London Employment Sites Database

Final Report

May 2016

GLA
London Employment Sites Database

A report by **CAG Consultants**

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Contents

1 Introduction

1.1 The London Employment Sites Database

CAG Consultants were commissioned by the Greater London Authority (GLA) to produce the London Employment Sites Database (LESD) for 2016 and 2017. The LESD is a database that records recently completed employment developments and those in the pipeline in London.

The LESD brings together information from numerous sources into one comprehensive database in a standardised and user friendly format. Some of the major information sources include the London Development Database, Core Strategies/Local Plans, the industry press such as Property Week and consultations with London local authorities.

The database is site specific and for each site it provides information on:

- the precise location of the development site;
- the scale of completed/ proposed/ planned development by employment use (floorspace; site size to be developed, estimated employment capacity); and
- the timescale of the development.

The LESD is an important planning policy tool that informs key strategic policies including the London Plan, the London Office Policy Review and the Mayor's Transport Strategy. The output of the LESD is one of the key components of the GLA's Borough employment forecasts for London. It is also a tool for analysing the balance between supply and demand of floorspace for employment at the borough level.

This Technical Report presents the method used to compile the database and the sources and assumptions behind it. It also summarises the principal results of the database. The following chapters present:

- the method and data sources used to construct LESD(2016);
- the employment density and plot ratio assumptions used to derive employment capacity estimates;
- analysis of office space lost through permitted development rights (PDR);
- summary results of the LESD(2016); and
- estimates of the potential additional capacity from intensification of existing office stock.

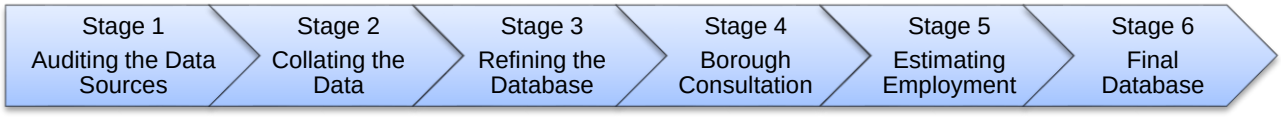
2 Method

2.1 Approach

This chapter sets out the method used to produce the London Employment Sites Database. The method, which has been developed and evolved over successive iterations[1], ensures that we have a clear and transparent audit trail; that the data is verified and cross checked against information from numerous sources and that the final database is robust.

The method and stages of work are summarised in Figure 2.1 below. Below the Figure we expand on the principal elements of the method at each stage.

Figure 2.1 - LESD Production Method



Stage 1: Auditing the data sources

The LESD is based on three primary information sources:

- the London Development Database (LDD) from the GLA;
- the National Land Use Database (NLUD) from the HCA. The latest published NLUD data is for 2012 (published October 2014). The published data comes with a number of caveats, but nevertheless provides a source for identifying potential employment developments; and
- Borough Local Plans (previously Unitary Development Plans and Core Strategies).

These three primary information sources are combined with data from the previous London Employment Sites Database, LESD (2012), to produce a comprehensive database. In addition, secondary data sources, such as property press publications like Property Week and CoStar are reviewed for recent data on major schemes.

Stage 2: Compiling the data

In Stage 2 data is extracted from the different data sources and compiled into a single database with associated GIS data. It combined comprehensive information from each data source regarding the

[1] London Employment Sites Database 2012, https://lep.london/sites/default/files/documents/publication/London%20Employment%20Sites%20Database%202012%20Final%20Report%20%28March%202013%29.pdf
London Employment Sites Database 2009, https://www.london.gov.uk/sites/default/files/gla_migrate_files_destination/tech-paper1-final.pdf
London Employment Sites Database 2006. https://www.london.gov.uk/sites/default/files/gla_migrate_files_destination/archives/mayor-economic_unit-docs-ep-technical-paper-2.pdf

identity of a site, location, existing use, proposed use and potential employment capacity. This data is then presented in a standardised format.

Table 2.1 sets out the principal data fields used in the LESD.

Table 2.1 LESD Data Fields

Development Details	**Geographic Fields**
Unique ID	Town Centre
Data Source	London Transportation Study (LTS) zone
Borough	Public Transport Accessibility Level (PTAL)
Planning Authority	Opportunity Area (OA)
Site Name	Area of Intensification (AOI)
Site Address	Ward
Post Code	Central Activities Zone (CAZ)
Easting	
Northing	
Site/Project Status	
Completion date	
Floorspace (Sq m)	**Employment[2]**
A1[3] Floorspace	A1 Jobs
A2 Floorspace	A2 Jobs
A3 Floorspace	A3 Jobs
A4 Floorspace	A4 Jobs
A5 Floorspace	A5 Jobs
B1 Floorspace	B1 Jobs
B2 Floorspace	B2 Jobs
B8 Floorspace	B8 Jobs
C1 Hotel Bedrooms	C1 Jobs
C2 Floorspace	C2 Jobs
D1 Floorspace	D1 Jobs
D2 Floorspace	D2 Jobs
SG Floorspace	SG Jobs
Total Floorspace	Total Jobs
Site Area	
Land Use	

To ensure that we have a clear and transparent process, we use a strict system of monitoring what goes in, what stays in and what is left out. Each site is given a unique ID number when it is identified from the various sources. This ID number system will remain the same regardless of how many sites are removed due to reasons such as overlaps, duplicates, completed sites etc. Accompanying the ID number is a source name and source reference.

By the end of stage 2 we have the raw London Employment Sites Database.

[2] The employment estimate is generally derived from floorspace data by application of employment density ratios. Detail on the employment density ratios used and their sources is set out in the next chapter

[3] These codes refer to the Town and Country Planning Use Classes Order. See Appendix 1.

Stage 3: Refining the data

The raw database of potential sites is then refined through GIS to identify and remove non-employment and duplicate sites, deal with overlapping sites and expired sites.

Refining the Database follows a sequential process:

- **Removal of non-employment sites** - All sites that do not contain an employment element are excluded from the database. Where there is a mixed residential scheme with an element of employment, these sites are retained in the main database. At this stage all employment uses are included.

- **Deletion of Small Sites** - The standard thresholds of 1,000 sq m for A and B uses, 5,000 sq m for C and D uses or 0.25 ha site area are used as minimum site sizes. Developments below these thresholds are generally excluded from the database although smaller sites are included in the LESD where information is available, especially where there is a concentration of small sites below the standard threshold.

- **Net Change in Floorspace** - The database aims to capture net change in floorspace. In practice this information is not always available. Where we are not able to do this we will record whether the estimate is net, gross or unknown. This enables the data to be subsequently interrogated further, or a set of rules established as to how the data should be treated in employment capacity estimates.

- **Transfer the Database to GIS** - Each site in the raw database is geocoded using either postcode data or Easting and Northing references. Where available digitised boundaries are included. Every site that does not have a polygon has an arbitrary circular polygon created based on the site size specified in the original data: this allows us to better detect overlapping sites and duplicates.

- **Identify and Remove Duplicate Sites** - Using GIS, the polygons are layered to identify overlaps between two or more sites. A query is performed within the GIS to determine which sites share the same overlap and by how much. This process is used to identify duplicate sites. When a duplicate is removed, all the information for that site is supplemented and any missing values populated.

- **Identify Overlapping Sites** - Some sites may not be duplicates but are overlapping. For example a site identified by LDD may overlap a site identified by NLUD. In such cases a decision needs to be made as to whether one site supersedes the other, or whether two non-overlapping parcels should be retained.

The end of stage 3 results in the first draft of the LESD 2016 which is sent to the Boroughs for consultation.

Stage 4: Borough Consultations

Each Borough is consulted on the Draft LESD for their Borough. This provides an opportunity to review the sites data and, importantly, to quality check the information gathered and to understand the local realities regarding probabilities of sites coming forward, expected change of uses, new employment sites coming forward and the strategic planning context. In 2016, the consultation process included the London Legacy Development Corporation and the Old Oak and Park Royal Development Corporation as the responsible planning authorities for their respective areas

Each Borough is sent a copy of the Draft Database for their Borough plus an accompanying map of sites. For the 2016 study, we then set up a face to face meeting with each Borough to review and amend the site information and gather information for new sites.

