	£ 89,120
	Elec	£ 6,710	£ 197,716	£ 218,471	£ 222,830	£ 258,881	£ 300,294	£ 341,644	£ 388,021	£ 439,767
	Citigen Heat	£ -	£ -	£ 51,193	£ 56,795	£ 75,794	£ 100,687	£ 128,789	£ 159,164	£ 185,600
	Citigen Coolth	£ -	£ 7,596	£ 139,209	£ 143,242	£ 158,752	£ 175,289	£ 194,918	£ 215,644	£ 229,763
CAS	Gas				£ -	£ 25,566	£ 104,107	£ 162,729	£ 226,368	£ 285,455
	Elec				£ -	£ 317,748	£ 1,027,204	£ 1,422,736	£ 1,844,884	£ 2,301,889
	Citigen Heat				£ -	£ 43,869	£ 182,512	£ 287,727	£ 402,360	£ 509,390
	Citigen Coolth				£ -	£ 22,443	£ 84,502	£ 128,555	£ 176,513	£ 220,992
Total		£ 17,984	£ 272,021	£ 471,974	£ 486,589	£ 1,802,507	£ 3,049,193	£ 3,766,507	£ 4,546,958	£ 5,337,992

8. Energy Reduction Programme Phase 1 & 2

Phase 1 & 2

Energy Reduction Programme - Phase 1	Budget (incl. risk)	Savings (£/yr)	Savings (tCO2e/yr)
Tower Hill Car Park Lighting	£121,440	£19,273	29
CCC Lighting	£181,703	£43,239	48
Smithfield Car Park Lighting	£90,600	£15,543	25
Energy Reduction Programme - Phase 2			
Smithfield HVAC Upgrades	£186,111	£31,622	37
London Metropolitan Archives Air Conditioning	£15,560	£2,770	33
Central Criminal Court	£3,241	£2,758	14
Mansion House Lighting	£66,568	£13,899	9
Tower Hill Coach & Car Park Ventilation Control	£113,652	£19,155	32