

Greater London Authority

Employment Projections Technical Paper 2
LONDON EMPLOYMENT SITES DATABASE



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Technical Note and Results
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1 LONDON EMPLOYMENT SITES DATABASE

Introduction

- 1.1 The London employment sites database (LESD) generates supply-side employment capacity forecasts. The database includes existing and potential development and redevelopment sites identified for employment uses.
- 1.2 Employment uses cover both business and non business land use space, but excludes land with permission and/or allocated for housing or other uses where employment generating activity is unlikely.
- 1.3 The data on sites has been compiled from various sources (listed in paragraph 1.4), and estimates of employment capacity have been calculated using applied employment densities and, in some cases, site area plot ratios.

Data Sources

- 1.4 Three main sources of information have been used, which are:
 - London Development Monitoring System (LDMS) database - providing information on developments recently completed, under-construction and with outstanding planning consents. For different land use classes, this provided new floorspace figures (in square metres), either developed or with a change of use. Sites have a grid point reference for mapping.
 - National Land Use Database (NLUD) - providing information on brownfield sites, showing likely potential reuse. Not every London Borough had provided an NLUD return in 2004, so for these missing boroughs earlier NLUD data going back to 2002 were used.¹ The size of site areas (in hectares) is provided, but no floorspace figures are given. Where sites are identified for mixed uses, the expected numbers of housing units are given. Again, sites are located using grid points based on grid references provided for each site.
 - Unitary Development Plans (UDPs) - UDPs with a proposal map (adopted or revised) dating from 2000. Earlier UDPs were not used due to the likelihood for information to be out of date. Only those sites identified for employment use, retail or mixed uses, and were not identified by the previous two sources, were added to the database. The degree of information about sites varied considerably by UDP. In some cases land use type and potential floorspace were shown, but in other cases no site details other than employment/mixed use designation was given. In most cases a grid point or polygon for the site was able to be identified.
- 1.5 The above sources were supplemented with other area specific information from the Canary Wharf Website, journal/press articles, and the earlier GLA database and more recent studies where data was still current and not identified in any of the above sources.
- 1.6 The use of information from different sources, although not ideal, was necessary owing to the lack of a single source of up-to-date information on potential development and redevelopment sites across London. A similar exercise was undertaken by Roger Tym and Partners (RTP) for the GLA in 2001/2, but this composite source is now too out of date to have significant use for this exercise.
- 1.7 At the request of the client we did not contact the boroughs to validate this information.

¹ NLUD is updated annually, with 2004 the latest year available.

- 1.8 Many sites were sourced from LDMS and NLUD and required careful examination to omit double counting. Geographic locators, such as site names and/or grid references were used for identifying duplicate sites. A Geographic Information Source (GIS) application (MapInfo) was used for checking sites sharing similar locations.
- 1.9 Duplicate sites were consolidated into one entry. In some cases, there were different development proposals for the same sites. When this occurred, LDMS data was given priority over NLUD since this better reflected current market conditions.

Geographies

- 1.10 All sites in LESD have a grid point reference for mapping. For most sites the reference originated from the source, but where there were omissions or identified errors, the grid reference was plotted manually.
- 1.11 Using MapInfo and the sites grid references, each site has been assigned to different geographical reference areas. These areas include:
- Local Authority administrative areas;
 - 2003 wards;
 - London Transport Zones (LTS); and
 - Sub-area (Central Activity Zone (CAZ), other Inner London and Outer London).
- 1.12 Sites located in, or near, one of the GLA defined opportunity areas or area for intensifications, have also been identified.

Supply Side Employment Capacity Estimates

- 1.13 Depending on the amount of information available, employment densities and plot ratios assumptions weighted according to land use type and site locations are used for estimating site employment capacities.
- 1.14 Employment density ratios are commonly used for estimating the number of jobs that may be accommodated in a given amount of floorspace. The relationship between employment and land use depends not only on these floorspace/worker ratios, but also on the plot ratio - the amount of land required for each thousand square metres of floorspace. There is no one correct figure for employment densities and plot ratios, and ratios are found to vary widely due to land use type and locations.

Land Use Type

- 1.15 We define employment uses into business space (B-space) and non-business space (non B-space). More specifically, these uses cover sites identified for:
- B-space:
 - Offices (B1);
 - Industry (B2/B8);
 - Non B-space:
 - Retail (A class);
 - Hotels (C1); and
 - Leisure (D2).
- 1.16 B-space uses on sites have been disaggregated into offices and industry. But we have not disaggregated non-B space categories due to greater complexities in identifying the above three uses.