Following the consultation process, a revised copy of the database is sent to each Borough for final confirmation and validation. This version of the database includes employment capacity estimates for each site.

On completion of this second stage of Borough validation, the individual Borough databases are merged into a single London wide database.

Stage 5: Estimating employment

The principal output of the LESD is an estimate of the employment capacity of each site. Where available from a specific development proposal we use the estimate provided, subject to tests for plausibility against benchmark data.

In most cases the estimate is derived from floorspace data, by application of employment density ratios. Detail on the employment density ratios used and their sources is set out in the next chapter.

Where only a site area is available, and floorspace data is not available, we apply assumptions based on plot ratios. This applies primarily to the longer term development proposals such as Local Plan site allocations. In the absence of any more local intelligence we also apply a standard set of assumptions with regard to the mix of uses on each site.

Detail on the plot ratios used and assumptions on employment mix are set out in the next chapter.

The assumptions on employment densities and plot ratios are provided in the form of a look-up table in order that alternatives and sensitivity tests can be readily applied.

Stage 6 Final Database

The final stage is the production of the Final LESD in an excel spreadsheet complete with accompanying technical report. The database comes complete with full functionality, look-up tables for sensitivity testing and pre-set tables of results.

Planning Geographies

The database is geo-coded with a number of additional fields to enable policy analysis at a variety of spatial levels. This includes:

- Town Centre boundaries
- LTS zones – transport zones used for TfL's transport models
- PTAL scores – public transport accessibility measures
- Opportunity Areas
- Areas of Intensification
- Ward
- Central Activities Zone (CAZ)

As the LESD contains geographically specific point data, analysis by any other required geography can be readily added.

3 Database Assumptions

3.1 Introduction

Some of the uses of the LESD require estimates of potential additional employment capacity in future years. But this information is not directly available and hence a series of assumptions underpin the output of the LESD. These assumptions relate to employment density ratios for different use types, plot ratios, development mix, and timescales at which future developments will be occupied.

We set out below the assumptions used for each of these factors and the sources underpinning those assumptions. There are two principal measures of floorspace referenced in this section. Gross Internal Area (GIA) refers to the entire area inside the external walls of a building and includes corridors, lifts, plant rooms, service accommodation. Net Internal Area (NIA), which is commonly referred to as the net lettable or 'usable' area of offices and retail units[4].

3.2 Employment Densities

This section reviews the principal sources and trends in employment density ratios and then concludes with the assumptions adopted for the LESD(2016). By way of context it first sets out the assumptions used for LESD(2012).

2012 LESD Assumptions

The employment density assumptions used for LESD(2012) are presented in Table 3.1. No original research on density ratios was undertaken for the 2012 update and the density ratios were based on those used for LESD(2009), with the exception of B1 developments where the density ratios were taken from research published in the 2012 London Office Policy Review.

Table 3.1 LESD 2012 Employment Density Assumptions

Floorspace per worker[5] (sq m/worker GIA)	CAZ	Inner London	Outer London	Source
B1 (businesses)	12.4	13.5	15.2	LOPR 2012
B2 (industrial)	33	39	44	LESD 2009
B8 (storage and distribution)	33	39	44	LESD 2009
A-class (shops, food& drink, services)	21	21	21	LESD 2009
Other (C-uses; D-uses)[6]	45	45	45	LESD 2009

Source: LESD 2012

[4] For further explanation see Employment Density Guide 3rd Edition – Homes & Communities Agency (2015) https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/484133/employment_density_guide_3rd_edition.pdf

[5] Total number of workers both full-time and part-time

[6] C-uses cover various forms of accommodation such as hotels. D-uses cover institutional uses such as schools and libraries as well as recreational and leisure facilities

LESD(2009) drew on detailed research, notably the 2006 report by Roger Tym & Partners for the London Development Agency on the use of Business Space[7]. The Roger Tym & Partners research is now ten years old and there have been many changes in the uses of employment space, though little in the way of comprehensive evidenced-based surveys to monitor this change.

The report identified more intensive use of space in Central than in Outer London area with floorspace per worker a third higher in Outer London for industrial activity compared to the CAZ.

London Office Floorspace Projections 2014

The London Office Floorspace Projections 2014[8] recommended use of an employment density ratio based on a research study published by the British Council for Offices (BCO 2013). This remains the latest large scale survey data of which we are aware. The BCO study comprised a sample of 2,485,484 sq m Net Internal Area (NIA) across 381 properties, across the country, making it one of the most extensive studies of occupancy densities undertaken.

The overall finding was a mean density of 10.9 sq m per desk across the UK, with 38% of the sample falling within the 8-10 sq m range; and 58% falling within the 8-12 sq m range.

Within the overall 10.9 sq m mean for the UK, the London average density was found to be lower at 11.3 sq m per desk. However, it is important to stress that the sample includes older properties as well as new. As the purpose of the London Office Floorspace Projections was to understand the demand for new space generated by employment change, the study adopted the higher density figure of 10.9 sq m per desk to reflect the greater efficiency of new buildings. One caveat to note is that whilst this is appropriate for the majority of new floorspace which will be large floorplate central London offices, the BCO sample was biased towards such types of property and the higher density may not hold for smaller premises. However this in turn may be offset by a trend to higher densities as we note below.

The BCO study uses the metric of 'Floorspace per Desk'. For the purposes of the London Office Floorspace Projections and for the LESD, our interest is in floorspace per worker. The benchmark ratio used for converting to workers is 1.2 - i.e. 1.2 workers per desk[9]. Applied to 10.9 sq m per desk this gives an overall ratio of 9.0 sq m Net Internal Area (NIA) per worker.

In planning, floorspace is commonly measured by Gross Internal Area (GIA). NIA is usually estimated at around 80% of GIA[10]. This then provides a ratio of 11.3 sq m GIA per employee. This is an average density ratio and past evidence has found that densities are lower in older stock and higher in modern stock, configured for current occupational requirements.

There was an increase in density between BCO(2009) and BCO(2013), as average floorspace per desk fell from 11.8 sq m (NIA) in 2009 to 10.9 sq m (NIA) in 2013. Evidence from past surveys has shown the trend in declining floorspace to worker ratios and this is illustrated in Figure 3.1.

However, there is growing evidence that the rate of increase in densities is levelling out. This is to be expected, given the physical limitations of buildings.

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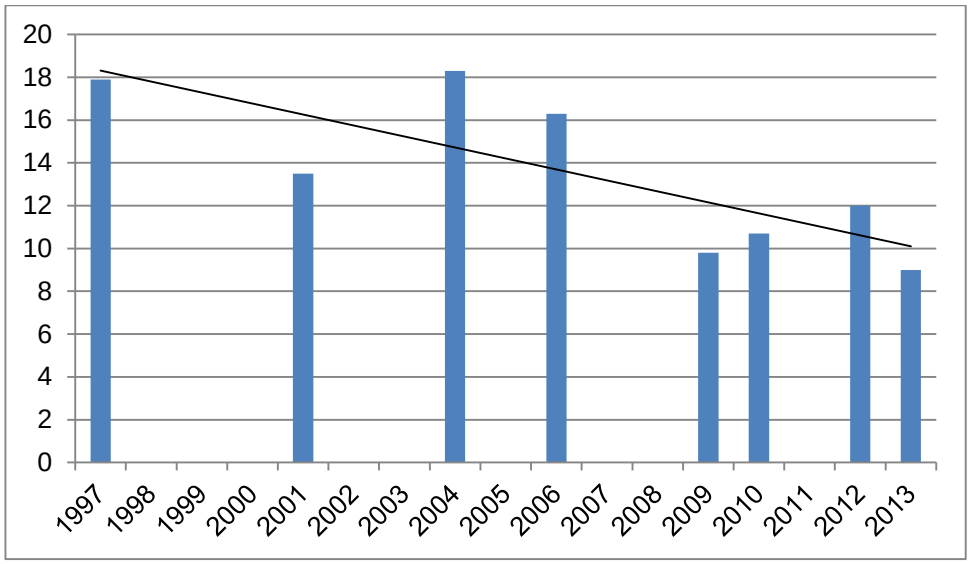
[7] The Demand for Premises of London's SMEs, Roger Tym & Partners for LDA (2006)

[8] London Office Floorspace Projections – PBA (2014)
https://www.london.gov.uk/file/18777/download?token=9lnaCBWe

[9] See London Office Policy Review 2012 Figure 5.3 and para 5.5.9. 1.2 workers per desk was adopted as the most typical benchmark. There instances of higher utilisation ratios being applied.

