

Appendix 1.

Table 1. Performance comparison by top 30 sites: 2018/19 Q4 with 2017/18

Site	2017/18	2018/19 Q4	Diff. kWh	Diff. %
London Central Market (Smithfield)	18,054,184	17,969,543	-84,641	-0.5%
Guildhall Complex	19,650,648	17,318,337	-2,332,310	-11.9%
Barbican Arts Centre	17,420,016	17,096,058	-323,957	-1.9%
Central Criminal Court	8,327,461	7,947,859	-379,603	-4.6%
New Spitalfields Market (Landlords)	7,379,904	6,800,091	-579,813	-7.9%
City of London Freeman's School	4,316,320	4,874,703	558,383	12.9%
GSMD - Milton Court	3,470,753	3,879,176	408,423	11.8%
Streetlighting	3,791,970	3,753,746	-38,224	-1.0%
Billingsgate Market	3,532,006	3,628,421	96,415	2.7%
Bishopsgate Police Station	3,450,449	3,326,812	-123,638	-3.6%
City of London School	3,284,365	2,965,864	-318,501	-9.7%
City of London Crematorium	2,686,117	2,626,819	-59,298	-2.2%
Tower Bridge	1,861,980	2,326,102	464,122	24.9%
Mansion House	2,199,224	2,306,203	106,979	4.9%
City of London School For Girls	2,224,762	2,244,760	19,998	0.9%
GSMD	2,221,018	2,210,540	-10,478	-0.5%
GSMD - Sundial Court	1,698,301	1,777,505	79,204	4.7%
Walbrook Wharf Cleansing Depot	1,933,581	1,699,369	-234,211	-12.1%
Wood Street Police Station	1,706,546	1,600,081	-106,465	-6.2%
London Metropolitan Archives	1,381,890	1,345,486	-36,404	-2.6%
Snowhill Police Station	986,908	863,679	-123,228	-12.5%
Animal Reception Centre	852,577	763,431	-89,146	-10.5%
Open Spaces Hampstead Heath Leisure	679,721	660,475	-19,246	-2.8%
Open Spaces Epping Forest	660,692	642,925	-17,766	-2.7%
Tower Hill Coach & Car Park	497,707	547,955	50,248	10.1%
Open Spaces Golders Hill & Extension	422,681	369,008	-53,672	-12.7%
Upper Thames Street Tunnel Lighting	260,690	304,116	43,426	16.7%
Open Spaces Parliament Hill	293,245	256,714	-36,531	-12.5%
Minorities Car Park	237,168	251,901	14,733	6.2%
London Wall Car Park	215,808	216,832	1,024	0.5%
Grand Total	115,698,695	112,574,518	-3,124,177	-2.7%

Appendix 2. Commentary on smaller consuming top sites

- 1.1 **Streetlighting:** electricity consumption was almost unchanged from the previous year. The savings from the changes to LED and smart lighting controls are likely to have been fully accounted for now and further reductions in the short term are not anticipated.
- 1.2 **Animal Reception Centre:** gas consumption is 11% and electricity 12% lower likely due to improved heating control and resolution of related maintenance issues.
- 1.3 **Open Spaces Hampstead Heath Leisure:** Overall energy consumption reduced by 2.8%. The majority of electricity is used for the Lido filtration pumps and their consumption increased slightly. Consumption for these pumps has been historically ~10% higher than average due to an ongoing water leak issue. Once this is resolved there is potential for significant savings through a proposal the Energy Team are developing for variable speed pump demand control. Electricity reduced significantly to supplies both at the One 'O' Clock Club and the Men's Pond.
- 1.4 **Open Spaces Epping Forest:** overall Epping Forest energy consumption reduced by 2.7%. Gas consumption patterns for the Warren Office indicate potential heating control issues which the Energy Team will investigate. Gas at Harrow Road changing rooms spiked significantly over Dec-18 to Jan-19 but have since returned to normal - the Energy Team will raise this with the site to investigate. Temple Wanstead Park gas reduced by 28% and electricity by 59%. There was also a 50% reduction in electricity at QEHL.
- 1.5 **Open Spaces Golders Hill & Extension:** Overall energy consumption reduced by 12.7%. The majority of this reduction was due to significantly lower gas consumption for the Hampstead Heath Extension boiler room.
- 1.6 **Open Spaces Parliament Hill:** Overall energy consumption reduced by 12.5%. This was due to lower gas consumption for Nassington Rd Football Changing Rooms and the Staff Yard, but also lower electricity consumption for the Running Track (Floodlights). This was partly offset by increased electricity consumption for the Dressing Rooms and Office Service Yard.
- 1.7 **Upper Thames Street Tunnel:** an ongoing lighting control fault has resulted in a 63% increase in electricity consumption. This has identified by the Energy Team and raised with DBE and appears to be recently resolved and should result in a return to previous consumption levels.
- 1.8 **Tower Hill Coach & Car Park:** electricity consumption increased by 10%, probably related to the ventilation system, and follows ongoing trend of increasing consumption at the site for a number of years. The Energy Team are working on proposals for LED lighting and controls and improvements to the ventilation control.
- 1.9 **Minorities Car Park:** electricity consumption increased by 6% and this will be investigated further by the Energy Team.
- 1.10 **London Wall Car Park:** there was no change in electricity consumption.

Appendix 3. Commentary on energy intensity metric and benchmarking

At the presentation of the draft 2019-24 Business Plan at Property Investment Board (PIB) on 20 March 2019, a Member queried one of the Key Performance Indicators (KPI). This item was KPI 2 – Corporate Energy Consumption. It was questioned whether it was more desirable to report on Energy Efficiency.

Although not explicitly stated within the high-level business plan, this measure is reported for the purposes of Corporate Asset Sub Committee (CASC) and not for PIB. However, it is worthwhile to respond to the Member query to explain the situation.

We have taken the opportunity to consult with the Energy Team on this point, and there are currently a number of barriers to reporting on Energy Efficiency for the entirety of our estate:

1. **Measurement** – At the moment available information is not sufficiently granular to determine energy consumption at different sites, or elements of these sites. There are substantial and significant assumptions that need to be made presently which renders efficiency data questionable.

In order to overcome these issues, a sub metering project has been commenced, with the Gateway 1-2 Report agreed by Members of CASC in 2018. The follow up Gateway 3-4 is currently being authored. This project covers the Guildhall and Walbrook Wharf sites.

2. **Different property uses** – When considering energy efficiency, building use must be considered. For instance, it would be appropriate to consider ‘KWH per workstation’ for an office environment such as the Guildhall North Wing, however it would be more valid to measure ‘KWH per visitor’ at the Barbican, or ‘KWH per event’ for the Great Hall. As these denominators change between use and site, it would not be possible to combine them into a single efficiency measure across the Corporate Estate.

Once the sub-metering programme has been delivered at Guildhall and Walbrook Wharf, and baseline data has been measured and tested, it will be possible to track efficiency of these sites and compare them with similar buildings. This detailed information can be reported separately in the quarterly Energy Update Report but wouldn't be part of the wider departmental KPI measure.

3. **Benchmarking** - there are currently a range of ‘benchmarks’ but each suffers from particular weaknesses. The national method is Display Energy Certificates, but these are quite broad and therefore not a driver for improving efficiency. As a result, organisations commonly report on consumption as their performance metric.