1.17 Where no specific land use is able to be identified for a site, they have been apportioned across different uses based on site descriptions, locations and judgement. For example, sites in central London (CAZ areas) identified for employment uses are likely to be wholly office employment. For sites with no identified use (or floorspace) the following rules were applied:

- If identified use is none or other (NLUD terms), and description does not indicate otherwise, the site area was weighted by 0.25.
- If identified use is mixed with housing, and housing numbers are provided from source, we subtract the housing area land take using look-up table densities shown in Table 1.3 and then weight the remaining site area by 0.5.

Area Type

1.18 In addition to the above assumptions, we use the locations of sites for weighting the estimated employment capacity. Using site grid references, sites have been grouped into one of the three areas below (shown in Table 1.1):

- Central Activity Zone (CAZ) - a GLA London Plan definition. GLA GIS files are used for identifying sites in the CAZ area.
- Other Inner London Area - this covers the remaining areas of inner London boroughs that are not in the CAZ areas.
- Outer London - these are the outer London boroughs, and are consistent with the definition used in the previous GLA sites database.

Table 1.1

Area Type by Borough		
CAZ	Other Inner London	Outer London
Camden	(RO) Camden	Barking&Dagenham
City of London	Greenwich	Barnet
Hackney	(RO) Hackney	Bexley
Islington	Hammersmith&Fulham	Brent
Kensington&Chelsea	Haringey	Bromley
Lambeth	(RO) Islington	Croydon
Southwark	(RO) Kensington&Chelsea	Ealing
Tower Hamlets	(RO) Lambeth	Enfield
Westminster	Lewisham	Harrow
	Newham	Havering
	(RO) Southwark	Hillingdon
	(RO) Tower Hamlets	Hounslow
	Wandsworth	Kingston-upon-Thames
	(RO) Westminster	Merton
		Redbridge
		Richmond-upon-Thames
		Sutton
		Waltham Forest

NB: RO (Borough) covers the rest of the borough outside of the CAZ area.

Employment Densities

1.19 There are a limited number of large scale surveys for estimating employment densities that have been undertaken. Based on information from the RTP study carried out for SERPLAN (Sustainable Development Strategy for the South East) in 1996 (which remains one of the most comprehensive data sources), a review of evidence by Arup Economic and Planning for English Partnerships (which recommended employment densities for use for different types of activity and

location) and a survey by DTZ Pinda for SEERA (South East England Regional Assembly), the following densities were applied:

Table 1.2

Densities by Land Use and Area Type							
Locality	Square metres per job*						Hotel beds per job
	Offices	Industrial	A class	Leisure	All B-space	Other emp uses	
CAZ	20	33	21	70	26	45	1
Other Inner London	19	39	21	70	29	45	2
Outer London	19	44	21	70	31	45	3
*Net internal area							

Source: RTP/SERPLAN/Arup Economics and Planning

- 1.20 The 2001 London Office Policy Review study reviews density ratios for London offices and concludes that for the FBS (Financial and Business Services) sector, which it takes as the proxy for employment, a figure of 175 sq ft net per employee is a reasonable rule of thumb. This is equivalent to around 19 sq m per worker gross.

Plot Ratios

- 1.21 There is less survey evidence available for plot ratios. Whilst at one time local development plans might prescribe plot ratios for different zones this practice has fallen into abeyance. We have looked at plot ratios in London through analysing planning permissions. This pointed to very strong differences between central, inner and outer London, with ratios varying considerably between high rise city centre offices and out of town distribution activities, and so we weight them accordingly in Table 1.3.
- 1.22 It is also likely that given the policy emphasis towards higher density development in London that plot ratios for new development will show higher intensification than those for existing development.

Table 1.3

Plot Ratios by Land Use and Area Type						
Locality	Floorspace per hectare					Housing Units per Ha
	Offices	Industrial	A Class	Leisure	Other Emp	
CAZ	77,000	9,000	9,000	9,000	9,000	100
Other Inner London	18,500	5,000	5,000	5,000	5,000	70
Outer London	9,000	4,000	4,000	4,000	4,000	50

Source: RTP

Supply-side Scenarios

- 1.23 By changing the employment densities and plot ratios assumptions, different scenarios are able to be applied to sites. Excluding sites where employment numbers are provided from the source, plot ratios and employment densities can be changed to reflect higher and lower capacity estimates. No sensitivity testing has been undertaken at this stage.

Timescale

- 1.24 Employment capacity has been estimated over five year intervals to 2021. This is to reflect the expected completion date of development.