[10] LOPR 2012 noted *"As already stated, property agents' rule of thumb conversion is that the NIA is typically 15 to 20 % smaller than the GIA. We confirm this using evidence from EGI for developments under construction. EGI identifies a total of 71 sites and provides both net and gross floorspace. This evidence shows a net-to-gross ratio of 79%."* The City of London Office Evidence paper March 2011 found a slightly lower net to gross ratio of 73%.

Figure 3.1 Surveys of Employment Density Ratios over Time (Sq m per worker NIA)



Note: Bars are for years at which survey data is available. Sources from Table 3.2.

The source of the surveys illustrated in Figure 3.1 is shown in Table 3.2. Different surveys have used different units of measure so we have standardised to a single metric of floorspace per worker (NIA).

Table 3.2 Surveys of Office Employment Density Ratios

Survey	Date	Unit of Measure	GIA	NIA	Revised unit of measure	Estimate per worker
British Council for Offices (BCO)	2013	Sq m/desk	-	10.9	Sq m/worker	9.0
National Audit Office (NAO)	2012	Sq m/FTE	-	13.2	Sq m/worker	12.0
Homes and Communities Agency (HCA)	2010	Sq m/FTE	-	11.9	Sq m/worker	10.7
British Council for Offices (BCO)	2009	Sq m/desk	-	11.8	Sq m/worker	9.8
Roger Tym & Partners/Ramidus	2006	Sq m/worker	-	16.2	Sq m/worker	16.2
DTZ	2004	Sq m/worker	-	18.3	Sq m/worker	18.3
English Partnerships (EP)	2001	Sq m/desk	19	16.2	Sq m/worker	13.5
London and South East Regional Planning Conference (SERPLAN)	1997	Sq m/worker	-	17.9	Sq m/worker	17.9

The LESD capacity estimates only provide estimates of the employment potential of new floorspace. It is also possible that additional capacity can be created through more intensive use of existing stock. This is considered further in Chapter 6.

HCA Employment Density Guidance 3rd Edition (2015)

In November 2015 the HCA published the 3rd Edition of its Employment Density Guidance. This Guidance has been widely adopted in much public policy and appraisal work. It presents density ratios across a large range of employment uses types.

Unfortunately as with the 2nd Edition the recommended employment density ratios are not directly sourced from surveys. Guidance on regional variation on employment density ratios for different parts of the UK is not provided, and past surveys have shown this to be a factor.

The density ratios in the HCA Guidance[11] are expressed in terms of sq m per Full Time Equivalent Employee (FTE). To convert from FTE to floorspace per Employee will depend on which sector is being assessed. The figure below shows the percentage of part-time employment by sector for London.

Figure 3.2 Percentage of Part-Time Employees by Sector London (2014)

Source: BRES (2014 Employee data)[12]

The HCA ratios for office employment are expressed in terms of FTE per NIA. So for Professional Services the recommended density is 12 sq m NIA per FTE. This would equate to 13.5 sq m GIA per employee.

The suggested ratios for the major employment categories from the HCA Guidance 3rd Edition are summarised in the Table below. We have also added assumptions to convert from NIA per FTE to GIA per Employee.

[11] This convention was adopted in the 2nd Edition and carried on in the 3rd Edition. The Density Matrix in the 3rd Edition does not explicitly label all the ratios as being in term of FTEs but this approach is used elsewhere in the Guidance

[12] Extracted from nomis 2nd February 2016

Table 3.2 Employment Density Ratio – HCA Guidance

Use Class[13]	Activity	sq m per FTE	Measure	GIA	% Part-Time	sq m per Employee
B1a	Professional Services	12	NIA	15.0	20%	13.5
B1a	Finance & Insurance	10	NIA	12.5	10%	11.9
B1b	R&D	50	NIA	62.5	10%	59.4
B1c	Light Manufacturing	47	NIA	58.8	10%	55.8
B2	Industrial & Mfr	36	GIA	36	10%	34.2
B8	Final Mile	70	GEA	70	20%	63.0
A1	High Street	17.5	NIA	21.9	40%	17.5
A2	Finance & Professional	16	NIA	20.0	40%	16.0
A3	Restaurants & Cafes	17.5	NIA	21.9	40%	17.5
C1	Budget	5	Beds/FTE	5	40%	4.0
C1	Mid Scale	3	Beds/FTE	3	40%	2.4
C1	Upscale	2	Beds/FTE	2	40%	1.6
C1	Luxury	1	Beds/FTE	1	40%	0.8
D2	Fitness Centre	65	GIA	65	20%	58.5

Source: HCA Employment Density Guidance 3rd Edition

For B2 employment 36 sq m GIA per FTE is within the range previously adopted for the 2012 LESD study.

For B8 we have set out the 'Final Mile' warehouse product. Even this is a lower density ratio than has been historically observed in London. We are not aware of any recent survey evidence but suspect that most warehouse activity in London has a higher value added and higher labour component.

The A use classes have a higher density in the HCA Guidance than previously adopted in LESD(2012) but are consistent with the reduction seen in floorspace per worker ratios seen in the office sector.

For D class uses the HCA Guidance has a wide range dependent on type. From the perspective of the LESD it is the large institutional buildings that are of most interest and there is no guidance on these.

Assumptions Adopted for LESD(2016)

For the purposes of the principal applications of the LESD, offices are the predominant interest in terms of employment capacity. For all boroughs we use the assumption of 11.3 sq m per worker GIA inclusive of a desk sharing ratio of 1.2, based on the BCO survey, which is in line with the assumptions adopted for the London Office Floorspace Projections (2014).

For A class employment we adopt the HCA density ratios.

Evidence from the latest GLA Industrial Land Survey suggests that industrial land is currently being occupied at lower employment density ratios than previously adopted for LESD(2012). But as the objective is to assess employment capacity we believe that actual occupation is less important than potential occupation. Industrial land can be occupied more intensively than it is as present, as previous survey evidence has demonstrated. We therefore maintain industrial employment density ratios similar to those adopted for LESD(2012), but have standardised these across London as a whole.

[13] See Appendix 1 for Use Class definitions

The density assumptions adopted for industrial land have no impact on the GLA's employment forecasts as, consistent with the approach of previous capacity calculations, industrial land is excluded from the capacity calculations that are used for the GLA's employment forecasts[14].

For C and D use classes we are guided by the HCA density ratios, though actual employment density can range widely depending on the use. We therefore try to gather local intelligence wherever possible to inform the employment estimate for a given development.

The employment density assumptions are supplied as a look-up table to enable sensitivity testing. This could, for example, be used to apply different density assumptions to different policy areas. Floorspace per worker is the product of the variables 'floorspace per desk' and 'desks per worker'. Either or both of these components can be varied to undertake further sensitivity testing.

The current default assumptions adopted for LESD(2016) are summarised in the Table below.

Table 3.3 Default Employment Density Assumptions (sq m per worker GIA) by Use Class

	CAZ	Inner	Outer
A1	17.5	17.5	17.5
A2	16	16	16
A3	17.5	17.5	17.5
A4	17.5	17.5	17.5
A5	17.5	17.5	17.5
B1	11.3	11.3	11.3
B2	36	36	36
B8	36	36	36
C1 Beds	2.4	4	4
C2	45	45	45
D1	45	45	45
D2	60	60	60
SG	60	60	60

Source: CAG

3.3 Plot Ratios and Development Mix

Plot Ratios

Where we do not have information about the proposed floorspace to be developed on a particular site, we use standard plot ratios to estimate the floorspace. A plot ratio is a measure of the total quantity of floorspace developed on a given site area. This might be expressed in terms of, say, sq m per hectare (ha) or as a ratio of floorspace to site area (both measured in sq m). For example 5,000 sq m of floorspace developed on a site of 0.5 ha would have a plot ratio of 10,000 sq m per ha, or 1 expressed as a ratio in terms of sq m.

The 2009 LESD undertook analysis of plot ratios using LDD data which was used to inform the plot ratio assumption adopted in LESD(2012). This is published in Appendix 1 to the 2009 Technical Report[15].

[14] See Technical Paper https://www.london.gov.uk/sites/default/files/gla_migrate_files_destination/working-paper-18-final.pdf

We have analysed current LDD data based on new build developments where non-residential site areas are available. The results are summarised in Table 3.4 below. For the purpose of this analysis Central Boroughs have been defined as City and Westminster. There are not sufficient observations to meaningfully split the B2 data by Inner and Outer averages.

As this analysis is based on Borough-level data, the Inner average will include both CAZ and non CAZ developments. We would therefore expect it to over-estimate the ratio for the non-CAZ Inner London area.

Table 3.4 LDD Plot Ratios. Median Average (Sq m per Ha)

	Central	Inner	Outer	London
B1	65,100	25,200	10,700	23,200
B2				5,600
B8		10,000	6,500	6,700

Source: LDD/CAG

Work for the GLA on Industrial Land Use[16] found a plot ratio of 65% of industrial uses and 95% for non-industrial uses giving an overall average of 69%. The plot ratio findings for industrial uses are similar to those in Table 3.4 above and consistent with those used in LESD(2012) for Inner London. This may imply that intensity of land use in Outer London is converging to the Inner London characteristics.

The plot ratio analysis is broadly in line with the plot ratios applied in LESD(2012) and thus the same ratios have been maintained with the exception of the B2, B8 and 'Other ratios for Outer London' which have been increased from 3,800 sq m per ha to 6,500, as the analysis in Table 3.4 would suggest some increased intensification of land use.

The plot ratios adopted as the default assumptions for LESD(2016) are summarised in Table 3.5 below.

Table 3.5 Plot Ratio Assumptions (Sq m per Ha)

	CAZ	Inner	Outer
B1	77,000	18,500	9,000
B2	9,000	6,500	6,500
B8	9,000	6,500	6,500
Other	9,000	6,500	6,500

Plot ratios have tended to be relatively stable over time for given use types and character areas. The principal scope for increasing plot ratios is through increasing densification of existing areas, which means changing the characteristics of an area rather than an individual site. For example this might be achieved through expanding the CAZ characteristics to other parts of London, such as the Opportunity Areas.

The appropriate plot ratios for different uses types and areas might be something for the GLA to consider developing guidance on to ensure intensification of land use. This could be based on area types and typologies like the Residential Density Matrix published in the London Plan.

[15] London Employment Sites Database (2009) – Roger Tym & Partners
[16] London Industrial Land Supply and Economy Study (2015) – AECOM
https://www.london.gov.uk/sites/default/files/industria_land_supply_and_economy2015.pdf

Development Mix

The plot ratio assumptions set out above assume, as a minimum, that there is some information on the development type proposed – e.g. offices, industrial, retail etc. Where there is no information as to the proposed development mix - and the site is allocated or proposed as Mixed Use - then a prior set of assumptions are required.

With Mixed Use schemes we try to extract as much information as possible from the local authority about the anticipated or preferred distribution of activity by use type, as any assumptions are potentially subject to a wide margin of error

Where we do not have more detailed information for the site, a 2-stage process is adopted. First we estimate the proportion of a Mixed Use site allocated to employment uses. Using evidence from the London Development Database, LESD(2012) found that:

- in CAZ and Inner London, on average 12% of a Mixed Use site area goes to employment uses;

- in Outer London a slightly larger proportion of the Mixed Use site (15%) is allocated to employment uses.

Since 2012 the demand pressures for residential development over employment uses has intensified further. We would therefore expect a fall in the proportion of Mixed Use sites being given over to employment uses.

For the proportion of the site then left for employment, we then need to estimate the distribution of the site between uses. Research for LESD(2009)[17] found that for CAZ and Inner London 63% of the non-residential development was offices, and for Outer London the proportion was 41% for offices. A-classes accounted for 18% in CAZ and Inner London and 15% in Outer London. Industrial development accounted for 4% in CAZ and Inner London and 6% in Outer London. 'Other' uses accounted for 15% in CAZ and Inner London and 38% in Outer London.

For LESD(2016), in the absence of any other information, the following default assumptions are adopted for Mixed Use sites.

Table 3.6 Site Mix Assumptions for Mixed Use Sites

	CAZ	Inner	Outer
% Employment	10.0%	10.0%	10.0%
of which:			
B1	50.0%	50.0%	50.0%
B2	5.0%	5.0%	5.0%
A1	25.0%	25.0%	25.0%
Other	20.0%	20.0%	20.0%

Source: CAG

The assumptions on plot ratios and development mix are tested through the Borough consultation process. We apply the standard default assumptions in the absence of any information other about a site. The Borough then has the opportunity to see and comment on the resulting employment capacity estimates and as a result these can be varied if the local intelligence suggests they are not producing an appropriate employment estimate for that site.

[17] London Employment Sites Database (2009) – Roger Tym & Partners

3.4 Forecast Completion Year

The principal uses of the LESD are to inform the GLA's employment projections and to inform TfL's transport models. Both these models produce forecasts to five-year planning intervals.

In the absence of any better estimates from the local authorities or other sources on completion dates, the occupancy dates are estimated based on the planning status. Table 3.7 sets out the assumptions used for LESD(2016).

Table 3.7 Date at which Development assumed Occupied

Planning Status	Forecast Year for Inclusion in Capacity
Completed at 2013 or later	2016
Started	2021
Full Planning Permission; Detailed Planning Permission	2021
Outline Planning Permission	2026
Allocated in Local Plan	2031
Sites with no planning status	2036

Source: CAG

4 The Impact of Permitted Development Rights

4.1 Permitted Development Rights

In May 2013, the Government amended the General Permitted Development Order (GPDO) to allow the conversion of B1(a) offices to C3 dwellings subject to 'prior approval'. The underlying motive was to encourage residential development particularly in those areas suffering from structural vacancy in office stock.

These amendments to the GPDO were initially time-limited, for three years, up to the end of May 2016. Following a consultation exercise, 33 areas within 17 Local Planning Authorities (LPAs) were made exempt from Permitted Development Rights (PDR). In London this included areas within CAZ, Tech City, North of Isle of Dogs, the Royals Enterprise Zone and the Royal Borough of Kensington and Chelsea.

Changes of use allowed by the amendment had originally been required to be completed by 30th May 2016, although following the announcement by Government making the PDR permanent, schemes may be started up to three years following consent, enabling offices to be demolished and replaced by new-build residential.

The Government also confirmed that planning authorities can retain control over the planning process through the application of an Article 4 direction, subject to caveats. An Article 4 Direction is an order made by a local planning authority to restrict and remove certain permitted development rights. A number of London Boroughs have, or are looking to, implement Article 4 directions in part of their Borough to mitigate potential losses of commercial floorspace. But, despite this, the expectation is that the introduction of these Permitted Development Rights will results in a loss of office stock to residential use.

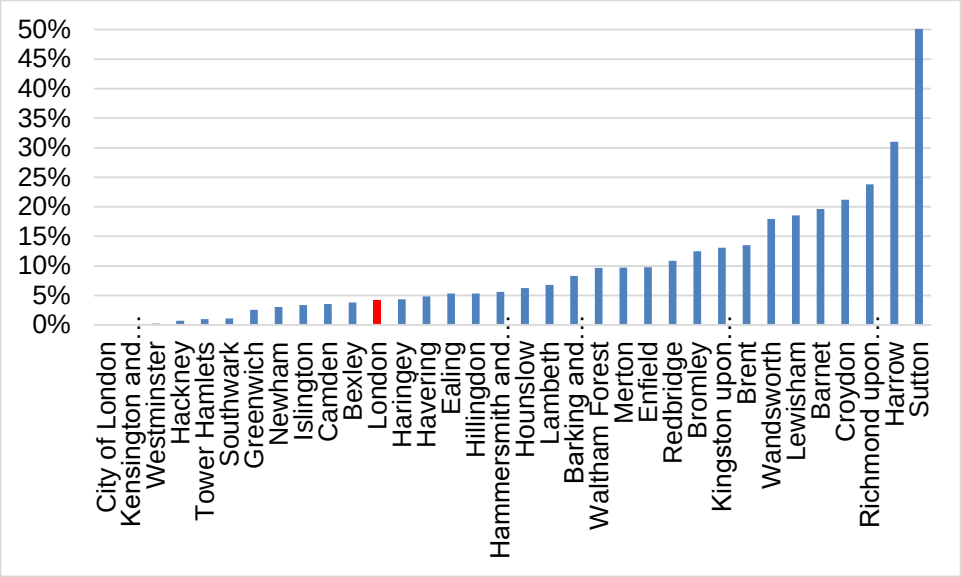
4.2 Impact on London's Office Space

The GLA supplied a schedule of developments containing commercial floorspace lost through prior approval notifications. The schedule contains details of all prior notifications of change of use from office to residential submitted under Schedule 2 Part 3 Class J of the Town and Country Planning (General Permitted Development) Order as amended. This data has been kept separate from the main LESD data set out above. The Prior Approvals represent (where implemented) an actual reduction in office capacity, and (where outstanding) a potential reduction in office capacity.