- 1.25 The original sources of information rarely have information on expected completion dates for sites. Where they do have a date this has been referenced. For sites with no identified completion date, we have applied the following rules based on site status for estimating timescales:

Table 1.4

Estimated Development Timescales (end year)	
Site Status	Completion (end year)
Completed (post 2002)	2006
Under construction	
Full planning permission	
Detailed planning permission	
Planning permission subject to conditions	2011
Outline planning permission	
Allocated for employment use	2016
Designated for employment	2021

- 1.26 These rules may be ignored where it is judged that sites are likely to need longer or less time to be developed. For example, a large development with planning permission is unlikely to be developed by 2006, so we change this to a later end period.

Opportunity Areas and Areas of Intensification

- 1.27 Owing to the state of play with some of the major sites, the certainty of either the size of development or type of development and development timescales has been hard to ascertain. The more notable sites are those in the GLA defined opportunity areas and areas of intensification.
- 1.28 For consistency between the LESD estimates of jobs within with the GLA opportunity areas (OAs) and areas of intensification (AIs) and the GLA's own estimates, a residual job growth value has been added to these areas. So, for example, if the GLA estimate of jobs growth in the Lea Valley OA is greater than the LESD estimate, a positive residual value is added to the specific OA in the LESD. If the opposite was true, a negative residual factor would be added into the sites database.

Gross and Net Change

- 1.29 The objective of the database is to capture net change in floorspace to equate to net change in employment. There may be over estimates in employment growth from the identified development activity as data on net change is not always available. This is due to the paucity of information on the loss of existing occupied employment sites. Where net figures are provided we have used them. However, the level of over estimation is likely to decline over our forecast years due to potential windfall sites coming forward within the boroughs.
- 1.30 The 2001 London Office Policy Review has analysed gains to stock for all applications and current permissions in excess of 1,000 sq m. This shows that where new brownfield sites are being developed, such as the Isle of Dogs, the effective difference between gross and net change in stock is small. For the City of London, however, where most development represents re-development to a higher intensity, then the net gain to stock is only about 25% of the gross change.

2 EMPLOYMENT CAPACITY TABLES

Introduction

- 2.1 The database list 2,353 sites contributing to the future employment capacity of London. The results tables show the estimated total number of jobs that could be accommodated from these identified sites.
- 2.2 In the results tables we aggregate the job capacities of sites by London Borough and by LTS zones (2003 definition). For both types of areas, we show the totals jobs for the following land use types:
- B-space (ie, Offices and Industry (covering both factories and warehousing));
 - Offices (B1);
 - Industry (B2/B8); and
 - Non B-space (A, C1 and D2)
- 2.3 The tables also show employment capacity potential by estimated end year, based on five-year bandings.

Comments about the Results

- 2.4 Capacity release is heavily skewed into the earlier periods because most sites have development commitments and may therefore be available for immediate development. This does not reflect market demand for jobs.
- 2.5 The all jobs total includes a residual value which equalises the estimate of development capacity based on the LESD data and the GLA's own estimates of potential jobs growth in the GLA opportunity areas (OAs) and areas of intensification (AIs). Consequently, the column identified as OAAI Residual calculation may show negative figures for some boroughs and some LTS zones. These residual values are only used as an accounting factor.

Employment Capacity Results by Borough

- 2.6 Results are shown on the following pages.