A total of 1.1million sq m of office floorspace could potentially be lost through the prior approvals system, representing 4% of London's total office floorspace stock. This is from a total of 1,670 prior notifications and, if implemented, could result in an addition of 17,000 residential units.

The largest losses are in Croydon which could lose up to 138,000 sq m of office floorspace. The next largest losses at between 60,000-80,000 sq m are to be found in Camden, Sutton, Richmond, Harrow and Barnet. Figure 4.1 illustrates displays potential loss of stock as a proportion of total floorspace in the Borough. Boroughs that are wholly or partly within CAZ or other areas of exemptions can be seen to have their office stock protected. There is no loss at all in the City or Kensington & Chelsea for example.

Figure 4.1 Office Floorspace due to be lost to Prior Approvals* as % of total stock



Source: LDD/VOA/CAG

* As recorded up to 31 March 2015

Table 4.1 sets out the detail of potential losses by Borough. Only a relatively small proportion of the prior approvals have been implemented to date, but the table illustrates the potential reduction in office capacity.

Table 4.1 Office Floorspace to be lost due to Prior Approvals* (sq m)

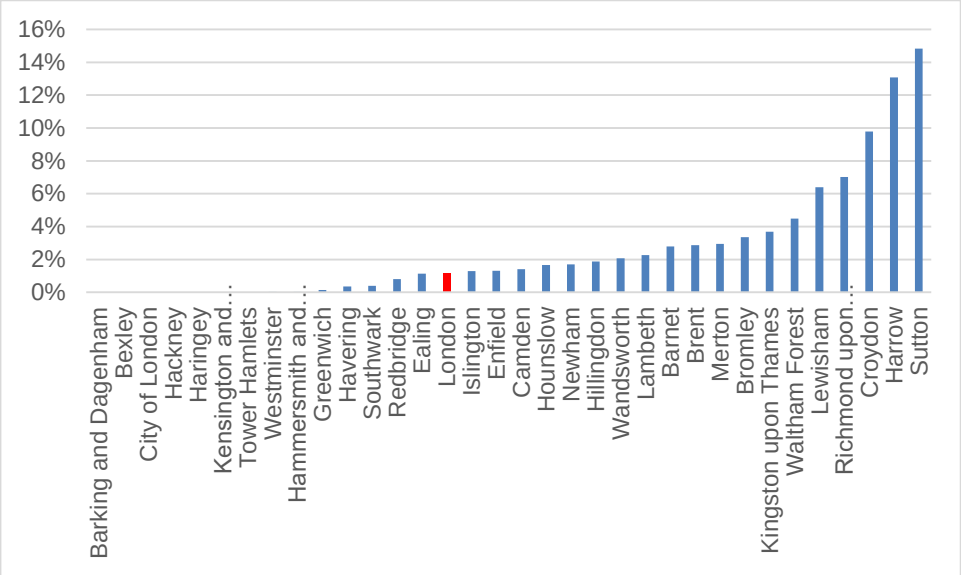
Borough	Floorspace to be lost	Office Stock 2014	As % Stock
Barking and Dagenham	8,250	99,271	8.3%
Barnet	66,195	337,059	19.6%
Bexley	5,378	140,036	3.8%
Brent	38,141	282,471	13.5%
Bromley	36,748	294,655	12.5%
Camden	79,369	2,222,780	3.6%
City of London		5,118,399	0.0%
Croydon	137,632	648,949	21.2%
Ealing	21,634	406,092	5.3%
Enfield	18,866	193,376	9.8%
Greenwich	3,844	149,702	2.6%
Hackney	3,863	535,895	0.7%
Hammersmith and Fulham	43,359	772,770	5.6%
Haringey	6,401	146,031	4.4%
Harrow	69,160	222,971	31.0%
Havering	7,271	149,300	4.9%
Hillingdon	34,648	650,388	5.3%
Hounslow	50,226	800,606	6.3%
Islington	48,650	1,446,811	3.4%
Kensington and Chelsea		425,634	0.0%
Kingston upon Thames	36,333	278,108	13.1%
Lambeth	40,085	591,802	6.8%
Lewisham	28,634	154,237	18.6%
Merton	26,277	270,998	9.7%
Newham	6,893	227,450	3.0%
Redbridge	16,374	151,018	10.8%
Richmond upon Thames	70,421	296,059	23.8%
Southwark	14,923	1,355,940	1.1%
Sutton	76,395	152,393	50.1%
Tower Hamlets	24,464	2,457,092	1.0%
Waltham Forest	9,229	95,358	9.7%
Wandsworth	52,734	293,470	18.0%
Westminster	11,598	5,254,645	0.2%
London	1,094,549	26,621,766	4.1%

Source: LDD/VOA/CAG

* As recorded up to 31 March 2015

Although the potential losses are in some case quite large, as noted above, only a small proportion of the potential losses due to prior approvals have been implemented to date. Figure 4.2 shows the estimated proportion of Borough stock actually lost based on prior approvals completed or started as at 31st March 2015. It remains to be see the extent to which outstanding prior approvals will ultimately be implemented.

Figure 4.2 Office Floorspace lost to Prior Approvals* as % of total stock



Source: LDD/VOA/CAG

* As recorded up to 31 March 2015

5 Results

5.1 Employment Capacity

This Chapter presents a series of summary tables setting out the results of the LESD(2016).[18]

Total Employment

Table 5.1 summarises the results for all employment use classes by Borough. Development capacity to accommodate an additional 914,000 jobs has been identified for the period up to 2041. The Boroughs with the largest identified capacity are Tower Hamlets, Newham and City of London with capacity ranging from 99,000-130,000 jobs each. The capacity identified for the City is more near term and more advanced in the planning pipeline. Some of the capacity identified for Newham is longer term and there is a higher degree of uncertainty that it will come forward.

Hammersmith & Fulham, Camden and Southwark have employment capacity for between 50,000-75,000 jobs identified. In the case of Hammersmith & Fulham the vast majority of this is dependent on the Old Oak Common site being developed in the longer term as a major office employment location.

Non Industrial Employment

For the purposes of the employment projections prepared by GLA Economics it is non-industrial employment that is of principal interest. Development capacity is a mechanism for distributing forecast growth, but in overall net terms, industrial employment is projected to decline and hence is excluded from the employment projection process. The non-industrial employment capacity is shown in Table 5.2.

For non-industrial employment, development capacity to accommodate an additional 904,000 jobs has been identified for the period up to 2041. The overall capacity and distribution of capacity is not very different to that for all employment. Of the relatively low number of schemes that do come forward for industrial development, most will be redevelopment on existing industrial sites and hence frequently will not result in any net addition to employment capacity.

Office Employment

The largest single component of capacity for additional employment is in the B1 office use class. For offices employment development capacity to accommodate an additional 696,000 jobs has been identified for the period up to 2041 (Table 5.3).