3 APPENDIX 1

Borough Capacity Tables

Sum of AllJobs_No__Imputed__

Borough	2006	2011	2016	2021	OAAI Residual	Total
Barking&Dagenham	9,603	8,805	10,709	1,472	-1,380	29,208
Barnet	4,629	67	21,966	6,894	-7,472	26,084
Bexley	9,577	1,943	9,910	2,043	386	23,859
Brent	10,895	6,579	1,560	2,753	-4,217	17,570
Bromley	2,511	1,815	364	4,381		9,071
Camden	14,124	1,329	15,735	4,082	-1,161	34,109
City Of London	67,155	46,034	689	999	117	114,993
Croydon	10,615	6,844	8,621	2,938	-8,714	20,303
Ealing	6,979	1,492	983	16,595	3,704	29,752
Enfield	12,830	1,147	963	10,253	-3,370	21,823
Greenwich	28,379	8,492	4,675	3,190	8,457	53,193
Hackney	11,060	722	3,753	2,792	6,703	25,030
Hammersmith&Fulham	18,686	4,204	2,448		-1,238	24,099
Haringey	1,657	541	29,230	1,190	-6,662	25,956
Harrow	1,117	92	3,145	2,822		7,176
Havering	9,322	1,580	1,530	1,489		13,920
Hillingdon	12,075	9,687	185	2,351	32,077	56,375
Hounslow	17,312	3,215	12,090	5,334	25	37,975
Islington	16,379		5,955	3,661	-3,043	22,952
Kensington&Chelsea	4,074	842	50			4,966
Kingston-Upon-Thames	1,563		5,184	1,223		7,970
Lambeth	5,995		2,630	1,232	11,542	21,399
Lewisham	2,395	473	4,098	4,572	1,652	13,189
Merton	3,788	158	945	5,914		10,805
Newham	11,869	1,535	25,514	27,533	-14,706	51,746
Redbridge	1,620		2,095		-787	2,927
Richmond-Upon-Thames	5,315		1,482	591		7,388
Southwark	32,345	4,975	15,728	13,218	10,745	77,011
Sutton	2,320	49	2,999	442		5,811
Tower Hamlets	82,306	4,024	17,331	6,974	103,190	213,825
Waltham Forest	4,886	27	556	1,224	-3,890	2,803
Wandsworth	23,880	117	1,376	1,144	-2,471	24,046
Westminster	49,604	5,101	2,002	2,293	6,331	65,331
Grand Total	496,864	121,886	216,501	141,599	125,815	1,102,665

Sum of B_SpaceJobs_No___Imputed_

Borough	2006	2011	2016	2021	Total
Barking&Dagenham	8,768	8,677	8,920	1,428	27,793
Barnet	3,333	47	21,966	5,171	30,516
Bexley	8,569	1,920	9,794	2,030	22,312
Brent	8,088	6,517	1,430	2,735	18,770
Bromley	1,744	1,278	364	4,381	7,767
Camden	12,563	1,329	12,556	3,978	30,426
City Of London	63,633	43,403	425	999	108,459
Croydon	5,736	1,347	7,153	2,239	16,475
Ealing	6,325	1,168	901	13,261	21,655
Enfield	8,380	1,129	963	7,929	18,401
Greenwich	23,343	8,378	3,767	3,156	38,644
Hackney	10,753	722	3,467	2,792	17,735
Hammersmith&Fulham	11,791	3,282	2,429		17,502
Haringey	1,058	422	26,553	1,053	29,087
Harrow	759		2,455	2,822	6,035
Havering	7,022	1,580	1,064	1,417	11,082
Hillingdon	10,538	6,094	136	2,094	18,861
Hounslow	13,828	2,605	10,797	3,804	31,034
Islington	14,176		4,977	3,661	22,814
Kensington&Chelsea	2,496	842	50		3,387
Kingston-Upon-Thames	1,040		3,805	1,106	5,951
Lambeth	5,517		2,147	625	8,290
Lewisham	2,026	150	4,098	3,801	10,075
Merton	2,768	149	719	4,664	8,300
Newham	10,008	1,199	20,774	26,528	58,508
Redbridge	1,375		1,684		3,058
Richmond-Upon-Thames	4,890		1,030	591	6,512
Southwark	30,047	4,889	12,089	13,218	60,244
Sutton	1,805	49	2,999	442	5,295
Tower Hamlets	81,179	4,024	17,166	6,974	109,343
Waltham Forest	799	27	556	1,224	2,606
Wandsworth	20,502	117	1,074	1,144	22,837
Westminster	43,128	5,101	2,002	2,191	52,422
Grand Total	427,986	106,443	190,308	127,458	852,195

Sum of Non_B_SpaceJobs_No___Imputed_

Borough	2006	2011	2016	2021	Total
Barking&Dagenham	835	128	1,789	44	2,795
Barnet	1,296	20		1,723	3,040
Bexley	1,008	23	116	14	1,161
Brent	2,807	62	129	18	3,017
Bromley	766	537			1,304
Camden	1,561		3,180	103	4,844
City Of London	3,522	2,631	264		6,418
Croydon	4,879	5,496	1,468	699	12,542
Ealing	653	323	82	3,334	4,393
Enfield	4,450	19		2,324	6,792
Greenwich	5,036	114	909	34	6,092
Hackney	307		286		592
Hammersmith&Fulham	6,895	922	19		7,836
Haringey	599	119	2,677	136	3,530
Harrow	358	92	690		1,140
Havering	2,300		466	72	2,839
Hillingdon	1,537	3,593	50	258	5,437
Hounslow	3,484	610	1,293	1,530	6,917
Islington	2,204		978		3,182
Kensington&Chelsea	1,579				1,579
Kingston-Upon-Thames	524		1,379	117	2,019
Lambeth	478		483	607	1,567
Lewisham	369	323		771	1,463
Merton	1,020	9	226	1,250	2,505
Newham	1,861	337	4,740	1,006	7,944
Redbridge	245		411		656
Richmond-Upon-Thames	425		452		877
Southwark	2,298	86	3,639		6,023
Sutton	516				516
Tower Hamlets	1,127		165		1,292
Waltham Forest	4,087				4,087
Wandsworth	3,378		302		3,679
Westminster	6,477			102	6,578
Grand Total	68,878	15,443	26,193	14,141	124,655