[18] This is total jobs consistent with the Workforce jobs definition used for the GLA's employment projections

Table 5.1 Employment Capacity by Borough and Planning Authority – All Use Classes

	2016	2021	2026	2031	2036	2041	Total
Barking and Dagenham	1,000	6,100	3,500	300			10,800
Barnet	-1,300	1,500	11,600	10,200	300		22,300
Bexley	2,300	2,900	4,000		8,600		17,900
Brent	1,500	3,600	600	12,100	300		18,100
Brent LPA	*1,500*	*3,600*	*600*		*300*		*6,000*
OPDC				*12,100*			*12,100*
Bromley	600	400	2,400	900	2,500		6,700
Camden	10,100	13,200	12,300	24,300	-1,100		58,900
City of London	20,800	39,700	38,200				98,700
Croydon	2,000	17,800	-300				19,500
Ealing	1,100	200	4,800		6,200		12,400
Ealing LPA	*1,100*	*200*	*4,800*		*2,500*		*8,700*
OPDC					*3,700*		*3,800*
Enfield	3,800	3,300	1,000	1,900	1,400		11,500
Greenwich	2,600	11,000	13,000	3,700			30,300
Hackney	1,800	23,200	11,800	100	100		37,100
Hackney LPA	*1,200*	*12,600*	*10,500*	*100*	*100*		*24,500*
LLDC	*600*	*10,600*	*1,400*				*12,600*
Hammersmith and Fulham	2,100	14,200	4,500	300	30,100	23,000	74,200
Hammersmith & Fulham LPA	*2,100*	*14,200*	*4,500*	*300*	*-2,900*		*18,200*
OPDC					*33,000*	*23,000*	*56,000*
Haringey	300	6,100	4,400		2,600		13,300
Harrow		-800	600	400			200
Havering	1,600	2,300	1,200				5,100
Hillingdon	1,200	6,600	900	1,100			9,800
Hounslow	13,700	12,700	6,700		-2,300		30,800
Islington	2,100	6,500	9,700	800	6,400		25,400
Kensington and Chelsea	-4,500	1,600	900		200		-1,900
Kingston upon Thames	-400	1,600	9,400	800	300		11,700
Lambeth	-200	13,700	100		6,000		19,600
Lewisham	2,000	7,800	1,900	2,600	700		15,000
Merton	200	-300			1,000		900
Newham	5,000	32,500	52,500	24,600	9,200		123,900
Newham LPA	*4,200*	*14,000*	*42,900*	*15,700*			*76,900*
LLDC	*800*	*18,500*	*9,600*	*8,800*	*9,200*		*47,000*
Redbridge		-400	800	300			700
Richmond upon Thames	200	700	1,300	600	400		3,200
Southwark	10,400	3,700	28,400	7,100	600		50,200
Sutton	800	3,200	300				4,300
Tower Hamlets	10,000	66,800	47,600		5,800		130,200
Tower Hamlets LPA	*5,100*	*65,100*	*47,500*		*5,800*		*123,500*
LLDC	*4,900*	*1,700*	*100*				*6,700*
Waltham Forest	900	1,900	300		500		3,600
Waltham Forest LPA	*900*	*1,900*	*300*		*500*		*3,600*
LLDC							*0*
Wandsworth	1,500	-4,500	-900	22,500	2,900		21,600
Westminster	3,900	20,700	1,200	2,500			28,300
London	**97,400**	**319,300**	**274,900**	**117,200**	**82,600**	**23,000**	**914,300**
OPDC				*12,100*	*36,700*	*23,000*	*71,900*
LLDC	*6,300*	*30,700*	*11,100*	*8,800*	*9,200*		*66,300*

Source: LESD(2016). Totals may not sum due to rounding

Table 5.2 Non-Industrial Employment Capacity by Borough and Planning Authority

	2016	2021	2026	2031	2036	2041	Total
Barking and Dagenham	600	4,100	2,900	300			7,800
Barnet	-1,000	1,300	11,400	10,000	300		22,000
Bexley	1,800	1,500	7,000		7,700		18,000
Brent	1,700	4,100	600	300	300		7,000
Brent LPA	*1,700*	*4,100*	*600*		*300*		*6,700*
OPDC				*300*			*300*
Bromley	400	-800	2,400	300	2,200		4,600
Camden	10,300	13,100	12,300	25,400	-1,100		60,000
City of London	20,800	39,700	38,200				98,700
Croydon	2,300	17,800	-400				19,700
Ealing	1,000		4,700		6,200		12,000
Ealing LPA	*1,000*		*4,700*		*2,500*		*8,200*
OPDC					*3,700*		*3,800*
Enfield	3,600	2,400	900	1,900	1,200		10,000
Greenwich	3,000	9,900	13,000	3,700	0		29,500
Hackney	2,200	21,300	11,800	100	100		35,600
Hackney LPA	*1,600*	*12,700*	*10,500*	*100*	*100*		*25,000*
LLDC	*600*	*8,600*	*1,400*	*0*	*0*		*10,500*
Hammersmith and Fulham	2,100	14,000	5,600	300	30,100	23,000	74,900
Hammersmith & Fulham LPA	*2,100*	*14,000*	*5,600*	*300*	*-2,900*		*18,900*
OPDC					*33,000*	*23,000*	*56,000*
Haringey	200	7,100	4,300		2,300		14,000
Harrow		-300	5,000	400			5,000
Havering	500	2,400	1,200				4,000
Hillingdon	1,400	6,600	800	1,000			9,900
Hounslow	13,400	12,300	6,600		-2,300		30,000
Islington	2,100	6,800	9,400	800	5,300		24,300
Kensington and Chelsea	-4,200	1,600	900		200		-1,500
Kingston upon Thames	-500	1,500	9,300	800	300		11,300
Lambeth	100	13,300	100		5,800		19,300
Lewisham	1,900	8,200	2,400	2,600	700		15,800
Merton	200	-400			1,000		800
Newham	4,300	32,300	52,400	23,100	9,200		121,400
Newham LPA	*900*	*18,500*	*9,600*	*8,800*	*9,200*		*47,200*
LLDC	*3,400*	*13,800*	*42,800*	*14,200*			*74,200*
Redbridge		-400	800	300			700
Richmond upon Thames	200	700	1,300	600	400		3,200
Southwark	10,700	4,800	28,400	6,600	600		51,100
Sutton	400	2,900	1,700				5,000
Tower Hamlets	10,000	70,900	48,300		5,800		135,000
Tower Hamlets LPA	*4,900*	*2,200*	*500*				*7,700*
LLDC	*5,200*	*68,600*	*47,800*		*5,800*		*127,300*
Waltham Forest	1,200	1,900	300		500		3,800
Waltham Forest LPA							*0*
LLDC	*1,200*	*1,900*	*300*		*500*		*3,800*
Wandsworth	1,600	-3,400	-1,000	22,800	2,900		23,000
Westminster	3,800	21,000	1,200	2,400			28,500
London	**96,100**	**318,100**	**283,900**	**103,800**	**79,600**	**23,000**	**904,500**
OPDC				*12,100*	*36,700*	*23,000*	*71,900*
LLDC	*6,300*	*30,700*	*11,100*	*8,800*	*9,200*		*66,300*

Source: LESD(2016). Totals may not sum due to rounding

Table 5.3 Office Employment Capacity by Borough and Planning Authority

	2016	2021	2026	2031	2036	2041	Total
Barking and Dagenham	100	1,900	1,100	200			3,300
Barnet	-1,100	100	9,000	8,000	200		16,200
Bexley	1,600	400	200		1,500		3,600
Brent	300	1,300	500		200		2,200
Brent	*300*	*1,300*	*500*		*200*		*2,200*
OPDC							*0*
Bromley	100	100	600	300	1,700		2,800
Camden	7,900	11,300	10,500	24,300	-1,500		52,500
City of London	19,800	37,400	35,500				92,700
Croydon	1,900	15,100	-3,700				13,200
Ealing	700	-1,100	3,600		3,900		7,000
Ealing	*700*	*-1,100*	*3,600*		*400*		*3,600*
OPDC					*3,400*		*3,400*
Enfield	2,000	2,000	700	1,400	500		6,600
Greenwich	2,300	4,500	8,300	3,200			18,300
Hackney	1,100	17,300	10,800	100	100		29,500
Hackney	*1,000*	*7,700*	*9,600*	*100*	*100*		*18,500*
LLDC	*100*	*9,600*	*1,200*				*10,900*
Hammersmith and Fulham	1,000	11,300	1,900		28,000	22,200	64,300
Hammersmith and Fulham	*1,000*	*11,300*	*1,900*		*-3,000*		*11,100*
OPDC					*31,000*	*22,200*	*53,200*
Haringey	200	4,000	2,700		300		7,300
Harrow		-1,100	3,500	100			2,500
Havering		900	800				1,700
Hillingdon	900	5,600	100	800			7,400
Hounslow	13,300	8,600	4,200		-2,300		23,800
Islington	1,800	3,900	9,300	400	5,300		20,700
Kensington and Chelsea	-4,700	3,400	900		100		-200
Kingston upon Thames	-800	300	7,400		200		7,200
Lambeth	-800	10,700			5,400		15,200
Lewisham	800	4,200	1,100	1,400	600		8,200
Merton	200	-1,000			500		-300
Newham	2,400	21,400	41,600	12,700	9,200		87,300
LLDC	*-300*	*16,300*	*9,400*	*8,800*	*9,200*		*43,500*
Newham	*2,700*	*5,100*	*32,200*	*3,900*			*43,900*
Redbridge		-200	200	200			300
Richmond upon Thames	100	300	500	300	300		1,500
Southwark	10,100	400	20,300	2,900	500		34,100
Sutton	300	2,300	1,100				3,700
Tower Hamlets	9,600	62,700	44,800		5,800		122,800
LLDC	*4,800*	*700*	*100*				*5,600*
Tower Hamlets	*4,800*	*61,900*	*44,700*		*5,800*		*117,200*
Waltham Forest	300	200	200		400		1,200
LLDC							*0*
Waltham Forest	*300*	*200*	*200*		*400*		*1,200*
Wandsworth	-200	-4,700	100	16,300	2,800		14,300
Westminster	3,600	17,600	1,200	2,300			24,700
London	**74,700**	**241,200**	**218,900**	**75,000**	**63,600**	**22,200**	**695,600**
OPDC				*12,100*	*36,700*	*23,000*	*71,900*
LLDC	*6,300*	*30,700*	*11,100*	*8,800*	*9,200*		*66,300*

Source: LESD(2016). Totals may not sum due to rounding

5.2 Opportunity Areas and Areas of Intensification

Data from the LESD is used to inform estimates of the employment potential of London's Opportunity Areas and Areas of Intensification. Table 5.4 sets out the capacity identified by the LESD for each of these areas and compares it against the employment capacity estimates set out for each Opportunity Area in the 2015 London Plan, and also against the totals identified in LESD(2012).

In total the employment capacity associated with the Opportunity Areas and Areas of Intensification is 700,000 jobs. This is 77% of the total employment capacity in LESD(2016) for London as a whole.

This total is higher than both the total employment capacity estimate set out in the 2015 London Plan and also that identified in LESD(2012).

The higher employment density ratio used in LESD(2016) explains part of this. But there are also a small number of Opportunity Areas where there are new aspirations to deliver high quantities of employment-generating development. The current aspirations for the Royal Docks and Beckton Waterfront OA are significantly higher than either the 2015 London Plan Figure or LESD(2012). Similarly, at Old Oak Common ambitions to create a major new office location in the longer term have emerged since production of LESD(2012). And at Canada Water new proposals have recently emerged which have resulted in a large increase in potential employment capacity for that OA.

In most cases the identified employment capacity from LESD(2016) is reasonably well aligned with the existing employment capacity estimates for the OAs and AoIs. City Fringe/Tech City stands out as the one area where the identified capacity in the LESD significantly undershoots the 2015 London Plan employment capacity estimate. But the nature of this OA is different in that rather than being a single opportunity site, it is a large area where intensification is expected to occur through redevelopment, as tends to happen in the City of London.

Table 5.4 Opportunity Area Employment Capacity Estimates

Opportunity Area	LESD(2016)	London Plan Employment Capacity Estimates	LESD(2012)
Bexley Riverside	17,800	7,000	3,600
Bromley	2,300	2,000	
Canada Water	20,600	2,000	*3,500*
Charlton Riverside	-400	1,000	700
City Fringe/ Tech City	29,600	70,000	35,800
Colindale/Burnt Oak	900	2,000	
Cricklewood/Brent Cross	20,400	20,000	6,400
Croydon	18,600	7,500	13,000
Deptford Creek/Greenwich Riverside	3,600	4,000	3,500
Earls Court	4,900	9,500	8,600
Elephant and Castle	10,400	5,000	4,000
Euston	8,100	7,700	8,100
Greenwich Peninsular	16,400	7,000	21,300
Harrow & Wealdstone	-1,600	3,000	2,000
Heathrow	20,300	12,000	9,200
Ilford	300	800	1,600
Isle of Dogs	115,100	110,000	82,900
Kensal Canalside	900	2,000	100
King's Cross - St Pancras	42,600	25,000	33,500
Lewisham, Catford & New Cross	10,000	6,000	6,700
London Bridge, Borough & Bankside	10,500	25,000	8,900
London Riverside	25,200	16,000	7,300
Lower Lea Valley	76,300	50,000	66,000
Old Kent Road	5,300	1,000	
Old Oak Common	60,000	55,000	
Paddington	13,000	5,000	9,700
Park Royal	12,700	10,000	10,100
Royal Docks & Beckton Waterfront	55,100	6,000	13,900
Southall Hinterland	3,400	3,000	2,100
Thamesmead & Abbey Wood	5,600	4,000	3,300
Tottenham Court Road	4,600	5,000	2,700
Upper Lea Valley	19,300	15,000	10,700
Vauxhall, Nine Elms & Battersea	21,900	25,000	27,000
Victoria	5,100	4,000	5,200
Waterloo	15,900	15,000	18,300
Wembley	4,300	11,000	4,700
White City	7,700	10,000	10,300
Woolwich	4,800	5,000	8,000
Areas of Intensification			
Farringdon/Smithfield	3,200	2,500	4,800
Haringey Heartlands/Wood Green	2,500	2,000	1,000
Holborn	500	2,000	200
Kidbrooke	1,600	400	2,000
Mill Hill East	500	500	400
South Wimbledon/Colliers Wood	200	500	
West Hampstead Interchange	600	100	400
Total	**700,600**	**576,500**	**461,500**

Source: LESD(2016)

6 The Potential for Intensification

6.1 Introduction

In previous editions of the LESD, the total potential employment capacity identified by the LESD had always exceeded the future employment growth for London forecast by GLA Economics. But due to the recent strong growth in employment in London the latest GLA Economics forecast for employment growth have been revised up. At the same time the supply of employment space in London has come under increasing pressure from higher value residential development. As a consequence the longer term employment projections now exceed the currently identified employment capacity to accommodate those levels of growth, in spite of the increases in employment capacity described in Chapter 5.

There is no immediate problem that suggests growth will be constrained in the short-medium term through lack of capacity, but this is something that policy makers may need to address for the longer term. We would expect new sites and development potential to emerge over the London Plan period which could address any potential shortfall. But it is also the case that many of the longer term sites and aspirations identified as part of the capacity in the current LESD may not come forward and deliver the levels of employment that are currently hoped for. The situation therefore requires careful monitoring.

6.2 Intensification of London's Existing Office Stock

One potential response to a tightening of supply is that the existing stock of employment space will be used more intensively. We have already noted in Chapter 3 how employment density ratios have been increasing over time. There are a higher number of workers employed per sq m of office floorspace than was the case twenty years ago.

Our assumptions on employment density ratios, which inform the LESD capacity estimates, apply these higher employment density ratios to future stock. But these estimates take no account of the potential to accommodate additional employment through intensification of existing floorspace.

As at 2014 London had an estimated total office floorspace stock of 26.6m sq m[19] and total office employment of around 1.9m[20]. This would give an average floorspace per worker ratio of 14 sq m per worker. If over time existing stock came to be occupied at the same ratio of 11.3 sq m per worker we have applied to new stock, then this would imply that the existing stock could accommodate an additional 450,000 workers.

Not all of the existing stock may be capable of such intensification of use due to its configuration not being suitable for the adoption of modern working practices, but this gives some indication of the scale of the additional capacity that might be squeezed out of the existing stock. Even a reduction to just 13 sq m per worker would accommodate over 140,000 additional office jobs. But floorspace per worker ratios are not uniform across London.