Sum of OfficeJobs_No___Imputed_

Borough	2006	2011	2016	2021	Total
Barking&Dagenham	4,440	6,533	6,728	1,198	18,899
Barnet	3,061	39	15,172	4,162	22,434
Bexley	5,261	865	5,927	1,337	13,391
Brent	4,001	6,287	1,075	1,993	13,356
Bromley	1,257	1,081		3,676	6,013
Camden	11,920	1,275	11,168	3,542	27,905
City Of London	63,564	43,403	425	933	108,324
Croydon	4,359	1,203	6,073	1,878	13,513
Ealing	3,522	850	650	10,437	15,459
Enfield	4,195	786	665	6,528	12,174
Greenwich	21,693	5,394	1,045	2,509	30,642
Hackney	10,378	722	3,324	2,444	16,868
Hammersmith&Fulham	11,754	2,900	2,375		17,029
Haringey	760	373	24,138	937	26,207
Harrow	615		2,000	2,367	4,982
Havering	5,475		892	927	7,294
Hillingdon	8,030	4,791	95	1,642	14,558
Hounslow	10,546	2,488	7,486	3,147	23,667
Islington	11,242		4,465	3,266	18,973
Kensington&Chelsea	2,496	842	44		3,381
Kingston-Upon-Thames	548		3,056	928	4,531
Lambeth	5,430		1,938	553	7,921
Lewisham	1,902		3,879	3,369	9,151
Merton	2,407	125	648	4,035	7,215
Newham	8,720	1,059	18,563	22,764	51,106
Redbridge	503		1,277		1,780
Richmond-Upon-Thames	4,874		864	343	6,082
Southwark	28,908	4,878	9,022	12,533	55,341
Sutton	1,228	34	1,980	306	3,548
Tower Hamlets	80,172	4,006	15,950	6,503	106,630
Waltham Forest	518		384	846	1,747
Wandsworth	17,375	117	949	1,083	19,524
Westminster	42,858	4,941	1,907	2,065	51,771
Grand Total	384,010	94,991	154,164	108,251	741,416

Sum of IndJobs_No__Imputed_

Borough	2006	2011	2016	2021	Total
Barking&Dagenham	4,328	2,144	2,192	230	8,894
Barnet	273	8	6,794	1,008	8,082
Bexley	3,307	1,054	3,867	692	8,921
Brent	4,087	230	355	742	5,414
Bromley	487	197	364	705	1,754
Camden	643	54	1,387	436	2,521
City Of London	69			66	135
Croydon	1,377	144	1,081	360	2,962
Ealing	2,803	319	251	2,823	6,196
Enfield	4,185	343	298	1,401	6,227
Greenwich	1,650	2,984	2,722	647	8,002
Hackney	375		143	348	866
Hammersmith&Fulham	37	382	54		472
Haringey	298	49	2,416	117	2,880
Harrow	144		455	454	1,053
Havering	1,547	1,580	171	490	3,788
Hillingdon	2,507	1,303	41	452	4,303
Hounslow	3,282	117	3,311	657	7,367
Islington	2,934		512	395	3,841
Kensington&Chelsea			6		6
Kingston-Upon-Thames	492		750	178	1,420
Lambeth	88		208	73	369
Lewisham	124	150	219	431	924
Merton	360	24	72	629	1,085
Newham	1,288	139	2,211	3,763	7,402
Redbridge	872		406		1,278
Richmond-Upon-Thames	16		166	248	430
Southwark	1,139	12	3,067	686	4,903
Sutton	577	15	1,018	137	1,747
Tower Hamlets	1,008	18	1,216	471	2,713
Waltham Forest	282	27	172	379	859
Wandsworth	3,128	0	125	61	3,314
Westminster	270	159	95	127	651
Grand Total	43,976	11,452	36,144	19,207	110,780