Figure 6.1 shows the estimated floorspace per office worker by London Borough at 2014. The ratios show total stock office divided by estimated office employment so make no allowance for vacancies.

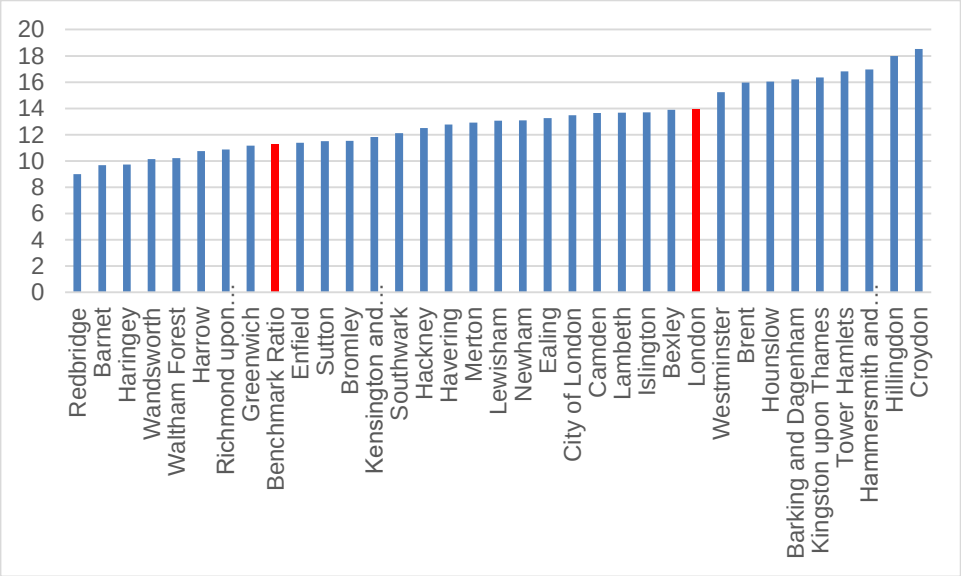
[19] This estimate is derived from 2012 VOA Commercial Floorspace Statistics and data on net additional completions from the London Development Database
[20] CAG estimates from 2014 BRES data

Eight predominantly outer London Boroughs have a higher density ratio (lower floorspace per worker) than our current benchmark of 11.3 sq m per worker. There are two contrasting explanations for this. One is that these are back office type functions operating at high densities to keep costs low. The other is that a high proportion of people in office occupation is these boroughs are self-employed and not occupying any formal office space.

Sixteen Boroughs are operating a higher floorspace per worker than the benchmark but at below the London average.

Nine Boroughs have a higher floorspace per worker ratio than the London average. Most of the boroughs have quite a large employment stock. In some cases, such as Croydon, this probably represents under-utilisation of stock. In other, such as Westminster, it may be because high value workers demand higher space standards.

Figure 6.1 Estimated Floorspace per Office Worker by London Borough

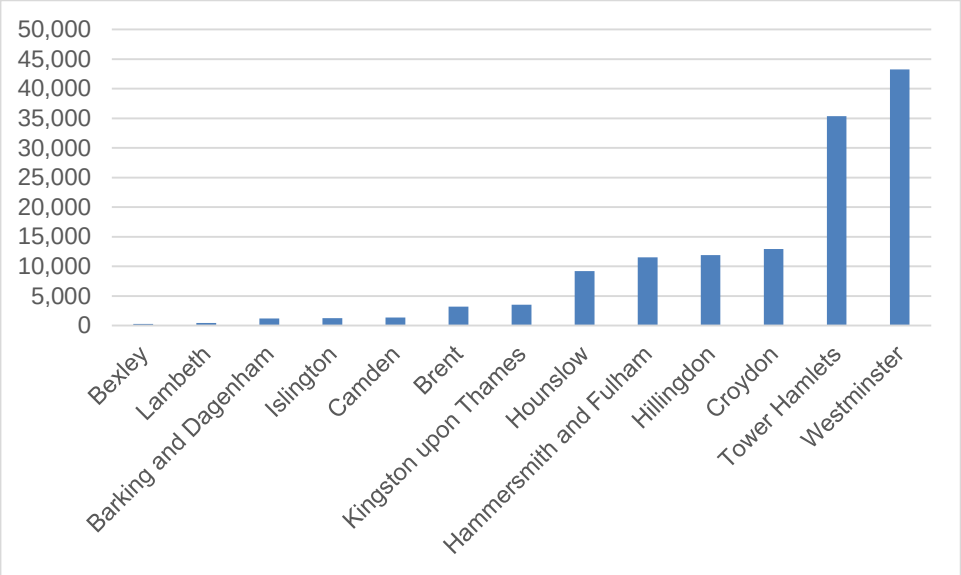


Source: VOA/BRES/CAG

To give some indication of potential additional capacity from existing stock, we first assume a uniform vacancy rate of 4%. The London Office Policy Review recommends a target vacancy rate of 8%. There is no data on vacancy rates for London as a whole but where there is data it suggests vacancy was low in 2014.

We then recalculate floorspace per worker ratios at 2014 based on estimates of occupied stock. Where the implied Borough floorspace per worker ratio is above 13 sq m per worker we assume there is potential for further intensification to achieve an occupancy level at 13 sq m per worker. This produces a potential capacity for an additional 135,000 jobs at the London level. These would predominantly be location in Westminster and Tower Hamlets as illustrated in Figure 6.2 below.

Figure 6.2 Potential Additional Jobs Capacity through Increased Job Density



Source: CAG Estimates based on VOA and BRES

The calculations set out in this chapter contain a number of assumptions but give some indication of the potential for further intensification and it is suggested that the potential to intensify London's existing office stock is taken into account in future reviews of the London office market and future floorspace demand.

Appendix 1

Land Use Classifications

A1 Shops - Shops, retail warehouses, hairdressers, undertakers, travel and ticket agencies, post offices, pet shops, sandwich bars, showrooms, domestic hire shops, dry cleaners, funeral directors and internet cafes.

A2 Financial and professional services - Financial services such as banks and building societies, professional services (other than health and medical services) and including estate and employment agencies. It does not include betting offices or pay day loan shops - these are now classed as “sui generis” uses (see below).

A3 Restaurants and cafés - For the sale of food and drink for consumption on the premises - restaurants, snack bars and cafes.

A4 Drinking establishments - Public houses, wine bars or other drinking establishments (but not night clubs).

A5 Hot food takeaways - For the sale of hot food for consumption off the premises.

B1 Business - Offices (other than those that fall within A2), research and development of products and processes, light industry appropriate in a residential area.

B2 General industrial - Use for industrial process other than one falling within class B1 (excluding incineration purposes, chemical treatment or landfill or hazardous waste).

B8 Storage or distribution - This class includes open air storage.

C1 Hotels - Hotels, boarding and guest houses where no significant element of care is provided (excludes hostels).

C2 Residential institutions - Residential care homes, hospitals, nursing homes, boarding schools, residential colleges and training centres.

C2A Secure Residential Institution - Use for a provision of secure residential accommodation, including use as a prison, young offenders institution, detention centre, secure training centre, custody centre, short term holding centre, secure hospital, secure local authority accommodation or use as a military barracks.

C3 Dwellinghouses -

C4 Houses in multiple occupation - small shared houses occupied by between three and six unrelated individuals, as their only or main residence, who share basic amenities such as a kitchen or bathroom.

D1 Non-residential institutions - Clinics, health centres, crèches, day nurseries, day centres, schools, art galleries (other than for sale or hire), museums, libraries, halls, places of worship, church halls, law court. Non residential education and training centres.

D2 Assembly and leisure - Cinemas, music and concert halls, bingo and dance halls (but not night clubs), swimming baths, skating rinks, gymnasiums or area for indoor or outdoor sports and recreations (except for motor sports, or where firearms are used).

Sui Generis - Certain uses do not fall within any use class and are considered 'sui generis'. Such uses include: betting offices/shops, pay day loan shops, theatres, larger houses in multiple occupation, hostels providing no significant element of care, scrap yards. Petrol filling stations and shops selling and/or displaying motor vehicles. Retail warehouse clubs, nightclubs, launderettes, taxi businesses, amusement centres and casinos.